



Research Article

Systems Thinking and Business Competitiveness: A Systematic Review of 2012 – 2022

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Abstract

The present study shows a systematic review of systemic thinking and its relationship with business competitiveness. The objective of the research is to determine the theoretical aspects of the dependent variable systemic thinking that are associated with business competitiveness and its dimensions. The methodology used is the systematic review of investigations. The inclusion criteria address the temporality of the investigations 2012-2022 and validate that the content is directly linked to the variables that are addressed in this investigation. The results allow conceptualizing systemic thinking and business competitiveness, as well as broadening the understanding of the incorporation of the systemic thinking method in companies; a method that analyzes and understands the elements, their interconnections, the feedback they generate, and the purpose of a system, from the perspective of cyclical dynamic analysis that promotes the projection of scenarios in the face of emerging factors. The main finding shows that the incorporation of systemic thinking in companies has an impact on the dimensions of business competitiveness, such as the development of dynamic capacities, and innovation at the first level of the relationship; at a second level, an impact on planning is observed, strategies, sustainability, through the intervention of mediating dimensions such as performance management, the correct analysis of internal and external factors, improvement in managerial skills.

Keywords: Systemic Thinking, Competitiveness, innovation, interrelationships, strategies,

Introduction

The social and economic complexity, the conception of business is constantly changing, generating strong transformations in the markets and in general in the dynamics of business management. Business scenarios demand analyses that contemplate the constant connectivity, non-linearity, and the constant emergence of the characteristics that make up the system, i.e., complexity (Dominici, 2012).

Considering business organizations as complex systems shows that it is impossible to understand their operation by analyzing the elements that make them up, separately; under that scheme of analysis, it is not possible to establish legitimate scenarios and even less to try to foresee or influence them (Dominici, 2012; Plate y Monroe, 2014).

In view of the above, it is necessary to incorporate analysis approaches in order to survive in such challenging environments with high levels of variability, by generating dynamic capabilities that result in competitive advantages (Arnold, 2018; Soto, 2021). Competition is increasingly intense among organizations operating in the same sectors. Institutions must be able to generate sustainable efficiencies managing to develop differentiating elements that allow them to survive in the face of competition (Epede and Wang, 2022; Mukerjee, 2016).

In this sense, it is considered that the understanding of the systemic dynamics of organizational structures has been conceptualized as an important aspect for the global understanding of organizations, playing an important role for the success and growth of businesses in modern environments (Jardon and Martinez-Coba, 2022; Soto 2021). In view of the above, the treatment of social phenomena in the world, including business, is considered through the lens of Systems Theory, which through systems thinking contemplates reality as a complex scenario that demands different types of treatment that include disruptive approaches and different theories for the search for growth in organizations (Soto, 2021; Ledesma and Armijo 2018).

Therefore, the present study carries out an in-depth analysis of the associativity between the variables systems thinking and business competitiveness, according to the scientific literature developed. This not only fills the gap in reference to research on the theories of both variables by trying to establish a linkage between them, but also addresses a topic of key interest for organizational leaders in the long-awaited search for competitiveness and the subsistence of organizations. In this context, it is emphasized that institutions interact in increasingly volatile environments, exposed to an overload of information and variability in the condition of factors, making it difficult for organizations to operate competitively.

It is becoming increasingly complex to generate competitiveness (Luamba et al., 2021); this is configured as a problem, since the positive impacts generated by competitive industries are innumerable, from the economic growth of nations to the improvement in the quality of life of their inhabitants (Hajduova et al., 2021).

In view of the above, this research aims to answer the question: What are the theoretical aspects of systems thinking that are associated with business competitiveness and its dimensions? As a derivation, the general objective of the research is to determine the theoretical aspects of systems theory that are associated with business competitiveness.

Systems Thinking In Organizations

The business world changes drastically and new ways of understanding and analyzing it are needed; in this context, the systems theory that evokes systems thinking is presented as a strategy to address management in companies (Ledesma and Armijo, 2018; Vemuri and Bellinger, 2017).

Systems thinking emerges as a school of thought in the twentieth century; however, it has not yet made the leap to be incorporated into mainstream business activities in organizations (Vemuri and Bellinger, 2017; Prasad and Nori, 2008). The term was coined by Barry Richmond in 1987, then many authors have conceptualized it, but a

common denominator is not observed. Ross and Jon (2015) argue that such difficulty and variation in the proposed concepts comes from the need to link the concept to our field of action; in addition, the definitions are raised based on a reductionist thinking approach, an antagonistic approach to systems thinking concepts (Dominici, 2012).

