

Innovation in organizations: A Literature Review

Innovación en las organizaciones: una revisión de la literatura

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Abstract:

This article presents a systematic revision of the literature based on the innovation in organizations in a global context, making an emphasis on the benefits and contributions of the innovations as a strategic purpose for the competitiveness of the companies. As an object, we find to highlight the importance and integration of the concept of innovation in all functional areas, so this can facilitate the development of creativity and the idea implementations such as essential elements for organizational sustainability. The previous information was taken from the research of the keywords “innovation”, “organizations”, “Organizational innovations” and “applied innovation organization”, on the scientific databases Scopus, Science Direct and EbscoHost, on the years 2015 to 2020. The initial research showed a total of 2355 articles, on which by applying the criteria’s inclusion related with the themes of development and innovation, of adoption and contribution of the innovation, stayed minimized up to 50 articles. As a result of investigation, it was observed that the innovation is a holistic process in which they converge the functions of production, technology, investigation and evolution of new products, that impulse the creation value, competition by sustainability organizations.

Keywords: Innovation, innovative strategies, organizations, competitiveness.

Resumen

Este artículo presenta una revisión sistemática de la literatura basada en la innovación en las organizaciones en un contexto global, haciendo énfasis en los beneficios y aportes de las innovaciones como propósito estratégico para la competitividad de las empresas. Tiene por objeto resaltar la importancia e integración del concepto de innovación en todas las áreas funcionales, de manera que esta pueda facilitar el desarrollo de la creatividad y la implementación de ideas como elementos esenciales para la sustentabilidad organizacional. La información anterior se tomó de la investigación de las palabras clave “innovación”, “organizaciones”, “Innovaciones organizacionales” y “organización de innovación aplicada”, en las bases de datos científicas Scopus, Science Direct y EbscoHost, en los años 2015 a 2020. La investigación arrojó un total de 2355 artículos, sobre los cuales, aplicando los criterios de inclusión relacionados con los temas de desarrollo e innovación, de adopción y contribución de la innovación, quedaron minimizados hasta 50 artículos. Como resultado de la investigación se observó que la innovación es un proceso holístico en el que convergen las funciones de producción, tecnología, investigación y evolución de nuevos productos, que impulsan la creación de valor, competencia por parte de las organizaciones sustentables.

Palabras clave: Innovación, estrategias innovadoras, organizaciones, competitividad.

José Morelos-Gómez

University Cartagena
jmorelosg@unicartagena.edu.co
ORCID: <https://orcid.org/0000-0002-0334-0575>

Samil Tirado-Roca

University Cartagena
stirador@unicartagena.edu.co
ORCID: <https://orcid.org/0000-0001-6527-9717>

Laura Marcela Guerrero Álvarez

University Cartagena
lguerreroa1@unicartagena.edu.co
ORCID: <http://orcid.org/0000-0003-4217-4095>.

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Introduction

The innovation drives improvement of the processes and creation of products in the organizations (Buijtendijk et al., 2021). This strategic process makes it easier in some aspects, new business models, new products, new marketing expressions, among other characteristics and related attributes (Cheah & Yuen-Ping, 2021). Many ways of innovation dependents of the capacity of implement the creativity and optimize the commercial processes, by meaning, the invitation of products can appear as a popular way of improvement, so the new products tend to lost his impact later on in the massive adoption process in the market, which represents an acceleration for the perceived products to be known as truly innovating (Haro et al., 2017; Guzmán, 2018; Queyroi, 2020). In this sense, the organizations need to appeal to innovation alternatives which could be capable of supporting alternation and deformation of the market in the long term. By meaning, the innovation of the business model tends to resolve key problems in the market during a period of time and is easily adopted by leading companies to sustain the growth. (Morelos et al., 2021).

This purpose of the companies to increase the capacities for the creation of competitive advantages through goods and distinctive services raises the necessity to adopt the innovation inside of the structures of the organizations (Cui et al., 2021; Sánchez & Londoño, 2018). Therefore, the target of this article is to analyze the processes of innovation developed in the organizations, during the systematic revision of the literature in the national and international context for them to know and dig through the theoretical fundamentals that exist nowadays, the contributions, the relevance and application of the innovation in companies.

In order to respond to the research purpose, the following problems were posed: how is the innovation process developed in organizations; how do the theoretical foundations associated with innovation contribute to the sustainability of companies; what are the theoretical models and operational tools of innovation that facilitate the creation of value in organizations; what are the

theoretical models and operational tools of innovation that facilitate the creation of value in organizations; and how do the theoretical foundations associated with innovation contribute to the sustainability of companies?

The methodology applied to this study was the systematic review of the literature, based on the qualitative approach and rational analysis, which allowed establishing theoretical foundations, conceptual models, tools and operational models associated with innovation and oriented to the improvement and competitiveness of organizations. For the primary information gathering process, the search for the keywords "innovation" and "organizations" and "organizational innovation" and "innovation applied organizations", in the scientific databases Scopus, Science direct and HebscoHost, in the period from 2015 to 2020, was considered. This first search showed a total of 2355 articles, which, when the inclusion criteria related to the topics of development and innovation, adoption advantages and contribution of innovation were applied, were reduced to 50 articles. Likewise, the importance of the systematic review technique is highlighted, with the contribution of similar research by authors who highlight the usefulness and contribution of this technique, which facilitates the synthesis of different perspectives of scientific knowledge about the research topic under study (García-Orozco et al., 2020, Alfaro-García et al., 2018, Blanco-Mesa et al., 2017, Blanco-Mesa et al., 2019).

The content of this article is structured as follows: first, there is the introduction, which presents the business context and the importance of innovation in organizations; second, there is the reference framework, which describes the theoretical foundations related to the development, advantages of the adoption and contributions of the application of innovation; third, the proposed methodology is developed, with a multi-method approach that combined the types of research of systematic literature review and qualitative analysis; and finally, the results of the study are presented - which answer the questions posed-, the discussion and the final conclusions.



