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The effect of innovation management on competitive advantage: A review of current trends



Efecto en la gestión de innovación como ventaja competitiva empresarial: Revisión de literatura desde tendencias actuales

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Abstract

Globalization has transformed economic activity, creating more demanding markets and pressuring firms to adapt through effective organizational change. Despite extensive research on business competitiveness, gaps remain in understanding how innovation management (IM) contributes to competitive advantage (CA). This review synthesizes current trends to clarify those effects. For this purpose, a qualitative approach was used, which included an exhaustive literature review, bibliometric analysis and intelligent data analysis. We find that both IM and competitive advantage are essential elements. IM is considered crucial for the successful growth of organizations in extremely competitive business markets. It is suggested that future research with a quantitative approach be carried out to show what type of IM is developed by organizations and what CAs they obtain in return. Also, to examine the factors and actors involved in IM to develop CA. The results of the study have the potential to guide future research and sound business strategies. A key limitation is the Tree of Science (ToS) tool's database restriction, which may exclude relevant studies beyond Web of Science.

Keywords: Current trends; Competitive advantages; Entrepreneurship; Innovation management.

Resumen

La globalización ha transformado las actividades económicas, generando mercados exigentes que demandan cambios organizacionales que buscan ser satisfechos efectivamente. Aunque se ha investigado como mantener la competitividad empresarial, persisten lagunas en la comprensión de efectos de la gestión de la innovación (GI) como ventaja competitiva (VC) en el ámbito empresarial. Debido a esto se hace necesario realizar una revisión de literatura enfocada en las tendencias actuales de los efectos de la GI como las VC en el ámbito empresarial. Para ello, se empleó un enfoque cualitativo, que incluyó la revisión exhaustiva de literatura, análisis bibliométrico y análisis inteligente de datos. Se logró identificar que tanto la GI como las VC son elementos esenciales en el desarrollo empresarial, especialmente en países emergentes. La GI se considera crucial para el crecimiento exitoso de las organizaciones en mercados empresariales extremadamente competitivos. Se sugiere realizar futuras investigaciones de enfoque cuantitativo para evidenciar qué tipo

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de GI desarrollan las organizaciones y qué VC obtienen a cambio. Asimismo, examinar los factores y actores involucrados en la GI para desarrollar VC. Los resultados del estudio tienen la capacidad de orientar investigaciones futuras y estrategias empresariales sólidas. Sin embargo, como limitación, se destaca la restricción de la herramienta Tree of Science (Tos).

Palabras clave: Tendencias actuales; Ventajas competitivas; Emprendimiento; Gestión de la innovación.

Introduction

IM has become a key factor for organizational growth and prosperity in highly competitive business environments (Robayo Acuña, 2016). Scholars highlight firms' capacity to create and sustain competitive advantage in globalized markets (Medeiros et al., 2019). In this sense, it is emphasized that IM requires developing organizational management skills that ensure efficiency, thus boosting productivity and performance (Lestari et al., 2020). In addition, managerial mindsets spanning behavior, knowledge, capability building, and external partnering are emphasized (Markovich et al., 2019).

Consequently, it is crucial to change marketing practices and digital transformation (Suandi et al., 2022). IM increasingly integrates digital technologies and explores green dynamic capabilities (DC) (Abrudan et al., 2022). Although there are studies on the factors contributing to CA and on how to maintain business competitiveness, significant gaps remain in the understanding of the specific effects of IM as a driver of CA. This gap limits a comprehensive view of how IM influences business performance.

Therefore, a comprehensive literature review is needed to identify current trends and the effects of IM as a key source of CA in the business context.

On the other hand, studies have been conducted that identify the CAs of the business environment, including among them improving organizational performance (Tan et al., 2022), increasing sustainable business returns (Tufan & Mert, 2023) and flexibility of organizations in the face of demanding markets (Awwad et al., 2022). Thus, only those companies that manage to create products and services with high differential value can stand out in the current business environment.

It is paradoxical that, despite the different research on IM and CA, their combined effect in business environments has not been studied. This study aims to review the current trends of the impact of IM as CA in the business environment, seeking to integrate both concepts and identify the predominant trends in the last 15 years. The development of this research project will benefit those working in innovation and CA in global markets, guiding future research and business strategies to achieve sound CA. The findings will help to develop strategies to enhance organizational IG and obtain CA. It will define IM, CA and its impact in global business environments, detail the steps of the literature review, and analyze current findings and trends.

Emerging theories, emerging methodologies, and research areas of interest will also be identified, along with relevant conclusions.

Theoretical framework

Innovation management

Currently, globalization has imposed challenges to organizations, which must adapt, be at the forefront and improve to remain competitive (Alzate Arango et al., 2015). This is due to variations in needs and competition, therefore, the IM is a key factor for organizational prosperity, to ensure competitiveness and continuity in the markets (Robayo Acuña, 2016). Highlighting that, according to the Oslo Manual, innovation is defined as incorporation of a new or considerable improvement of a process, product, organizational method, marketing technique, internal business practices or external relations (OECD, 2018). Therefore, IM is a procedure of transformation or improvement in both designs, manufacturing techniques, and activities required in business areas (Cantú Ortiz & Pedroza Zapata, 2006). IM is reflected once income is obtained from the changes made, in the development of products and services (Varela, 2008). Innovation processes support other skills and knowledge that emerge in organizational departments, depending on their culture (Camio et al., 2014).