In the institutions, there is still entrenched reductionist thinking that analyzes situations by dividing the whole into smaller parts, to reach their understanding through simple linear relationships. This approach does not allow a deep analysis of complex and dynamic business scenarios; such approach has serious limitations to address the complexity of organizations. Today, it is imperative to incorporate a new paradigm that leads from the hand of science and technology beyond the reductionist approach to organizations (Dominici, 2012; Plate and Monroe, 2014).

Companies and institutions operate as systems, intertwined by links that do not easily show the relationships that intercept them. If we add to this context the fact that companies are made up of human beings, it is even more complicated to visualize such connections (Maestre and Bracho, 2019).

On the other hand, systems thinking seeks to achieve an understanding of interactions and interconnections, detecting points of leverage to capitalize on strengths or improve weaknesses. Systems thinking approaches a problem through the analysis of dynamic behavior; such analysis allows the thinker to develop a generalist view, managing to detect solutions to problems with comprehensive and effective solutions that do not generate major problems (Ayoubi et al., 2015; Shaked and Schechter, 2013; Maestre and Bracho, 2019).

Ross and Jon (2012) review the main authors who addressed systems thinking to highlight their common contributions. In that sense, it is indicated that through Systems Thinking it is possible to make reliable inferences about the behavior of a system (Richmond, 1994); it allows to see totalities and the context in which they are framed by identifying interrelationships instead of static parts

(Sense, 1990); on the other hand, systems thinking seeks to understand the system from the relationship between its elements, discovers feedback processes, identifies flows and delays by understanding nonlinearities, and recognizes the limits of mental models (Sweeney and Sterman, 2020). The definition should include long-term planning, nonlinearity and feedback (Kopainsky et al. , 2011). In addition, it should incorporate thinking from multiple perspectives, dealing with diverse operational contexts of the systems, achieving predictability of changes in the system (Escuderos et al., 2011). In this sense, from the concepts proposed by different authors, Ross and Jon (2012) propose systems thinking as the ability to understand a system by identifying its purpose, knowing the elements that compose it and the interconnections between them.

Consequently, systems thinking consists of three elements: (i) elements, defined as the characteristics or aspects that make up the studied reality; (ii) interconnections, conceptualized as the way in which the characteristics of the studied reality are related or feedback each other and in a dynamic way; (iii) Purpose, is the objective of the studied system and the most important element of the construct of the variables, since it is determinant and regulates the dimensions described above and also outlines the behavior of the system. A requirement to achieve a complete definition is to integrate the three proposed dimensions (Dominici, 2012; Ross and Jon, 2015).

Ayoubi et al., 2015, argue that the incorporation of systems thinking in companies contributes to decision making in the face of volatile circumstances of the environment; as well as it impacts on improving the level of efficiency; they even indicate that it increases the level of cognition of strategists generating creativity, innovation, achieving the dynamic ability to transform risks into development opportunities. The incorporation of systems thinking transcends many disciplines, connecting them and generating synergies with high impact (Ross and Jon, 2012).

= The success and survival of organizations depend on how competitive they can be in the market, facing their environment, understanding the external and internal dynamics that are constantly evolving, with patterns that are constantly generated. A company must be able to constantly redefine itself to face a changing market. A company appreciation is that of Dominici (2012) who argues that companies currently depend much more on their portfolio of intangible assets; this gives greater value to systems thinking in organizations that is posed as a new management tool based on fuzzy logic and nonlinearity.

Business competitiveness

Currently, there is a growing interest in deepening research in the field of business management that generates competitiveness (Barboza et al. 2022; Chursin and 2015; Pavlenchyk et al., 2021). The interest lies in being one of the business capabilities that would ensure, through the generation of comparative advantages, the subsistence of the organization (Hernández, 2020; Agyapong et al., 2016; Carrasco and Villalba, 2021; Villalobos, 2021).

Competitiveness is defined from multiple points of view; however, authors agree that a competitive organization performs successfully by coping with the direct and indirect impact factors of the macroenvironment and microenvironment highly volatile conditions in a globalized environment (Delgado et al., 2012; Pérez et al., 2021; Binns et al., 2022; Mukerjee et al., 2016).

In addition, the concept of competitiveness is associated with the capacity for innovation that comes from a correct analysis of the business structure and its actors; it is also linked to the ability to investigate the real causes of situations through the use of different disciplines (Ibarra et al., 2017; Pech, 2015; Sánchez-Gutiérrez et al., 2019). In this sense, competitiveness is not limited to working purely with the resources it possesses, the institution must have the ability to develop dynamic capabilities, which are defined as its differentiators, very difficult to replicate by the competition, as

well as determinants of business success (Jeng and Pak, 2016). This ability comes from the ability to analyze the business and understand the value of its processes and resources and combine them with the ability to innovate (Karman and Savanevičienė, 2021).