Referential framework

Meaning of innovation

To understand the importance of innovation in organizations it is relevant to take into account, as suggested by authors such as Da Costa et al. (2016), that "innovation is posed as a requirement for the survival of organizations" (p. 2), i.e., it is a necessity and, therefore, of vital relevance for those organizations that wish to be competitive in the market (Gault, 2018). Another necessary and critical aspect when referring to innovation is that it signifies a form of growth for the organization, as stated by Flores et al. (2019), Marín and Cuartas (2018); in other words, this process plays a leading role in companies that helps managers to achieve the purposes of continuous improvement and sustainability (Gao et al., 2017).

For Wicksell & Schumpeter (2022), innovation should focus on the redesign of both products and processes, in order to keep companies competitive over time, in such a way that it triggers constant actions to change ideas, existing knowledge and developed methods.

(Tarapuez et al., 2016; Valdés et al., 2019; Buenavides & Bolaños, 2020). Likewise, authors such as Veiga et al. (2020), and Hermundsdottir and Aspelund (2020) state that innovation corresponds to the search for competitive advantage that involves a benefit for customers, organizations and the market in which goods and services with higher quality compete. In this sense, innovation represents the means to achieve the materialization of the established strategic innovation objectives, i.e., it is not an end in itself, it only becomes the imperative that responds to the real threats of competition (Cornett et al., 2019; Unger, 2018).

Development of the innovation process

The way in which innovation is applied in organizations can be different for each one, that is, the way in which each company decides to develop it is particular; however, its internalization and materialization follow a four-phase model that requires the commitment and support of management.

The first phase begins with the identification of the organization's needs. Authors such as Ferreira et al. (2020) state that the identification and solution of these problems are related to the development of cognitive abilities to learn and unlearn, through the adoption of innovative behaviors that drive creativity and the improvement of goods and services in companies (Hameed et al., 2021). In this order, Lendel and Varmus (2016), Villalba and Builes (2016), and García et al. (2019) converge in that, naturally, in organizations there are internal processes in their functional areas susceptible to be improved, which mean an opportunity to innovate and develop new methods and technologies with greater efficiency and organizational differentiation (Dost et al., 2020).

The second stage is aimed at generating ideas or concepts using one of the best known techniques, brainstorming, in which all members of the organization participate. At this stage different concepts related to ideas emerge, in fact, in the literature on ideas in the innovation process there are three terms, namely: ideation, idea generation and idea management. However, some authors such as Dorov et al. (2015) state that ideation present and idea generation are the same or very similar meanings, which is summarized in that brainstorming includes these interpretations (Bonnardel & Didier, 2020).

In the third stage, the ideas obtained in stage 2 are evaluated and ordered according to the needs observed in stage 1. For this, authors such as Balland et al. (2022), Vargas et al. (2017) and Muñoz et al. (2018) propose the idea innovation networks, to develop them taking into account six areas that reflect research and correspond to basic research, applied research, product development research, production research, quality control research and marketing/commercialization research.

And the fourth stage will be carried out to design an innovative prototype that will be applied in the organization, so this process is important, because, along with the impact of globalization and new emerging technologies, companies must manage change perceiving it as an opportunity to be able to sustain, grow and compete in a rapidly changing environment and



respond to change with innovation (Robayo, 2016; Dogan, 2017; Zumba et al., 2019).

On the above, it should be noted that managerial innovation helps the long-term sustainability and growth of organizations. For Gupta (2018), managerial innovations are innovations in structures, administrative systems, practices, processes and managerial techniques that could generate changes in organizations. Thus, this process is currently of greater interest than in past decades, since it requires a systematic innovation effort that drives competitiveness and sustainability (Ali, 2021).

Advantages of the innovation of adoption

Competition is growing every day in the business environment. In this century, the globalization of markets has changed the consumption behavior of customers and the way companies compete with each other, which try to innovate in order to survive (Stavroulakis et al., 2021). This constant drive for innovation has become for many companies the main competitive strategy for growth, which promotes the development of distinctive competitive advantages in the market (Knudsen et al., 2021).

On the other hand, competitiveness has been one of the most significant advantages for organizations, whose function is to achieve the highest market share. As expressed by Weerardena (2016), competitive advantage can be conceptualized as a superior market position, which captures the provision of a privileged value mix for the customer and the achievement of lower relative costs, resulting in market share dominance and superior financial performance (Falciola, 2020). Likewise, for Idris et al. (2022) it is a motivation to improve their organizational structure, develop forward-looking, increase market share, gain customer loyalty and stay ahead of the competition and therefore focus on product innovation over process innovations, or else improve their efficiency (Herrera et al., 2020; Dornberger, 2019).

Contribution of the innovation in competitiveness

The search for competitiveness in organizations has aroused a particular interest of companies

and governments, therefore the purpose of these organizations is to finance and support R&D (research + development) of new products, social improvement of communities, new productive processes and technology transfer to organizations, to enhance their knowledge and help them in the development of productive and marketing processes (Distanont & Khongmalai, 2018; Zhang & Zhu, 2015).

Another contribution of innovation in organizations that allows generating a competitive scenario has to do with their business model, since the inclusion of innovations in the process of building a business model drives companies to orient their map of activities in response to the dynamics of transformation and change present in the market. This means an element of competitive advantage compared to companies that only orient the use of innovation to develop products and services that, over time, often imitate and replace existing ones (Pulgarín & Guerrero, 2017).

On the other hand, innovation favors the adaptation of the organizational structure to the dynamism of the market, since it is expected that after the implementation of changes in the traditional organizational structure it will also result in the change of behavior of individuals towards the company, in such a way that it generates innovations in human resources management (Madero & Barboza, 2015). This structural change can be evidenced in the organization's knowledge management, as some authors state that organizations also manage to boost their competencies aimed at competitiveness to the extent that they manage to absorb and apply the knowledge generated by their competitors with the objective of delivering value to the market (Horta et al., 2015).