Based on the above, each organization in developing IM should be supported by “top management, which is responsible for providing human and financial resources to execute “. In addition, promote a culture based on innovation and accountability. Since, according to the resource-centered perspective and the social exchange theory, the exchange of knowledge, competencies and experiences is encouraged, which drives the creation of innovative solutions (Getachew Kassa & Teklu Tsigu, 2022). This leads to stimulating creativity, critical thinking and teamwork (Walter et al., 2021). Likewise, IM is optimized through collaborations, development of alternatives and research of new technologies, materials and processes, which allows accelerating innovation, addressing common challenges and immediate solutions (Paap, 2020). Emphasizing that the main factor of business knowledge exchange is technology to preserve and raise competitiveness (Rajan & Dhir, 2021). Likewise, making changes in production and management systems and methods to improve productivity, efficiency, competitiveness and increase in supply (Saldarriaga Salazar et al., 2019).

Competitive advantage

Competitiveness, according to the Economic Commission for Latin America and the Caribbean (ECLAC) is the business capacity to implement strategies of rivalry, with the purpose of conserving and increasing contributions in a sustainable manner in the market (ECLAC, 1996). On the other hand, CA is fundamental in the business

environment, referring to the qualities that differentiate a company from its competitors by offering superior value to customers, in terms of efficiency, quality, innovation capacity (IC) and customer service (Universidad CESUMA, 2024). Likewise, CA is appreciated and they strive to increase market share by meeting expectations (Muñoz Díaz et al., 2021). Moreover, CA is linked to globalization, as they are emerging tactics in markets that are adopted by the state to compete in open economies (Ubeda, 2008).

The effect of innovation management as a competitive advantage in the business sphere

Innovation, understood as the search for novelty and value in products and processes, seeks to attract markets without cost being a relevant variable for the consumer. It allows companies to stand out by offering goods and services with improved attributes, additional functions, longevity and excellence, which increases demand and brand loyalty. This translates into a CA that enables higher prices and profitability. Therefore, IM is a dynamic and continuous process that responds to market expectations (Santos et al., 2019), which generates good image, reliability, security and builds a robust image of the organization (Rajan & Dhir, 2021).

Among the effects sought by IM as CA is to boost financial profit by reducing production costs and generating higher revenues by increasing prices and serving a larger market share. The economic prosperity resulting from IG allows fostering the generation of employment and economic boom. It also encourages investment and attracts talent, favoring the formation of dynamic and competitive business ecosystems (Aytekin et al., 2022). Based on the above, it differs from competitiveness to participate in globalization, which is a process that evidences a rupture between the public sector and the fall of international borders, with the purpose of reaching markets worldwide (González, 2000). Therefore, companies have the responsibility and role of generating appropriate conditions for local development, as countries increasingly feel the effects of globalization and that fall on emerging countries (Espinoza Garza et al., 2020).

Methodological design

Approach and design

We adopt a qualitative approach with an exhaustive literature review on the impact of IM on competitive advantage in the business environment. Trends over the last 15 years were reviewed, providing new perspectives. A narrative review with tabulation of relevant data and bibliometric analysis was used to handle large volumes of information. This methodological approach provides a detailed understanding of the current dynamics and allows us to compare existing theoretical positions with

thematic evolution. Based on this framework, a literature review was carried out to identify authors, results and relevant contributions of the last 15 years. Emerging theories, emerging methodologies and future lines of research in IM as CA in the business environment were highlighted. A detailed summary of the methodology used is presented in **Figure 1**.