In this context, it is important to highlight the need for organizations to avoid maintaining the status quo; they must consider that the ability to cope with the variability of conditions depends on the ability to understand and even anticipate technological change and impact the markets in which they operate (Karman and Savanevičienė, 2021); for this, the use of innovation in R&D is the source of tools to foresee the emergence of factors that alter the dynamics of markets (Hajduova et al., 2021; Li & Umans., 2020).

In addition, competitiveness requires the incorporation of customer-focused strategies, which, through knowledge of customers, allow the management of resources for the generation of differentiated value in the face of other market offerings (Mukerjee et al., 2016).

Materials and Methods

Siddaway et al., (2019), propose a systematic review as an exploratory-descriptive research study. The present study aims to locate and analyze the different research studies and their proposed theories on the variables under study, with which objective and systematic conclusions will be obtained. The research has a qualitative approach, in view that it intends to establish in response to the research questions and objectives, to state a reality, argued as part of a social activity, through the collection of information that describes the everyday life, seeking to describe a phenomenon (Holliday, 2014; Vasilachis; 2006). Through the present study, we seek to determine the level of associativity of the variables studied.

To do so, it will be important to follow the stages proposed by the design in reference; An exhaustive analysis of previous studies on Systemic Thinking and Business Competitiveness was carried out. The

systematic review was carried out based on the adaptation of the PRISMA [Preferred Reporting Items for Systematic Reviews and Meta-Analyses] methodology (Urrútia and Bonfill, 2013).

The objective of the research is to determine the theoretical aspects of systems thinking that are associated with business competitiveness and its dimensions. For this purpose, a search was conducted in the main databases such as: Scopus, Proquest, ScienceDirect, ElSevier, among others, selected the documents to be used, identified and filtered articles, which allows giving continuity to the research process.

The inclusion criteria detailed conference proceedings, papers and / or articles in scientific journals indexed in Q4, Q3, Q2 and especially in Q1, also, were validated in reference to the importance and linkage of the issues with the problem under study; another criterion was the temporality of the

research from 2012 to 2022, this in view that the dynamics of business is changing and evolving rapidly.

In view of the above, 60 documents were found, 40 research papers were part of the present research, which represents 66%. The documents were selected in order of their contribution to the conceptualization of the variables and the elaboration of their construct, in addition to their contribution to the determination of the theoretical relationship between both variables.

Regarding the search strategy, the key words were: systems thinking, business competitiveness, in English and Spanish.

It is important to point out that the selected documents come from scientific sources, and finally we proceed with the analysis of the complete document and extraction of the information that will be used in the research (see Fig. 01).