Methodology

This research is of systematic literature review, based on a qualitative approach with a rational analysis that allowed establishing the theoretical approaches, conceptual models, tools and operational models



associated with innovation, as instruments for the improvement and competitiveness of organizations. As a primary source of information, articles from indexed journals related to the discipline addressed were considered; the time period within which the theories related to innovation were analyzed was in the range of the last five years (2015 to 2020). It was decided to choose the most

recent studies of the authors with the highest number of citations, which was identified in the selected time range. The following methodological procedure from Table 1 was taken into account, taking into account the three essential stages (planning, information analysis and presentation of results and conclusions), for the development of the study.

Table 1. Methodological procedure for systematic review.

| Stage 1. Planning guidelines to carry out the systematic literature review. | Stage 2. Analysis of the information found in the systematic literature review. | Stage 3. Presentation of results and conclusions of the systematic review of the literature. |
|--|--|---|
| Phase 1. Establish the reasons for to carry out the review. | Phase 4. Selection of the theoretical foundations of the bibliographic references bibliographic | Phase 8. Presentation of the results obtained. |
| Phase 2. Defining the period for the review. | Phase 5. Extraction of the information information found in the selected bibliographic selected bibliographic references. | Phase 9. Presentation of conclusions. |
| Phase 3. Definition of the number of bibliographic sources to review. | Phase 6. Synthesis of extracted information. Phase 7. Analysis of the synthesized information. synthesized information. | |

Source: adapted from Lazaretti et al. (2018).

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(innovation AND organizational) AND (LIMIT-TO (OA, "all")) AND (LIMIT-TO (PUB YEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016)) AND (LIMIT-TO (SUB AREA, "BUSI"))

(organizational innovation) AND (LIMIT-TO (OA, "all")) AND (LIMIT-TO (PUB YEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO



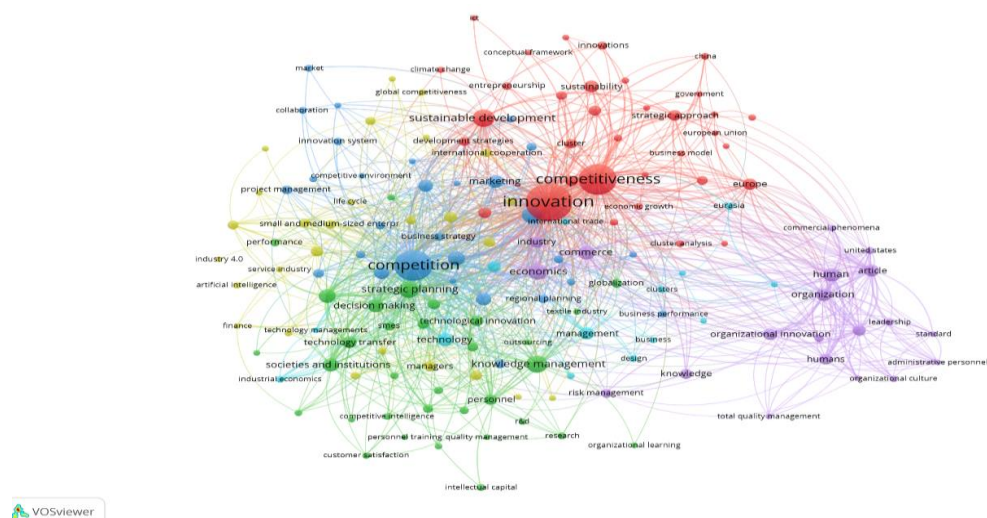
(PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016)) AND (LIMIT-TO (SUB AREA, "BUSI"))

(innovation applied organizations) AND (LIMIT-TO (OA, "all")) AND (LIMIT-TO (PUB YEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016)) AND (LIMIT-TO (SUB AREA, "BUSI"))

For the collection of the referential information, a rigorous literature search was carried out on contributions and studies related to the main research topic, in the case of innovation in organizations. This first search yielded a total of 2355 articles, to which the inclusion criteria related to the topics of development and innovation, advantages of adoption and contribution of innovation were applied. As

exclusion criteria, a time span from 2015 to 2020 was taken into account, in order to delimit the search with the purpose of obtaining information with a current perspective. Likewise, the VOSviewer software was used for the systematization of the data, observation and elaboration of the bibliometric networks of the documents with their respective authors, including the analysis of the abstract, research purpose, and inclusion criteria, with which the final articles were reduced to 50. To obtain each of the references, bibliographic databases were used: 19 articles from Science Direct, 18 articles from Scopus and 13 articles from Ebscohost, and keywords such as innovation, innovation in organizations and competitiveness were used. Figure 1 presents the correlation map of the keywords considered in the process of reviewing the analysis of innovation in organizations.

Figure 1. Correlation map of key words related to innovation in organizations.



Source: author

In this order of ideas, stage 1 of the methodological model used corresponds to the planning of guidelines to carry out the systematic literature review. These phases were followed for its execution:

Phase 1: in which the reasons for carrying out this review are determined and which are related to meeting the objectives proposed in this article,

i.e., to highlight the importance of the application of innovation within organizations, an aspect that is treated with recent theoretical foundations in a global context.

Phase 2: the period in which the systematic review of the literature will be carried out is defined. This review was limited to a recent period (2015-2020), so certain articles that did



not meet this criterion or that were not in accordance with the central theme developed were rejected despite the filters applied.

Phase 3: taking into account the previously selected period, 50 bibliographic references were chosen for the review, considering the national and international scope, and also that they were related to the topic of innovation in organizations.

Subsequently, stage 2 of the analysis of the information found in the systematic review of the literature was carried out in the following phases:

Phase 4: a set of theoretical foundations was gathered from the 50 bibliographic references from the 2015-2020 period, within which are the development of the innovation process, the advantages of adopting innovation in organizations and the contribution of innovation in competitiveness.

Phase 5: the most relevant information was extracted from these fundamentals.

Phase 6: the information was synthesized in a precise and coherent manner.