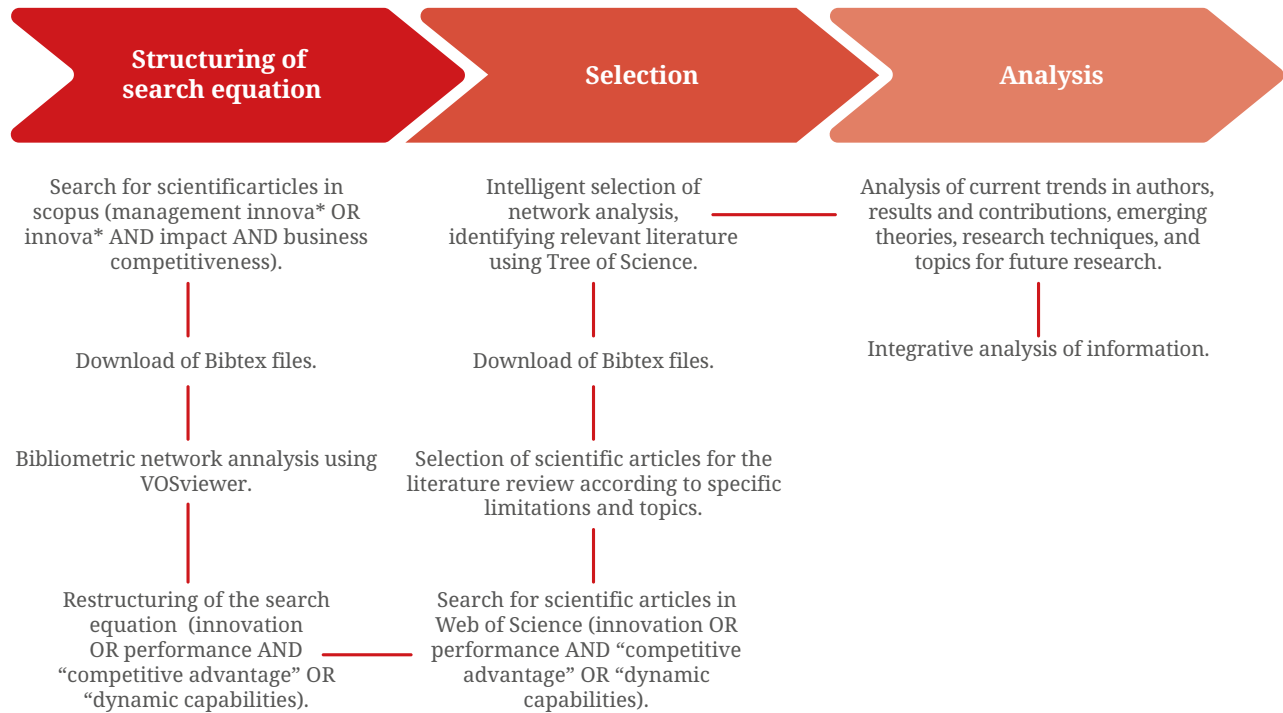


Figure 1. Summary of the procedure used in the development of the research

Structuring the search equation

The present literature review is based on a meticulous analysis, initially constructing bibliometric networks from the initial evaluation of 792 articles obtained from the Scopus database. These articles were compiled by searching for key concepts such as management innova* OR innova* AND impact AND business competitiveness, according to the bibliometric map constructed, keywords with greater cooccurrence were identified, as shown in **Figure 2**.

Subsequently, a second search stage was structured in the Web of Science database, using the keywords of the bibliometric map **Figure 2** and the second search equation used was innovation OR performance AND "competitive advantage" OR "dynamic capabilities". This new search resulted in a total of 635 related articles. This approach allowed us to broaden the search and obtain a comprehensive view of the available literature on the effect of IM as it relates to current trends in the business domain.