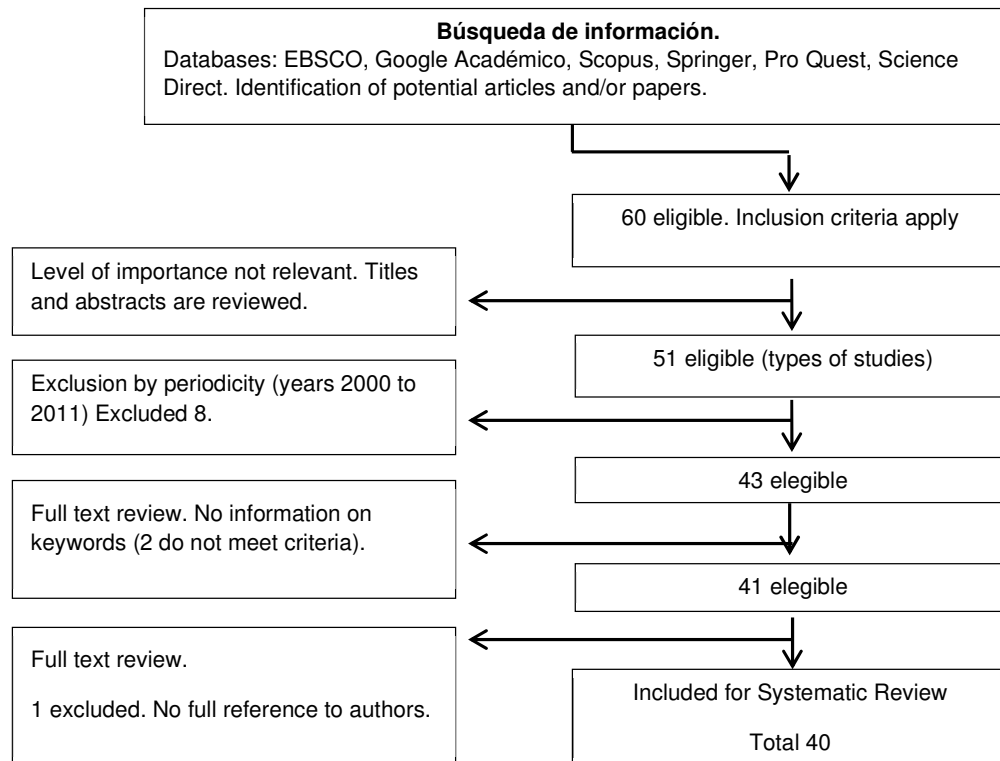


Figure 1: Research selection process

The information obtained was consolidated in a background matrix, from which the data shown in the results were extracted after an extensive analysis process.

Results and Discusión

The following is the selection process, analysis, and results found when reviewing the studies related to the objectives set for the following research: What are the theoretical aspects of systems thinking associated with business competitiveness? What are the theoretical aspects of systems thinking associated with the dimensions of business competitiveness?

In reference to the classification of the literature analyzed by place of origin, a high degree of atomization was observed, given that the search did not present geographical exclusion criteria; according to details, 27.5% of the documents reviewed correspond to Asia, as well as Latin America with 27.5%, followed by studies from North America with 20.0%, 17.5% of the research studied originates from the European continent, with a lower participation we have Africa with 5.0%. Finally, proposing the nations with the highest number of publications used, we have in the first three places: the United States with 20.0%, India with 10.0% and Taiwan with 7.5%, totaling 37.5%. The balance is widely dispersed, that is to say, there is no major focus of the study of the variables treated in any specific nation.

On the other hand, the classification segmentation of the studies used is presented in reference to their linkage with the variables treated, whether they are treated separately or linked in the same document. The research that contributed to the delimitation, conceptualization, and elaboration of the construct of systemic thinking represents 35% and the documents that contributed to the dimensioning of the competitiveness variable constitute 65%. It is clear that competitiveness is a concept widely studied due to its impact on the development of nations. The research on systemic thinking is still little and quite limited to the field of action of the authors.

No documents were found that directly link both variables; however, 5 articles were identified 12.5% that related systemic thinking with variables directly related to competitiveness, highlighting the impact of the dependent variable in the generation of successful strategies, correct conceptualization of a scenario, innovation, facilitator of creativity, good working environment, development of management strategies, effective leadership, possibility of projecting different scenarios in anticipation of changes.

In order to clearly expose the aforementioned links, it is important to first describe the research variables in order to determine precisely the association that may exist between them.

After reviewing and analyzing all the documents that dealt with Systems Thinking, we can indicate that it is a concept that, although it comes from the twentieth century, has gained importance in the last decade given the evolution of markets and the need for disruptive methods of analysis that can positively enhance the decisions made by organizations. Systems thinking proposes the analysis of scenarios by approaching behavior dynamically; the thinker must manage to develop a generalist perspective (Ayoubi et al., 2015; Shaked and Schechter, 2013; Maestre and Bracho, 2019), seeking to understand the interactions and impacts generated between the elements that make up the system (Ross and Jon, 2012).

Thinking allows achieving honest inferences about the behavior of a system, by identifying the elements, interrelationships, and feedback processes that generate linkages, analyzing the processes of nonlinearities, incorporating the analysis of multiple perspectives and above all considering the typification of its purpose. In this line, the elaboration of the construct of the variable systemic thinking is proposed based on the existence of three dimensions that compose it (See Fig. 02).

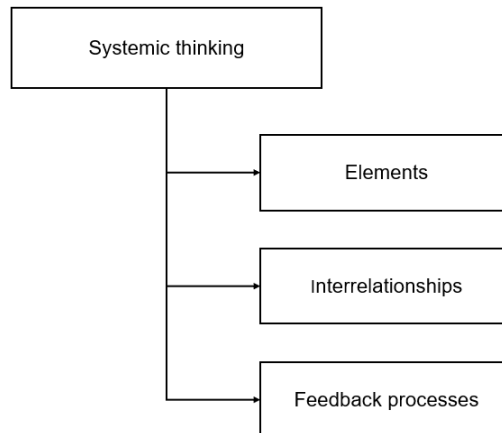


Figure 2: Systems Thinking Model

Business competitiveness is defined as the ability of an organization to survive in the market and stand out from the competition in a certain sector (Karman and Savanevičienė, 2021; Pérez et al., 2021). Authors associate competitiveness with the following abilities of an organization: innovation, act performance teams, efficiency, productivity and development of dynamic capabilities,

planning (Arnold, 2018; Agyapong et al., 2016; Luamba et al., 2021). Competitiveness positively impacts the value of a company and improves the position it has with respect to other players. Although the concept has been widely studied, there is still much room for research on the elements that lead to the development of competitive advantages (Mukerjee, 2016) (See Fig. 03).