Phase 7: the information was analyzed to meet the proposed objectives.

Finally, stage 3, phase 8 was implemented, in which the results obtained were recorded, and phase 9, in which the conclusions were presented.

With the above, it was demonstrated that the systematic review of the literature for the bibliographic references selected in a recent period is very useful to support the need for organizations to implement the innovation process, which ratifies the importance of carrying out this process.

Results

The descriptive results identified in the systematic literature review process, which

respond to each of the research questions posed, are presented below:

Value and relevance of the innovation process

From the empirical studies studied, it is noted that innovation, despite corresponding to a process that takes place within organizations, also represents a variable in these subject to various theoretical foundations that highlight and reflect its importance for the growth and sustainability of companies. In this sense, Eisenman (2015) offers a holistic theory of design in the context of technological production. The author argues that visible attributes allow producers to take various actions such as, for example, explaining what their products do and how to use them in a more profitable way, motivating users to generate sales and, also, extending the basic functionality of products, highlighting their symbolic meanings for consumers (Bryant et al., 2020).

For Levine and Prietula (2015), innovation can be interpreted as an open collaborative chain, where principles are established and factors that affect performance are identified, and it is a robust driver for innovation and production. The open innovation paradigm represents new possibilities for organizing innovation within an ecosystem and generates different drivers of value creation, to impact the strategic position of the business and produce superior financial performance (Herskovits et al., 2015).

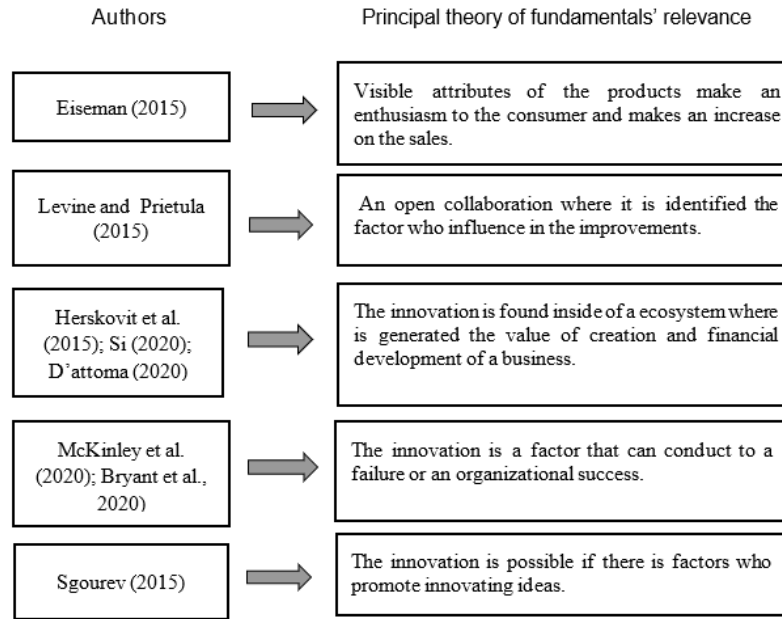
On the other hand, McKinley et al. (2016), D'Attoma (2020) and Si et al. (2020) distinguish between flexible and inflexible innovations, the factors that can lead to failure or successful organizational change, through the construction of four scenarios for organizations that innovate or respond rigidly or flexibly to business decline. Likewise, Sgourev (2015) adds to this perspective by pointing out that radical innovation is possible if there are actors present on the periphery who are likely to lead to radical ideas and who, despite being poorly positioned, promote innovative ideas. Another approach is given by models that have been applied within organizations due to the validity of the empirical



and theoretical foundation, and that have become a trend; for example, the innovation of a business model, thanks to its analysis, validation and evolution driven by different factors such as technological innovation (Grimaldi et al., 2021), environmental circumstances (Lee & Trimi, 2020), the ecosystem (Karimi et al., 2020), the product (Hadjielias et al., 2021), among others.

Figure 2 shows relevant information from some authors on the contribution of value and relevance, which support the fulfillment of the previously described approaches:

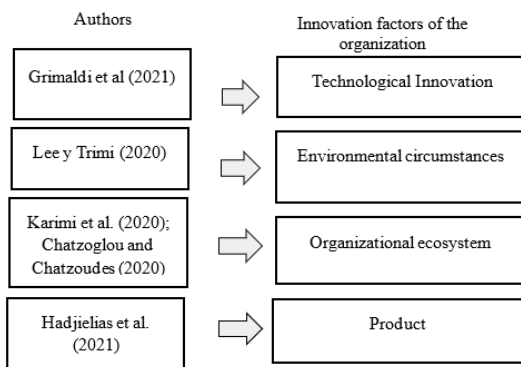
Figure 2. Value contribution and relevance of the innovation



Source: author

Continuing with the line of arguments, Figure 3 shows the factors that drive innovation in business models as an advantage according to the following authors:

Figure 3. Business model drivers



Source: author

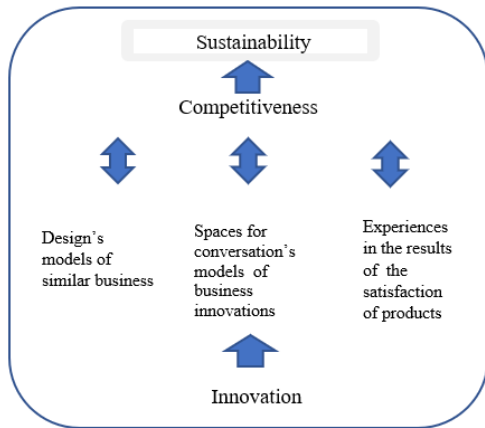
Pillars of innovation for competitiveness and sustainability

Another aspect to highlight is related to the opportunity for organizations to drive innovation, which suddenly stimulates competitiveness and sustainability. A framework capable of absorbing this competitive dynamic of the environment has three pillars: i) the design of similar business models that adjust to a dynamic environment, ii) the space where innovation begins to become a business model in this same type of environment, and iii) the experience resulting from the satisfaction that links customers to a particular product or service (see Figure 4). Finally, the positive effect of innovation in the creation of competitive advantages and



sustainability from practical application has been contributing to the improvement of products and processes, as well as decreasing the gap in the literature and creating novel and different ways for the development of organizations (Chatzoglou & Chatzoudes, 2018).