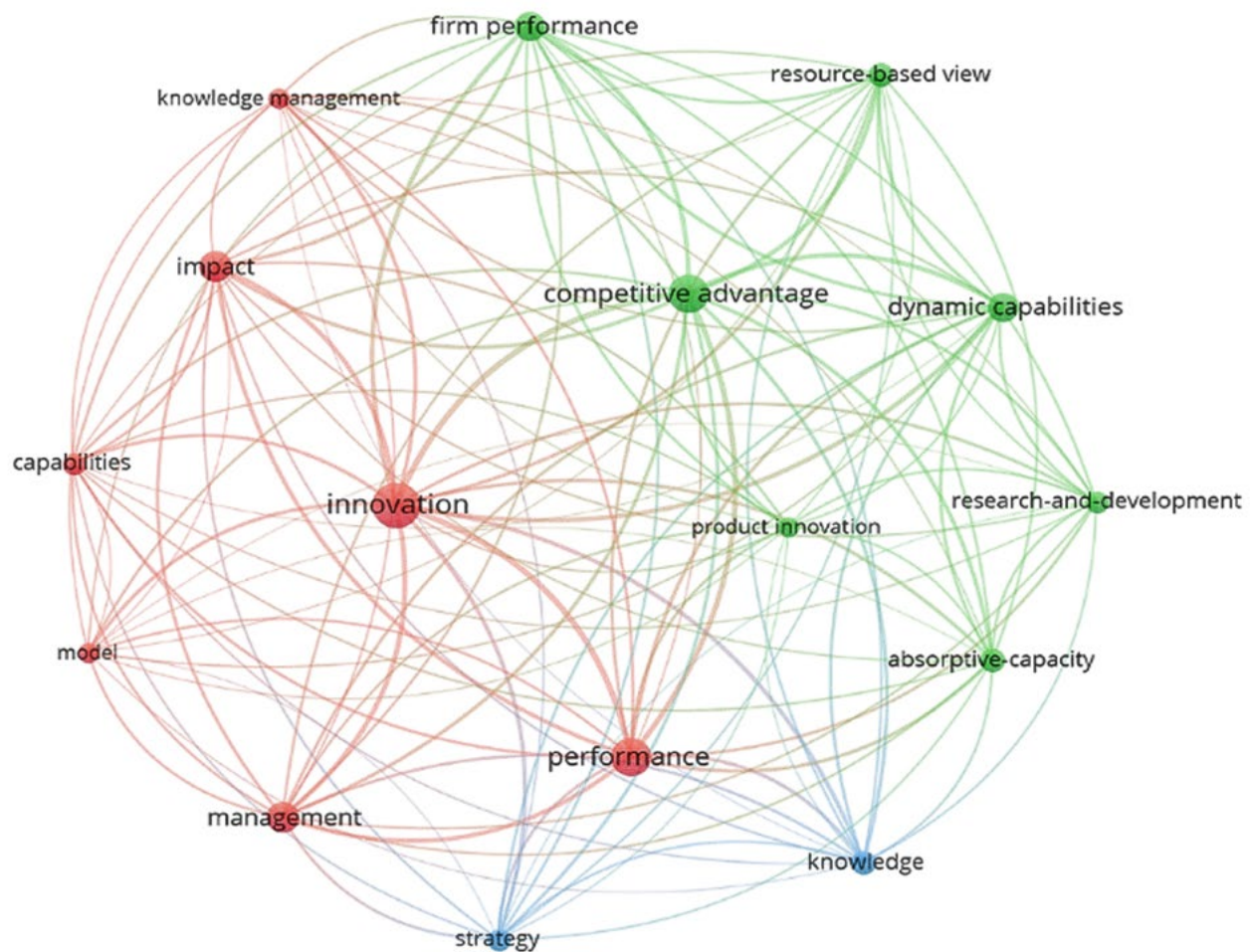


Figure 2. Bibliometric map. Search equation management innova* OR innova* AND impact AND business competitiveness

Article selection

In order to ensure the quality and relevance of the articles, sequential filters were applied. First, research and literature review articles were selected, reducing the total from 635 to 610. Then, they were filtered according to management subject matter, resulting in 519 articles. Finally, they were limited to publications from the last 15 years (2009-2023), resulting in 497 articles. These were analyzed with the ToS tool of the Universidad Nacional de Colombia, identifying 20 classic, 20 structural and 50 relevant articles, of which the latter were used for the literature review. This process ensured a representative and complete view of the effect of IM as CA in the business environment.

Analysis of the information

The 50 relevant articles were thoroughly analyzed, identifying key aspects such as titles, authors, methodology, objectives, conclusions, contributions, future lines of research and keywords. This information was organized in pivot tables to relate current trends. This approach ensures a quality literature review, offering a comprehensive and up-to-date view of the relationship between IM and CA in the business environment, and providing valuable information for researchers, practitioners and academics interested in the topic.

Results

The following are the results of the literature review, including details on authors, results and contributions of previous research. Emerging theories, emerging methodologies, and future lines of research in IM as CA in the business environment were identified. These trends are crucial for both academia and practitioners, as they provide valuable information for strategic decisions in a competitive and ever-changing business environment.

Current trends in results and contributions of IM to competitive advantage in the business environment.

Based on the results obtained, **Table 1** presents an exhaustive analysis of previous studies on the impact of IM as CA in the business environment. These studies address topics such as technological development, green business practices and human resource management, highlighting the importance of innovation to maintain competitiveness in the market. Digitalization and business transformation are also key areas, showing how they drive innovation and performance in the digital economy. The studies explore the relationship between CA, innovation and performance in international contexts and specific sectors, highlighting the importance of innovation strategies in global markets. In addition, the role of intellectual capital and dynamic capabilities (DC) in organizational ambidexterity and performance is highlighted, showing that knowledge management and investment in intellectual capital are crucial for CA creation. Sustainability and social responsibility also emerge as recurring themes, highlighting the integration of green suppliers and customers, which reinforces the importance of sustainability as a source of CA.

Table 1. Current trends in results and contributions of IMAs CA in the business world

Title	Result	Contribution
Green innovation (IV) a strategic resource for achieving CA (Barforoush et al., 2021).	Effects of organizational factors, legislation, regulation and technology in the IV, for obtaining CA.	How IV in terms of technology, organization, stakeholders and policies can develop CA.
CI and sustainable CA: a business marketing perspective (Teguh et al., 2021).	Effects of business marketing to drive innovation and CA.	CI as a mediator in analysis of the effect of business marketing on sustainable CA in MSMEs.
Effect of in human resource practices, innovation capabilities, and competitive advantage on small and medium enterprises' performance in Thailand (Wongsansukcharoen & Thaweepai boonwong, 2023).	How sustainable IC and CA influence human resource innovation in SMEs.	Business performance integrating innovations in human resource practices, IC and CA.
Effects of entrepreneurial orientation, marketing and innovation capabilities on market performance: the mediating effect of sustainable CA (Elgarhy & Abou-Shouk, 2023).	CAs that generate marketing capabilities are mediators for improving market returns.	Sustainable CAs (entrepreneurial orientation, marketing capability, CI and marketing innovation) affect market performance.
DC and innovation ambidexterity: the roles of intellectual capital and innovation orientation (Farzaneh et al., 2022).	Intellectual capital drives innovation ambidexterity through DC, in firms.	Intellectual capital and DC comprise and enhance relationships to drive IM ambidexterity.
Triggering sustainable firm performance, supply chain competitive advantage, and green innovation through lean, green, and agile supply chain practices (Waqas et al., 2021).	Efficient, green and agile supply chain practices are statistically related.	Impact of IV and CA practices as supply chain response and sustainable enterprise performance.
The effect of manufacturing agent heterogeneity on business innovation and CA performance in the era of digital transformation (Gao et al., 2023).	Digitization improves business performance.	Strategic reference for transforming and upgrading manufacturing enterprises and improving innovation performance in the digital economy.
Do IV and green CA mediate the effect of green marketing orientation on green marketing performance of SMEs? (Nuryakin & Maryati, 2022).	IV generates benefits in green marketing performance.	The effects of green marketing orientation on green marketing performance of SMEs.
Product innovation, market intelligence and pricing capabilities as a CA in the international performance of startups: case of Peru (Gomez Prado et al., 2022).	CA mediates between market intelligence capabilities and product innovation, but not on pricing and global performance.	How the influence of the Company's capabilities through CA mediates international performance.
Intellectual capital and corporate performance through CA: evidence from Indonesia (Gunawan & Widodo, 2022).	El Intellectual capital, corporate governance, and enterprise risk management do not affect organizational performance.	Organizational performance as a function of intellectual capital, corporate governance and enterprise risk management.