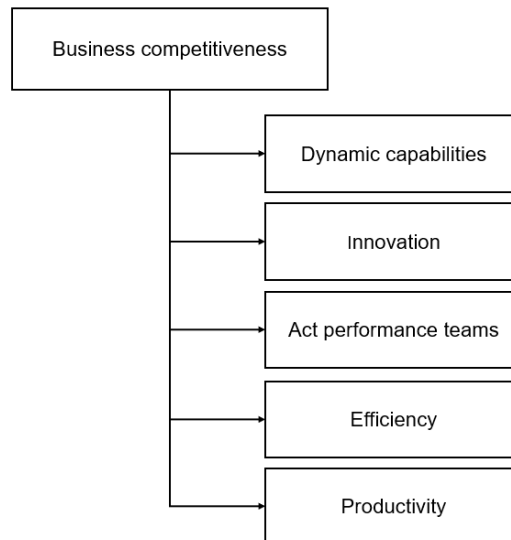


Figure 3: Business Competitiveness Model

Mukerjee (2016) states that the way in which the strategies of an organization are designed has a direct impact on competitiveness; for this, the strategy should

focus on being differential and be based on resources that are really difficult to imitate. In this sense, a correct analysis of the macro environmental aspects is required,

determining the relationships of the organization with the environment and the strategic options that come from these links. This analysis must consider the determination of the dynamic capabilities of the organization. These decisions are of utmost importance and are the basis of the strategies in a symbiotic way.

In view of the above, we must indicate that systemic thinking promotes, through the adoption of its methodology, the analysis and the optics that would allow the above to become a reality. This is through its dynamic vision of the organization, the cyclical study of resources, the analysis of interactions and the identification of strengths and weaknesses (Soto, 2021; Ledesma and Armijo, 2018; Vemuri and Bellinger, 2017).

In reference to the generation of strategies and their impact on competitiveness, we find the need to establish plans for an organization, made up of goals and objectives that will serve as metrics to ensure that the organization is aligned to the right path. In this context, it is determined that systems thinking, in addition to contemplating the elements and interconnections in the analysis, incorporates the purpose of the system (Chursin and Makarov, 2015; Ross and Jon, 2012).

On the other hand, it is argued that an indispensable factor for competitiveness to exist, linked to sustainability, is the need for constant innovation. The differentials developed by a company sooner or later will be discovered and put into practice by the competition. The company must have the ability to innovate to avoid the devaluation of knowledge considered as a valuable asset of the institution; it must manage organizational capabilities and processes with a focus on knowledge development and learning; for them, the analysis of trends and business models is essential, etc. (Arnold, 2018; Mukerjee, 2016; Saman et al, 2022; Jardon and Martinez-Cobas, 2022).

In that sense, systems thinking is necessary for innovation management by measuring the links between the elements of a system,

given that innovation in an organization incorporates subsystem and multidisciplinary approaches, also because it fosters the adaptability and learning capacity of an organization and contemplates feedback processes. This type of thinking encourages new views on events with greater accuracy (Ayoubi et al., 2015; Prasad and Nori, 2018). Innovation generates value and demands a two-way communication generating profitability (Sanchez-Gutierrez et al., 2019).

In line with the concept of innovation, it is important to highlight that systems thinking improves the predictability of scenarios, i.e. responding to the emerging patterns of external actors in a timely manner, given the analysis of the different inter- and external operating contexts of the organization (Kopainsky et al., 2011; Escuderos et al., 2011; Ross and Jon (2012)).

Finally, and in view of the above, when studying the selected research, no study was found that directly links both variables; however, when establishing the dimensions that make up the competitiveness construct, the validation of the impact between the systems thinking variable and the dimensions that make up the competitiveness model is clearly observed in different research studies.

The relationships found are classified as: (i) Level one relationship, in which the studies validate a direct impact between the incorporation of systems thinking in the organization and the generation of dynamic capabilities and innovation; (ii) Level two relationship that validates the impact of systems thinking on planning and the development of correct strategies through the intervention of a mediating dimension such as the correct internal analysis and the environment with its interconnections in the organization; likewise, a level two relationship of systems thinking with sustainability was detected, through the formation of high performance teams and the development of the capacity to foresee highly probable scenarios (See Fig 03).