Figura 4. Pillars of innovation.



Source: author

Discussion and conclusions

This analysis of the systematic literature review allows us to identify three recent general perspectives on innovation research: theoretical models of innovation, studies of the innovation process and innovation in organizations. The content review of the articles allowed us to classify them according to their methodological approach ranging from theoretical to empirical-theoretical and predominantly empirical. From the three general perspectives, ten specific categories were derived that respond directly to innovation in organizations (importance, relevance, general aspects, specific aspects, conditions, characteristics, environment, strategies, criteria and results), in order to locate more precisely the findings of this article, which can be a useful reference resource for future research.

From the literature review, a trend towards the integration of the concept of innovation as a process that includes creativity and implementation of ideas as essential elements was observed. Theoretical studies are

conceptually enriching the subject of innovation, theoretical-empirical and empirical studies have been developed in global organizational contexts that have validated the emerging theories on the subject (Queyroi et al., 2020; Albuquerque et al., 2020).

Likewise, the theoretical-practical contribution derived from knowledge, organizational learning and innovation drivers is highlighted. The approach in the studies shows a tendency towards empirical validation and the use of quantitative approaches (multivariate mathematical models) to corroborate the theory that has been recently generated (Cuevas et al., 2019).

The content of the literature leads us to expect in the near future research on the evolution of organizational capabilities, for the generation of creativity in its staff, elements that can enhance the conversion of ideas into market-oriented products and services, the implementation of new ideas in the early stages and their validation for the creation of products and services, and the effect of innovative ideas in the design of these products and services for consumer satisfaction (De Conto et al., 2016). As part of the final results of innovation in organizations, studies of the effects of innovation in improving organizational performance and its promising success in the future are expected (Flores et al., 2019; Guzman, 2018).

Recent research includes both theoretical and empirical studies, which is reflected in the diversity of the work done and the different approaches to the examination of this topic. From the recent review, especially in authors such as Eisenman (2015), Levine and Prietula (2015), Herskovits et al. (2015), McKinley et al. (2016), Sgourev (2015) Grimaldi et al. (2021), Lee and Trimi (2020), Karimi et al. (2020) and Hadjelias et al. (2020), the following perspectives in the study of innovation are identified: studies on theoretical models of innovation, on the innovation process and studies about innovation in organizations.

Within the ten research areas, creativity, knowledge generation and absorption, as well as



collaborative networking and strategic orientation are seen as the specific topics to be developed to drive the generation of future innovations in organizations (Marín & Cuartas, 2019).

The total number of articles included in the literature review refer to studies conducted in developed countries (United States, Switzerland, Netherlands, Canada and France), and only a few articles deal with research in emerging or developing countries (Colombia, Ecuador, Brazil and Mexico) (Pisano et al., 2015). In particular, it is observed that the theoretical study of innovation was conducted mostly in the context of the developed countries mentioned above, while for the case of empirical studies there is a greater participation of emerging countries. This is how the theoretical research on the topic of innovation in Latin American countries is reduced, which indicates an opportunity to launch new studies in the region to support empirical research (Sepúlveda et al., 2019).

Finally, in the literature review we can observe a trend in the characteristics of innovation studies: production of empirical studies with quantitative approaches in the context of developed countries, as mentioned in this study. Therefore, it is desirable in the near future to carry out empirical studies with both qualitative and quantitative methodological approaches in Latin America and Asia, in order to generate more empirical evidence, generalize the findings to other contexts and contrast existing theories.

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Declaration of conflict of interest

The authors declare that they have no conflicts of interest.

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This research work was developed with the authors' own resources.

Contribution of the authors

The authors contribute to the theory by presenting a framework, which provides an overview of the available knowledge and creates a context of interest for future research.

References

Albuquerque, A., Azevedo, M. Mendes, M. & Cavalho, A (2020). Influence of internationalization and innovation on business competitiveness. *Electronic Journal of International Business*, 15(1), 1-18. <https://dialnet.unirioja.es/servlet/articulo?codigo=7306838>

Alfaro-García, V. G., Merigó, J. M., Alfaro-Calderó, G. G., Plata-Pérez, L., & Gil-Lafuente, A. M. (2018). A Citation Analysis of Fuzzy Research. *Lectures on Modelling and Simulation*, 1(1), 1-6. https://amsemodelling.com/publications/lectures_on_modeling_and_simulation/01%20AMSE%20bestof%20mazatlan%20alfaro.pdf

Ali, M. (2021). Imitation or Innovation: To What Extent Do Exploitative Learning and Exploratory Learning Foster Imitation Strategy and Innovation Strategy for Sustained Competitive Advantage? *Technological Forecasting and Social Change*, 165(1), 120527. <https://doi.org/10.1016/j.techfore.2020.120527>

Balland, P. A., Boschma, R., & Frenken, K. (2022). Proximity, innovation and networks: A concise review and some next steps. *Handbook of Proximity Relations*, 1(1), 70-80. <https://doi.org/10.4337/9781786434784.0010>

Blanco-Mesa, F., Merigó, J. M., & Gil-Lafuente, A. M. (2017). Fuzzy Decision Making: A Bibliometric-Based Review. *Journal of Intelligent and Fuzzy Systems*, 32(3), 2033-2050. <https://doi.org/10.3233/JIFS-161640>