Cont.

Title	Result	Contribution
Digital innovation of sustainable business model: applying the DC approach (DSBMI-DC) (Hajiheydari et al., 2022).	Business model innovation requires commitment from different stakeholders.	A business should aim for sustainability and adapt to digital changes in DCs.
Do corporate social responsibility and green product innovation drive organizational performance? A moderated mediation model of CA and green trust (Hang et al., 2022).	IV significantly influences CA.	Impact of corporate social responsibility and IM of green products on organizational performance while moderating CA to green trust.
Green integration of customers and suppliers for a CA the mediating effect of sustainable product innovation (Awwad et al., 2022).	Sustainable IV positively influences CA.	Direct effect of green integration of customers, suppliers and flexibility of innovative and sustainable products independent of CA.
Business innovation and marketing plan of growth strategy and CA in the exhibition industry (Vanickova & Szczepanska-Woszczyna, 2020).	Causes and effects of the evolution of marketing innovation.	Business and marketing plan as impact on quantitative and financial sales volume in the long term, commercial success and CA.
Marketing resources, performance and CA: a review and future research directions (Davicik & Sharma, 2016).	Relationship between firms and stakeholders in business performance caused by marketing.	Relationship of marketing resources and performance, in relation to business environment and brand, as an organizational function.
Assessing the relationship between business marketing, CA and performance of Islamic banks (Suandi et al., 2022).	Importance of developing corporate marketing practices to improve performance and CA.	How enterprise marketing affects CA and performance by being a moderator of vigilant leadership.
Adoption of supply chain analysis: determinants and impacts on organizational performance and CA (Kalaitzi & Tsolakis, 2022).	Analyzing supply chains benefits organizational performance and organizational CA.	What factors influence the decision of logistics, operational and supply chain managers to adopt SCA.
Realization of DC and organizational knowledge in effective innovations: the typological map of capabilities (Cordeiro et al., 2022).	DCs depend on the context of human resources through typological mapping. Furthermore, idiosyncratic DCs plan innovation.	Which mechanisms connect DCs and organizational knowledge in the innovative process to offer theoretical and practical solutions as management strategies.
Innovation intermediaries as collaborators in shaping service ecosystems: the importance of DCs (Randhawa et al., 2022).	Innovation intermediaries are the main actors shaping ecosystems.	Which innovation intermediaries make up a service ecosystem with supplier diversity.
DC and an ESG strategy for sustainable management performance (Yi et al., 2022).	The absorptive and adaptive capacity of environmental, social and governance strategies affect sustainable management performance.	DC required by companies as environmental, social and environmental, social and governance strategies for sustainable management performance.

Cont.

Title	Result	Contribution
DC and SME performance: the moderating effect of market orientation (Hernández Linares et al., 2021).	Market orientations are moderately related to DC.	How the four dimensions of the DC construct (sensing, learning, integration, and coordination) act on markets.
Does it affect environmental, social and governance (ESG) market performance? The moderating role of CA (Dkhili, 2023).	Performance of environmental, social and governance factors increases market performance through CA.	How environmental, social and governance factors influence European market performance.
IV factors: the role of DCs and knowledge sharing through green creativity (Ma et al., 2022).	Knowledge sharing and green DCs are positively related to creativity and IV.	How knowledge sharing and green DCs affect green creativity and IG directly.
Can intellectual capital promote CA? CI of services and big data analytics in a moderated mediation model (Al-Khatib & Marco, 2022).	Theoretical model to incorporate intellectual capital components, service innovation, big data analytics capabilities CA.	Connection between intellectual capital components and CA as a big data driver for service innovation.
New realities: a literature review and reality of innovation and sustainable CA practices of young firms in Vietnam (Uyen et al., 2022).	Innovation is important at the enterprise level in Industry 4.0 as it enables to ensure sustainability and CA.	What is the reality in innovation and sustainable CA practices of young firms in Vietnam.
DC, strategic planning and performance: a virtuous and mutually reinforcing cycle (Araujo et al., 2022).	Strategic planning contributes to implementing organizational dynamics to achieve sustainable performance and learning.	How the dynamics of companies, their strategic planning and their performance are related.
Demystifying the role of stakeholder pressure and CA in environmental performance of garment industries (Chowdhury et al., 2023).	Interaction between CA, demand and resource management as a driver of responsible environmental, legal and compliance performance.	What are the factors responsible for environmental performance?
Does environmental strategy and awareness improve the environmental and financial performance of companies? The role of CA (Tan et al., 2022).	CA mediates the link between strategy and environmental awareness with environmental performance.	How environmental strategy and awareness improve the environmental and financial impact of companies.
The differential effects of potential and realized absorptive capacity on imitation and innovation strategies, and their impact on sustained CA (Algarni et al., 2023).	Imitation and innovation strategies are complementary, generating CA, where the absorption of external knowledge modulates this relationship.	Which roles antecedent knowledge-based capability differences, such as potential absorption, realized in imitation and innovation strategies and assess interactions leading to sustainable CA.
Big data analytics capabilities and innovation effect of DCs, organizational culture and the role of management accountants (Munir et al., 2023).	Shift towards big data analytics capabilities approaches, enables organizations to strengthen their role in innovation and flourishing sustainable CAs.	Impact of big data on organizational innovation through DC in processes, organizational culture and management accountants, in the era of artificial intelligence and emerging trends.