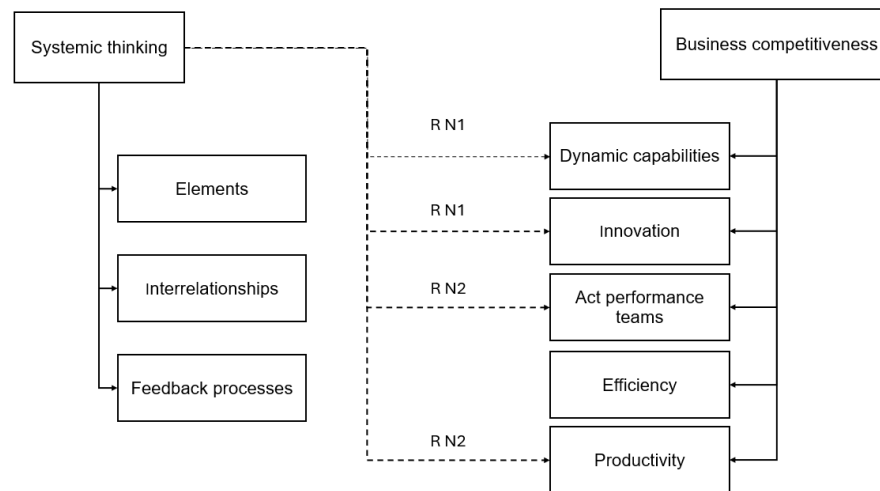


Figure 4: Associativity between systemic thinking and the dimensions of business competitiveness

In this sense, it is imperative to delve deeper into the different sectors and unveil a global vision in reference to the relationship levels of the variables, providing valuable knowledge for the companies and the longed-for search for business competitiveness.

Conclusions

It is evident that organizations have evolved drastically and are increasingly complex systems. Complex systems cannot be approached under reductionist approaches with models of isolated approaches, because of their limited capacity to represent business scenarios with the cyclical, multidisciplinary, and interconnected dynamics that comprise them.

Systems thinking represents an integral analytical approach of fuzzy logic and non-linearity that when incorporated in an organization would highlight the complexity of the systems, the interaction between internal and external elements, in addition to the constant interaction and exchange of information, through the connections that feedback and generate the understanding of the complete picture, fostering the ability to forecast scenarios, solve problems, and design strategies that consider the impact of these actions towards the other elements that make up the system.

Business competitiveness is understood as a capacity of companies, which enables them to survive and stand out from the competition. This performance is conditioned by the incorporation of certain factors in the management of the organization, such as: Innovation, high performance work teams, efficiency, productivity, dynamic capabilities, planning, strategies and profitability, all of which must exist in a sustainable and consistent manner in the organization for it to be competitive.

The objective of this research was to determine the associativity between systems thinking and business competitiveness. The results validate the existence of influence between the variables; however, relationships were detected between the independent variables and some of the dimensions of Business Competitiveness. The relationships found were classified into two levels.

Relationship one, between systemic thinking and the dimensions of competitiveness: Innovation and generation of dynamic capabilities, and the relationship between systemic thinking and the dimensions of business competitiveness: sustainability and planning with strategy development; the latter case was classified as relationship two, since mediating dimensions such as the capacity for external and internal analysis, the development of

high performance teams, and the ability to predict emerging scenarios are detected.

The main finding of this research shows the validation of how the incorporation of systemic thinking positively influences business competitiveness, through the direct impact on the dimensions of dynamic capabilities and innovation and through the indirect impact on the dimensions of planning, strategies and sustainability.

The above conclusions are generated in a global situation in which the dynamics of business requires disruptive and integrating methods that allow organizations to be competitive, impacting on the growth of countries and improving the quality of life of societies.

In view of the above, it is clear that it is imperative to carry out more studies that address the variables presented, even considering in future studies the validation of the conditioning of the relationship with other variables presented in the conclusions.