- Blanco-Mesa, F., León-Castro, E., & Merigó, J. M. (2019). A Bibliometric Analysis of Aggregation Operators. *Applied Soft Computing Journal*, 81. <https://doi.org/10.1016/j.asoc.2019.105488>
- Bonnardel, N., & Didier, J. (2020). Brainstorming Variants to Favor Creative Design. *Applied Ergonomics*, 83(1), 102987. <https://doi.org/10.1016/j.apergo.2019.102987>
- Bryant, S. T., Straker, K., & Wrigley, C. (2020). Business Model Innovation by Design: A Review of Design's Role in Business Model Innovation. *International Journal of Design Creativity and Innovation*, 8(2), 125-140. <https://doi.org/10.1080/21650349.2020.1717997>
- Buenavides, L. & Bolaños, S. (2020). Tabloids of innovation in pymes: an approximation through a systematic look into literature. *Magazine of the Faculty of economic science*. 21(1), 221-237. <https://doi.org/10.22267/rtend.202101.134>
- Buijtendijk, H., Van Heiningen, J., & Duineveld, M. (2021). The Productive Role of Innovation in a Large Tourism Organization (TUI). *Tourism Management*, 85(1), 104312. <https://doi.org/10.1016/j.tourman.2021.104312>
- Chatzoglou, P. & Chatzoudes, D. (2018). The Role of Innovation in Building Competitive Advantages: An Empirical Investigation. *European Journal of Innovation Management*, 21(1), 44-69. <https://doi.org/10.1108/EJIM-02-2017-0015>
- Cheah, S. L. Y., & Yuen-Ping, H. O. (2021, April). Commercialization Performance of Outbound Open Innovation Projects in Public Research Organizations: The Roles of Innovation Potential and Organizational Capabilities. *Industrial Marketing Management*, 94, 229-241. <https://doi.org/10.1016/j.indmarman.2021.02.012>
- Cornett, M. M., Erhemjamts, O., & Tehranian, H. (2019). Competitive Environment and Innovation Intensity. *Global Finance Journal*, 41(1), 44-59. <https://doi.org/10.1016/j.gfj.2019.02.002>
- Cuevas, H., Estrada, S., Cortés, H. & Ramírez, L. (2019). Innovation of processes in the pyme mexican family . *Magazine of Administração Unimep*, 17(4), 17-42. <https://www.researchgate.net/profile/Hector-Cuevas-Vargas/publication/338684692>
- Cui, H., Dai, L., & Zhang, Y. (2021). Organization Capital and Corporate Innovation: Evidence from China. *Finance Research Letters*, 43, 101956. <https://doi.org/10.1016/j.frl.2021.101956>
- Da Costa, S., Páez, D., Gondim, S., Rodríguez, M., Mazzieri, S., Torres, A., Sánchez, F. & Jiménez, P. (2016). Percepcion of innovation in organizations. *Perception of innovation in organizations of Spain and Latin America. Universitas Psychologica*, 15(4), 1-22. <https://doi.org/10.11144/Javeriana.upsy15-4.piop>
- D'Attoma, I. & Leva, M. (2020). Determinants of Technological Innovation Success and Failure: Does Marketing Innovation Matter? *Industrial Marketing Management*, 91(1), 64-81. <https://doi.org/10.1016/j.indmarman.2020.08.015>
- De Conto, S., Valle, J. & Roehe, G. (2016). Innovation as a Competitive Advantage Issue: A Cooperative Study on an Organic Juice and Wine Producer. *Gest. Prod.*, 23(2), 397-407. <https://doi.org/10.1590/0104-530x1677-14>
- Distanont, A. & Khongmalai, O. (2018). The Role of Innovation in Creating a Competitive Advantage. *Kasetsart Journal of Social Sciences*, 30(1), 1-8. <https://fardapaper.ir/mohavaha/uploads/2020/01/Fardapaper-The-role-of-innovation-in-creating-a-competitive-advantage.pdf>
- Dogan, E (2017). A Strategic Approach to Innovation. *Pressacademia*, 4(3), 290-300. <http://doi.org/10.17261/Pressacademia.2017.491>
- Dornberger, R (2019). *New Trends in Business Information Systems and Technology*. Springer,



- 294(1), 50-312.
<https://www.springer.com/gp/book/9783030483319>
- Dorov, P., Dávila, G., Varvakis, G. & Vallejos, R. (2015). Generation of Ideas, Ideation and Idea Management. *Navus*, 5(2), 51-59.
<https://doi.org/10.22279/navus.2015.v5n2.p51-59.248>
- Dost, M., Badir, Y. F., Sambasivan, M., & Umrani, W. A. (2020). Open-and-Closed Process Innovation Generation and Adoption: Analyzing the Effects of Sources of Knowledge. *Technology in Society*, 62(1), 101309.
<https://doi.org/10.1016/j.techsoc.2020.101309>
- Eisenman, M. (2015). Understanding Aesthetic Innovation in the Context of Technological Evolution. *Academy of Management Review*, 38(3), 332-351.
<https://doi.org/10.5465/amr.2011.0262>
- Falciola, J., Jansen, M., & Rollo, V. (2020). Defining Firm Competitiveness: A Multidimensional Framework. *World Development*, 129(1), 104857.
<https://doi.org/10.1016/j.worlddev.2019.104857>
- Ferreira, J., Fernandes, C. & Ferreira, F. (2020). Wearing Failure as a Path to Innovation. *Journal of Business Research*, 120(1), 195-202.
<https://doi.org/10.1016/j.jbusres.2020.08.006>
- Flores, F., Ramos, R., Ramos, F. & Ramos, A. (2019). Technological innovation management and globalization as drivers of service quality and competitiveness. *Venezuelan Journal of Management (RVG)*, 24(88), 1239-1248.
<https://www.redalyc.org/jatsRepo/290/29062051014/html/index.html>
- Gao, D., Xu, Z., Ruan, Y. Z., & Lu, H. (2017). From a Systematic Literature Review to Integrated Definition for Sustainable Supply Chain Innovation (SSCI). *Journal of Cleaner Production*, 142(1), 1518-1538.
<https://doi.org/10.1016/j.jclepro.2016.11.153>
- García, J., Armenta, A., Martínez, L., Rebollo, J. & Rentería, R. (2019). Relationship between the innovation and the labor productivity in the manufacturing industry of Mexico. *Magazine Investigación Operacional*, 40(2), 249-254.
<https://rev-inv-ope.univ-paris1.fr/fileadmin/rev-inv-ope/files/40219/40219-10.pdf>
- García-Orozco, D., Espitia Moreno, I. C., Alfaro-García, V. G., & Merigó, J. M. (2020). Sustainability in México, bibliometric analysis of the scientific research presented in the last 28 years. *Inquietud Empresarial*, 20(2), 101-120.
<https://doi.org/10.19053/01211048.11479>
- Gault, F. (2018). Defining and Measuring Innovation in All Sectors of the Economy. *Research Policy*, 47(3), 617-622.
<https://doi.org/10.1016/j.respol.2018.01.007>
- Grimaldi, M., Greco, M. & Cricelli, L. (2021). A Framework of Intellectual Property Protection Strategies and Open Innovation. *Journal of Business Research*, 123, 156-164.
<https://doi.org/10.1016/j.jbusres.2020.09.043>
- Gupta, M (2018). The Innovation Process from an Idea to a Final Product: A Review of the Literature. *Int J. Comparative Management*, 1(4), 400-415.
<https://www.inderscience.com/info/inarticle.php?artid=96731>
- Guzmán, A (2018). El S-commerce: The innovation through Social Media . *Journal of Technology Management & Innovation*, 13(1), 56-64. <http://dx.doi.org/10.4067/S0718-27242018000100056>
- Hadjielias, E., Dada, O., Cruz, A., Zekas, S., Christofi, M. & Sakka, G. (2021). How do Digital Innovation Teams Function? Understanding the Team Cognition-Process Nexus Within the Context of Digital Transformation. *Journal of Business Research*, 122, 373-386.
<https://doi.org/10.1016/j.jbusres.2020.08.045>
- Hameed, W. U., Nisar, Q. A., & Wu, H. C. (2021). Relationships Between External Knowledge, Internal Innovation, Firms' Open Innovation