Cont.

Title	Result	Contribution
DC and critical factors for increasing sustainability-oriented innovation: systematic literature review and a proposed framework (Cavalcanti Barros Rodrigues & Gohr, 2022).	Boosting sustainable innovation is supported by the DCs and fourteen key success factors.	How to understand the DCs and the critical factors responsible for the development of sustainability-oriented innovation.
The role of green supply chain management in predicting Indonesian firm performance: CA and influence of board size (Novitasari et al., 2021).	Green supply chain management and contribution to CA and independent of the performance generated by CAs.	What effect green supply chain management has on firm performance, with a CA as mediation and board size as moderation.
The sequential effect of absorptive capacity, strategic agility and sustainable CA on sustainable business performance of SMEs (Tufan & Mert, 2023).	Subdimensions of absorptive and exploitative as they influence strategic agility, which impacts sustainable CA, that impact sustainable business performance.	Sequential relationships between absorptive capacity, strategic agility, sustainable CA and sustainable business performance of (SMEs).
Social network use and business performance in SMEs: the mediating roles of relational social commerce capability and CA (Marolt et al., 2022).	Social media provides marketing, increasing leverage, but does not directly guarantee SMB performance.	How to improve how the use of SM for CRM affects CAs and SME business performance.
Linking green intellectual capital with IV: examining the roles of green CAs and motivation to achieve legitimacy (Abrudan et al., 2022).	Green dynamics skills moderate the connection of intellectual capital investment, sustainable innovation and business motivation to achieve green dynamics.	Performance of agribusiness dynamic green skills and “motivation to gain legitimacy” in the relationship between environmental intellectual capital and sustainable innovation.
Study on the impact of supply chain DCs on the long-term performance of enterprises (Yan et al., 2022).	Supply chain operational capabilities as DC intermediaries and business performance.	The connection between supply chain capability, operational efficiency and business performance.
The impact of cognitive and behavioral factors on export performance: a DC perspective (Wójcik & Ciszewska-Mlinarič (2021).	Managerial mindset exerts a favorable influence on the ability to design and collaborate across businesses.	How individual behavioral, cognitive, and organizational factors affect the performance of exporting firms.
DCs: interrelations and distinct effects on performance in low and high competitive intensity environments (Markovich et al., 2019).	DCs follow an order in which they identify it, capture it, and optimize reconfiguration without impacting performance.	Dynamic abilities of the interaction between identification, capture and reconfiguration generate competitive variations.
How can big data and predictive analytics affect the performance and CA of the food waste and recycling industry? (Mehrbakhsh et al., 2023).	Implementation of big data and predictive analytics methods in management organizations has a significant impact on CA, as well as environmental and economic performance.	The use of big data and predictive analytics can optimize performance, strategic decision making and deliver CA for companies adopting such technologies.

Cont.

Title	Result	Contribution
Social networks and ambidextrous innovation in SMEs: the mediating role of DCs and the moderating role of technological turbulence (He & Wu, 2022).	Social networks positively influence exploratory innovation, moreover DCs act as a technological regulator of social networks and innovation.	Role of social networks in ambidextrous innovation and impacts of dynamic and technological skills from social network theory and DC theory.
Orchestration of complex environmental context: how does strategic management and DC mediate performance (Özmutlu & Arun, 2022).	Strategic management and dynamic skills mediate operational performance.	Influence of strategic management on organizational and operational performance of dynamic skills in complex contexts.
DC and sustainability performance: exploring the moderating role of environmental dynamism in the Norwegian fishing industry (Harun et al., 2023).	Implementation of dynamic skills optimizes sustainable, economic, social and environmental performance.	Effects of DCs on economic, social and environmental interest under varying degrees of environmental dynamism.
The interplay between digital manufacturing and DCs: an empirical examination of direct and indirect effects on firm performance (Savastano et al., 2022).	Advanced DCs impact firm performance, which favors the extended production process.	Factors that promote dynamic skills in the evolution of competencies in digital manufacturing to increase their impact on business performance.
DC and entrepreneurial performance of Chinese startups: the mediating roles of managerial attitude toward risk and entrepreneurial behavior (Shi et al., 2021).	DCs directly and positively impact entrepreneurial performance.	Sequential mediation effects on managerial attitude toward risk and entrepreneurial behavior between DCs and entrepreneurial organizational performance.