References

- Agyapong, A., Ellis, F., & Domeher, D. (2016). Competitive strategy and performance of family businesses: Moderating effect of managerial and innovative capabilities. *Journal of Small Business & Entrepreneurship*, 28(6), 449-477 Q1
- Anderson, V.; Johnson, L. *Fundamentos del pensamiento sistémico* ; Pegasus Communications, Inc.: Massachusetts, MA, EE. UU., 1997. [Google Scholar]
- Arnold, M. G. (2018). Sustainability value creation in frugal contexts to foster sustainable development goals. *Business Strategy & Development*, 1(4), 265-275. Q1
- Ayoubi, A., Khosravi, L., & Jahromi, M. R. (2015). Transformational leadership and systemic thinking in an adaptive complex system in management of an organization. *Mediterranean Journal of Social Sciences*, 6(1), 245-251. doi:10.5901/mjss.2015.v6n1p245
- Barboza Seclén, D. M., Miranda Guerra, M. P., Cespedes Ortiz, C. P., & Esparza Huamanchumo, R. M. (2022). Experiential marketing and brand value in a company in the gastronomic sector. [Marketing experiencial y el valor de marca en una empresa del sector gastronómico] *Revista Venezolana De Gerencia*, 27(98), 696-712. doi:10.52080/rvgluz.27.98.20 Q3
- Bešić, S. (2019). The application of contemporary marketing concept in the sense of the improvement of business subject competitiveness. *Tehnicki Vjesnik*, 26(2), 441-448. doi:10.17559/TV-20181114195448 Q3
- Binns, A., Tushman, M. L., & O'Reilly III, C. (2022). Leading Disruption in a Legacy Business. *MIT Sloan Management Review*, 63(2), 1-4.
- Chursin, A., Makarov, Y. (2015). Introducción. En: *Gestión de la Competitividad*. Springer, Cham. https://doi.org/10.1007/978-3-319-16244-7_1
- Delgado, M., Ketels, C., Porter, M. E., & Stern, S. (2012). The determinants of national competitiveness (No. w18249). National Bureau of Economic Research.
- Dominici, G. (2012). Why Does Systems Thinking Matter? *Business Systems Review*, 1(1), 1-2. doi:10.7350/bsr.a02.2012
- Epede, M. B., & Wang, D. (2022). Competitiveness and upgrading in global value chains: A multiple-country analysis of the wooden furniture industry. *Forest Policy and Economics*, 140 doi:10.1016/j.forpo.2022.102737 Q1
- Hajduova, Z., Hurajova, J. C., Smorada, M., & Srenkel, L. (2021). Competitiveness of the selected countries of the EU with a focus on the quality of the business environment. *Journal of Competitiveness*, 13(4), 43-59. doi:10.7441/joc.2021.04.03

- Hernández, G. (2020). Diagnóstico organizacional como modelo de desarrollo sostenible y competitivo. *Revista Científica Electrónica de negocios Negotium*, 16
- Ibarra, C. M., Gonzáles, T. L. y Demuner, F. M. (2017). Competitividad Empresarial de las Pequeñas y Medianas Empresas. *Estudios Fronterizos*, 107-130.
- Jardon, C. M., & Martinez-Cobas, X. (2022). Trust and opportunism in the competitiveness of small-scale timber businesses based on innovation and marketing capabilities. *Business Strategy & Development*, 5(1), 69-79. Q1
- Jeng, D. J. F., & Pak, A. (2016). The variable effects of dynamic capability by firm size: The interaction of innovation and marketing capabilities in competitive industries. *International Entrepreneurship and Management Journal*, 12(1), 115-130
- Karman, A. y Savanevičienė, A. (2021), "Mejora de las capacidades dinámicas para mejorar la competitividad sostenible: conocimientos de la investigación sobre las organizaciones de la región báltica". *Baltic Journal of Management*, vol. 16, núm. 2, págs. 318-341. <https://doi.org/10.1108/BJM-08-2020-0287>
- Ledesma, F. y Armijo, S. (2018). Algunos Desarrollos del Pensamiento Sistémico, desde la Génesis de la Teoría General de Sistemas a la Teoría de Sistemas Complejos. *Revista Perfiles de las Ciencias Sociales*, 5(10), 38- 52
- Li, H., Terjesen, S., & Umans, T. (2020). Corporate governance in entrepreneurial firms: a systematic review and research agenda. *Small Business Economics*, 54, 43-74. <https://doi.org/10.1007/s11187-018-0118-1> Q1
- Luamba, D. S., Blye, M. L., Mwema, I. E. M., Williams, I. A., James, K., & Chagadama, J. (2021). The Benefits of Innovation for Small Businesses. *International Journal of Business and Management Research*, 9(4), 425-432. Q4
- Maestre, B. E., & Bracho, K. J. (2019). Control Sistémico de Gestión y Competencias Gerenciales del Directivo Docente en el Manejo del Talento Humano. *Bistua Revista De La Facultad De Ciencias Basicas*, 17(3 (2019)), 133-142.
- Mukerjee, K. (2016). Factors that contribute towards competitive advantage: A conceptual analysis. *IUP Journal of Business Strategy*, 13(1), 26-39. Q2
- Mukerjee, K. (2016). Factors that contribute towards competitive advantage: A conceptual analysis. *IUP Journal of Business Strategy*, 13(1), 26-39.
- Ortega Carrasco, R. J., & Villalba Benítez, E. F. (2021). Retos y oportunidades de las pymes para fortalecer su competitividad. *Latam Revista Latinoamericana De Ciencias Sociales Y Humanidades*, 2(1), 115-128. Recuperado a partir de <http://latam.redilat.org/index.php/lt/article/view/40>
- Pavlenchyk, N., Horbonos, F., Pavlenchyk, A., Skrynkovskyy, R., & Pawlowski, G. (2021). Increasing the competitiveness of enterprises based on the use of marketing management tools. *Agricultural and Resource Economics*, 7(3), 77-89. doi:10.51599/are.2021.07.03.05
- Pech, R. (2015). Achieving the innovative edge in technology, engineering design, and entrepreneurship. *Journal of Innovation and Entrepreneurship*, 5(6), 1-18. <https://doi.org/10.1186/s13731-016-0035-y>
- Pérez Peralta, C. M., Chirinos Araque, Y. del V., Ramírez García, A. G., & Barbera Alvarado, N. (2021). Factores de competitividad en PYMES manufactureras en Colombia. *Revista Venezolana De Gerencia*, 26(5), 350-369.