- Performance, Service Innovation and Business Performance in the Pakistani Hotel Industry. *International Journal of Hospitality Management*, 92(1), 102745. <https://doi.org/10.1016/j.ijhm.2020.102745>
- Haro, F., Córdova, N. & Alvarado, M. (2017). Importance of innovation and their execution in the business industry. *INNOVA Research Journal*, 2(5), 88-105. <https://dialnet.unirioja.es/servlet/articulo?codigo=5994740>
- Hermundsdottir, F., & Aspelund, A. (2020). Sustainability Innovations and Firm Competitiveness: A Review. *Journal of Cleaner Production*, 280(1), 124715. <https://doi.org/10.1016/j.jclepro.2020.124715>
- Herrera, A. X., Soto, J. & Parra, P. (2020). The virtual campus of the FES Zaragoza-UNAM: innovation in the organization. *Revista Colombiana de Computación*, 21(1), 35-45. <https://doi.org/10.29375/25392115.3897>
- Herskovits, R., Grijalbo, M., & Tafur, J. (2015). Understanding the Main Drivers of Value Creation in an Open Innovation Program. *International Entrepreneurship and Management Journal*, 9(4), 631-640. <https://doi.org/10.1007/s11365-013-0267-2>
- Horta, R., Silveira, L. & Camacho, M. (2015). Competitiveness and innovation in the manufacture industry in Uruguay . *Revista Iberoamericana de Ciencia, Tecnología y Sociedad*, 10(28), 23-49. <https://www.redalyc.org/articulo.oa?id=92433772002>
- Idris, B., Saridakis, G., & Khan, Z. (2022). The effect of outward and inward internationalisation on different types of innovation: evidence from UK SMEs. *Journal of International Management*, 28(2), 100903. <https://doi.org/10.1016/j.intman.2021.100903>
- Karimi, S., Sayyadi, H. & Shahabaldini, Z. (2020). Green Innovation: A Systematic Literature Review. *Journal of Cleaner Production*, 270(1), 24-45. <https://doi.org/10.1016/j.jclepro.2020.122474>
- Knudsen, E. S., Lien, L. B., Timmermans, B., Belik, I., & Pandey, S. (2021). Stability in Turbulent Times? The Effect of Digitalization on the Sustainability of Competitive Advantage. *Journal of Business Research*, 128(1), 360-369. <https://doi.org/10.1016/j.jbusres.2021.02.008>
- Lazaretti, K., Tiago, O., Sehnem, S. & Fantoni, F. (2018). Building Sustainability and Innovation in Organizations. Benchmarking: An International Journal, 22(7), 2166-2188. <https://doi.org/10.1108/BIJ-08-2018-0254>
- Lee, S. & Trimi, S. (2020). Convergence Innovation in the Digital Age and in the COVID-19 Pandemic Crisis. *Journal of Business Research*, 123, 14-22. <https://doi.org/10.1016/j.jbusres.2020.09.041>
- Lendel, V. & Varmus, M. (2016). Identification of the Main Problems of Implementing the Innovation Strategy in Slovak Businesses. *Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensi*, 60(4), 221-232. https://ideas.repec.org/a/mup/actaun/actaun_2012060040221.html
- Levine, S. S., & Prietula, M. J. (2015). Open Collaboration for Innovation: Principles and Performance. *Organization Science*, 25(5), 1414-1433. <https://doi.org/10.1287/orsc.2013.0872>
- Madero, S. & Barboza, G. (2015). Interrelation of culture, laboral flexibility, strategic alignment , innovation and corporate performance. *Contaduría y Administración*, 60(4), 735-756. <https://doi.org/10.1016/j.cya.2014.08.001>
- Marín, D. & Cuartas, J. (2019). Relationship between innovation and performance: impact of competitive intensity and organizational slack. *RAE Sao Paulo*, 59(2), 95-107. <https://doi.org/10.1590/s0034-759020190203>