Emerging theories on IM and competitive advantage in business

The emerging theories on IM as CA in the business domain, highlighted in **Table 2**, reveal a significant focus on DC theories, followed by CA and IV theories. This focus demonstrates the growing interest in optimizing resources and strategies to improve business competitiveness. There is also a strong development in resource-based theories, intellectual capital and business performance, highlighting the importance of leveraging internal resources and organizational capabilities to maintain competitiveness and improve performance. To a lesser extent, areas such as human resources, disruptive innovation and socio-materiality are investigated, reflecting the diversity of factors influencing IM as CA in today's business environment.

Table 2. Emerging theories in research on GM as CA in the business environment

Theory	No.
Dynamic capabilities	15
Competitive advantage	9
Green innovation	6
Resource-based	3
Intellectual capital	2
Competitiveness	2
Business performance	2
Based on human resources	1
Supply chain	1
Strategic business capability	1
Intellectual capacity and innovation ambidexterity	1
Absorption capabilities	1
E-commerce	1
Planned behavior	1
Disruptive innovation	1
Business innovation	1
Innovation in commercialization processes	1
Materiality partner	1

Research methodologies on the rise in the last 15 years in Corporate Social Innovation as CA in the business sphere

In the last 15 years, methodologies for researching IM as CA in the business environment have shown a remarkable development. According to the analysis of the 50 articles reviewed and observed in **Table 3**, of the 50 articles, 82% used quantitative methods, 10% qualitative, and 8% mixed methods, which allow for objective measurements and replicable results, especially useful in studies with large populations. Qualitative methods, ideal for exploring complex phenomena and understanding human interactions and perceptions, were used in 10% of the research. Finally, 8% adopted mixed methods, combining the best of both approaches for deeper understanding and robust validation of results.

Table 3. Research methodologies on the rise in the last 15 years in IM as CA in the business environment

Type of research	No.
Qualitative	5
Quantitative	41
Mixed	4

Future lines of research in IM as CA in the business environment

Table 4 shows the future lines of research related to IM as CA in the business environment. These key areas point to the importance of the environment due to the challenges presented by innovation and competitiveness green to improve organizational performance. They also highlight the need to focus on business performance, given its direct effect on organizational competitiveness and sustainability. To a lesser extent, areas requiring attention in strategic management, big data analysis and intellectual capital management are identified. These aspects are fundamental for strategic management to adopt changes in the environment, efficient use of available information and maximization of the intangible capital of companies. Finally, although to a lesser extent, aspects related to digitalization, innovation ecosystems, globalization and industry 4.0 stand out. Despite their lower numerical consideration, these areas are relevant for understanding and taking advantage of business opportunities and challenges.

Table 4. Future lines of research in IM as CA in the business environment

Future lines of research	No.
Environmental	13
Big data	2
Supply chain	4
Intellectual capital	2
Organizational performance	4
Digitalization	1
Innovation Ecosystems	1
Strategic management	3
Globalization	1
Industry 4.0	1
Marketing	6
Human resources	1
Business performance	8
Sustainability	3

Conclusions

The objective of this study was to review the literature on current trends regarding the impact of Intellectual Capital (IC) as a source of Competitive Advantage (CA) in the business environment. A qualitative approach was employed, including an extensive literature review, as well as narrative, bibliometric, and intelligent analysis using the ToS tool. These methods allowed for the identification of current trends and the provision of conceptual definitions of IC and CA in the business context.

The findings indicate that IC and CA are crucial for business development at a global level. IC is essential for success in competitive environments, emphasizing the need to develop Intellectual Assets and address environmental challenges. The importance of Dynamic Capabilities (DC) is also underscored, as they enable adaptation to change and improvements in supply chain efficiency, technological and digital development, thereby positively influencing marketing and digital transformation. These changes affect CA by enhancing financial performance and ensuring long-term growth, stability, and value creation. Companies that implement and develop IC will obtain CA to compete on a global scale.

It is recommended that future research include quantitative studies to provide evidence on the types of IC organizations develop and the CA they obtain, as well as to examine the factors and actors involved. In addition, further exploration of the emerging themes identified is suggested.

The findings may guide future research and business strategies toward building strong and sustainable CA. However, the use of the ToS tool configured to analyze literature exclusively from the Web of Science database posed a limitation, as it excluded other relevant databases that could have enriched the study.

Conflict of Interest

The authors do not present any possible conflict of interest.