- <https://doi.org/10.52080/rvgluz.26.e5.23.Q3>
- Placa, R. y Monroe, M. (2014). Una estructura para evaluar el pensamiento sistémico. El intercambio de aprendizaje creativo , 23 (1), 1-3.
 - Prasad, V.C.S., Nori, K.V. Systems Approach for Adoption of Innovations in Organizations. Syst Pract Act Res 21, 283-297 (2008). <https://doi.org/10.1007/s11213-008-9097-5>
 - Ross D. Arnold, Jon P. Wade, (2015) A Definition of Systems Thinking: A Systems Approach, Procedia Computer Science, Volume 44, 2015,Pages 669-678, ISSN 1877-0509, <https://doi.org/10.1016/j.procs.2015.03.05>
 - Saltos-Cruz, G., Araque-Jaramillo, W., & Saltos-Cruz, C. (2022). Brand management and business competitiveness: An explanatory study of fundamental processes. [Gestión de marca y competitividad empresarial: Un estudio explicativo de procesos fundamentales] Revista Venezolana De Gerencia, 27(7), 186-202. doi:10.52080/rvgluz.27.7.13
 - Saman, S N, Alfaro, W, Miranda M, & Esparza, RME (2022). Resiliencia y competitividad empresarial: una revisión sistemática, período 2011-2021. Revista de ciencias sociales , (3), 306-317.
 - Sánchez-Gutiérrez, J., Cabanelas, P., Lampón, J. F., & González-Alvarado, T. E. (2019). The impact on competitiveness of customer value creation through relationship capabilities and marketing innovation. Journal of Business and Industrial Marketing, 34(3), 618-627. doi:10.1108/JBIM-03-2017-0081
 - Shaked, H. y Schechter, C. (2013). Ver totalidades: el concepto de pensamiento sistémico y su implementación en el liderazgo escolar. Revista internacional de educación , 59 (6), 771-791.
 - Soto Quispe, N. (2021). La importancia del pensamiento sistémico para el diseño de estrategias exitosas. InnovaG, (7), 44-46. Recuperado a partir de <https://revistas.pucp.edu.pe/index.php/innovag/article/view/25120>
 - Urrútia G, y Bonfill X (2013). La declaración prisma: un paso Adelante en la mejora de las publicaciones de la Revista Española de Salud Pública. Rev Esp Salud Pública 2013; 87: 99-102.
 - Vemuri, P., & Bellinger, G. (2017). Examining the use of systemic approach for adoption of systems thinking in organizations. Systems, 5(3) doi:10.3390/systems5030043
 - Villalobos, G., Moraga, G., Guevara, M., & Araya-Castillo, L. (2021). Desempleo juvenil: contribuciones para su disminución desde el emprendimiento. Revista Venezolana De Gerencia, 26(95), 758-775. <https://doi.org/10.52080/rvgluz.27.95.20>
 - Yeh, T. -, Chen, S. -, & Chen, T. -. (2019). The relationships among experiential marketing, service innovation, and customer satisfaction-A case study of tourism factories in taiwan. Sustainability (Switzerland), 11(4) doi:10.3390/su11041041
 - Zhou, L., Ayegeba, J., Ayegeba, E. et al. (2021). Impact of dynamic capacities on the performance of food and beverage enterprises in Lagos, Nigeria. Journal of Innovation and Entrepreneurship, 10(50), 1-24. <https://doi.org/10.1186/s13731-021-00169-1>