- Mckinley, W., Latham, S. & Braun, M. (2016). Organizational decline and innovation: Turnarounds and downward spirals. *Academy of Management Review*, 39(1): 88-110. <https://doi.org/10.5465/amr.2011.0356>
- Morelos-Gómez J., Gómez-Yaspe I. S., & De Ávila-Suarez R. de J. (2021). Innovation capabilities of small and medium-sized companies in the metal-mechanic sector in Cartagena, Colombia.. *Entramado*, 17(1), 12-29. <https://doi.org/10.18041/1900-3803/entramado.1.7215>
- Muñoz, C., Gutiérrez, I. & Arias, O. (2018). The innovation of culture in the organization. *Revista Punto de Vista*, 1(1) 1-13. <http://dx.doi.org/10.15765/pdv.v9i13.1123>
- Pisano, P., Pironti, M. & Rieple, A. (2015). Identify Innovative Business Models: ¿Can Innovative Business Models Enable Players to React to Ongoing or Unpredictable Trends? *Entrepreneurship Research Journal*, 5(3), 181-199. <https://doi.org/10.1515/erj-2014-0032>
- Pulgarín, S. & Guerrero, N. (2017). Innovation and Competitiveness: Organizational Culture and Business Model. *Dimensión Empresarial*, 15(2), 16-25. <http://dx.doi.org/10.15665/rde.v15i2.1023>
- Queyroi, Y., Carassus, D., Maurel, C., Favoreu, C., & Marin, P. (2020). Local Public Innovation: An Analysis of its Perceived Impacts on Public Performance. *International Review of Administrative Sciences*. <https://doi.org/10.1177/0020852320963214>
- Robayo, P. (2016). Innovation as a process and its management in the organization: an application to the Colombian graphic sector.. *Suma de Negocios*, 7(1), 125-140. <https://doi.org/10.1016/j.sumneg.2016.02.007>
- Sánchez, L. & Londoño, M. (2018). Identifying features that promote the culture of innovation in organizations. *Revista Interamericana de Psicología Ocupacional*, 36(1), 35-47. <https://doi.org/10.21772/ripo.v36n1a03>
- Sepúlveda, J., Garcés, L., Arias, F., Betancourt, J., Arboleda, C. & Valencia, A. (2019). The Innovation of Products and Services: A Review of the Methodology for Its Evaluation in the Organizations. *Espacios*, 40(37), 26-38. <https://revistaespacios.com/a19v40n37/a19v40n37p26.pdf>
- Sgourev, S. V. (2015). How Paris Gave Rise to Cubism (and Picasso): Ambiguity and Fragmentation in Radical Innovation. *Organization Science*, 24(6), 1601-1617. <https://doi.org/10.1287/orsc.1120.0819>
- Si, S., Zahra, S., Wu, X. & Jeng, D. (2020). Disruptive Innovation and Entrepreneurship in Emerging Economics. *Journal of Engineering and Technology Management*, 58(1), 1-12. <https://doi.org/10.1016/j.jengtecman.2020.101601>
- Stavroulakis, P. J., Papadimitriou, S., & Tsirikou, F. (2021). Perceptions of Competitiveness for Maritime Clusters. *Ocean & Coastal Management*, 205(1), 105546. <https://doi.org/10.1016/j.ocecoaman.2021.105546>
- Tarapuez, E., Guzmán, B. & Parra, R. (2016). Strategy and innovation in Colombian MSMEs winners of the Innova Award 2010-2013. *Estudios Gerenciales*, 32(139), 170-180. <https://doi.org/10.1016/j.estger.2016.01.002>
- Unger, K (2018). Innovation, competitiveness and profitability in the sectors of the Mexican economy. *Gestión y Política Pública*, 27(1), 3-37. http://www.scielo.org.mx/scielo.php?script=sci_abstract&pid=S1405-10792018000100003&lng=es&nrm=iso
- Valdés, C., Triana, Y. & Boza, J. A. (2019). Reflexiones sobre definiciones de innovación, importancia y tendencias. *Avances*, 21(4), 532-552. <http://www.ciget.pinar.cu/ojs/index.php/publicaciones/article/view/488/1581>
- Vargas, E., Bahena, I. & Córdón, E. (2017). Responsible innovation: new strategy for Mipymes entrepreneurship. *Innovar*, 28(69), 9-27.



<https://doi.org/10.15446/innovar.v28n69.716>
95

Veiga, P. M., Teixeira, S. J., Figueiredo, R., & Fernandes, C. I. (2020). Entrepreneurship, Innovation and Competitiveness: A Public Institution Love Triangle. *Socio-Economic Planning Sciences*, 72(1), 100863. <https://doi.org/10.1016/j.seps.2020.100863>

Villalba, M. & Builes, C. (2016). The informal organization and the innovating process: case of a colombian pyme of electronic manufactory . *Ing. USB Med*, 7(1), 31-36. <https://doi.org/10.21500/20275846.2044>

Weerardena, J. (2016). An Empirical Investigation into Entrepreneurship and Organizational Innovation-based Competitive Strategy. *Journal of Research in Marketing and Entrepreneurship*, 3(1), 51-70. <https://doi.org/10.1108/14715200180001477>

Wicksell, K., & Schumpeter, J. (2022). Out of the Blue Danube. *The Making of Modern Economics: The Lives and Ideas of the Great Thinkers*, 173.

Zhang, W., Zhu, Y. (2015). Nirtetralin Inhibits Growth of Hepatitis E Virus in HepaRG Cells. *Bangladesh Journal of Pharmacology*, 10(2), 377-382. <https://doi.org/10.3329/bjp.v10i2.20923>

Zumba, M. F., Zumba, J. I., Toledo-Macas, R. K., & Martinez-Fernandez, V. A. (2017). Social media as a key tool in the management of innovation in organizations. In *CISTI (Iberian Conference on Information Systems & Technologies/Conferência Ibérica de Sistemas e Tecnologias de Informação) Proceedings 1(1)*, 1012-1016. <http://www.cisti.eu/2017/index.php?lang=es>