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References

- Abrudan, D. B., Kalyar, M. N., & Daianu, D. C. (2022). Linking green intellectual capital to green innovation: Examining green dynamic capabilities and motivation to achieve legitimacy. *Agricultural Economics – Czech*, 68(9), 367–377. <https://doi.org/10.17221/97/2022-AGRICECON>
- Algarni, M. A., Ali, M., Leal-Rodriguez, A. L., & Albort-Morant, G. (2023). The differential effects of potential and realized absorptive capacity on imitation and innovation strategies and their impact on sustained competitive advantage. *Journal of Business Research*, 162, 113674. <https://doi.org/10.1016/j.jbusres.2023.113674>

- Al-Khatib, A. W., & Marco, V. (2022). Can intellectual capital promote competitive advantage? Service innovation and big data analytics capabilities in a moderated mediation model. *International Journal of Innovation Management*, 27(3). <https://doi.org/10.1108/EJIM-04-2022-0186>
- Alzate Arango, B., Betancourt Hurtado, J., & Lopez Martinez, L. F. F. (2015). Implementation of tools for the diagnosis of innovation in a company of the footwear sector in Colombia. *RAI - Revista de Administração e Inovação*, 12 (3), 310-329. <https://doi.org/10.11606/rai.v12i3.100946>
- Araujo, G. R., Kato, H. T., & Del Corso, J. M. (2022). Dynamic capabilities, strategic planning and performance: A virtuous and mutually reinforcing cycle. *Journal of Management & Organization*, 28(5), 1116–1132. <https://doi.org/10.1017/jmo.2022.33>
- Awwad, A., Anouze, A. L., & Only Ndubisi, N. (2022). Green integration of customers and suppliers for competitiveness advantage: The effect of sustainable product innovation. *Sustainability*, 14(16), 10153. <https://doi.org/10.3390/su141610153>
- Aytekin, A., Ecer, F., Korucuk, S., & Karamsa, C. (2022). Global assessment of innovation efficiency of EU member and candidate countries through the DEA-EATWIOS multi-criteria methodology. *Technology in Society*, 71, 101896. <https://doi.org/10.1016/j.techsoc.2022.101896>
- Barforoush, N., Etebarian, A., Naghsh, A., & Shahin, A. (2021). Green innovation: A strategic resource to achieve competitive advantage. *International Journal of Innovation Science*, 13(2), 165–183. <https://doi.org/10.1108/IJIS-10-2020-0180>
- Camio, M. I., Rébori, A., & Romero, M. del C. (2014). Innovation management: Estudio de casos en empresas de software y servicios electrónicos de la zona de influencia de la UNICEN, Argentina. *Review of Administration and Innovation - RAI*, 11 (2), 30 - 44. <https://doi.org/10.5773/rai.v11i2.962>
- Cantú Ortiz, S., & Pedroza Zapata, Á. R. (2006). What is innovation and technology management (ITM)? *Journal of Technology Management & Innovation*, 1(2), 64–82. <https://www.jotmi.org/index.php/GT/article/view/rev1>
- Cavalcanti Barros Rodrigues, B., & Gohr, C. F. (2022). Dynamic capabilities and critical factors for increasing sustainability-oriented innovation: Systematic literature review and a proposed framework. *Mass Communication and Society*, 3(10), 349–383. <https://doi.org/10.1080/10429247.2021.1960124>
- Chowdhury, M. A. A. A., Dey, M., Rahman, M. M., & Ali, M. (2023). Demystifying the role of stakeholder pressure and competitive advantage in environmental performance of garment industries. *Journal of Environmental Accounting and Management*, 11(2), 165–180. <https://doi.org/10.5890/JEAM.2023.06.001>
- Cordeiro, M., Puig, F., & Ruiz-Fernández, L. (2023). Realizing dynamic capabilities and organizational knowledge in effective innovations: The capabilities typological map. *Journal of Knowledge Management*, 27(1). <https://doi.org/10.1108/JKM-02-2022-0080>

- Davcik, N. S., & Sharma, P. (2016). Marketing resources, performance and competitive advantage: A vision and future research directions. *Journal of Business Research*, 69(12), 5547–5552. <https://doi.org/10.1016/j.jbusres.2016.04.169>
- Dkhili, H. (2023). Does environmental, social and governance (ESG) affect market performance? The moderating role of competitive advantage. *Competitiveness Review*, 33(2), 43–56. <https://doi.org/10.1108/CR-10-2022-0149>
- Economic Commission for Latin America and the Caribbean - ECLAC (1996). Interactions between macro and microeconomics. *CEPAL Review*, 59, 7–26. <https://doi.org/10.18356/5be86cc9-es>
- Elgarhy, S. D., & Abou-Shouk, M. (2023). Effects of entrepreneurial orientation, marketing and innovation capabilities on market performance: The mediating effect of sustainable competitive advantage. *International Journal of Contemporary Hospitality Management*, 35(4), 1502–1526. <https://doi.org/10.1108/IJCHM-04-2022-0508>
- Espinoza Garza, M., López Rivera, A., Torres Martínez, V., & Zamora Gonzalez, C. E. (2020). *Relación entre la globalización y la competitividad en las economías*. <https://www.researchgate.net/publication/341440873>
- Farzaneh, M., Wilde, R., Afshari, L., & Mehralian, G. (2022). Dynamic capabilities and innovation ambidexterity: The roles of intellectual capital and innovation orientation. *Journal of Business Research*, 145, 1–10. <https://doi.org/10.1016/j.jbusres.2022.04.030>
- Gao, J., Zhang, W., & Guanb, T. (2023). The effect of heterogeneity of manufacturing agents on corporate innovation performance and competitive advantage in the era of digital transformation. *Journal of Business Research*, 157, 113387. <https://doi.org/10.1016/j.jbusres.2022.113387>
- Getachew Kassa, A., & Teklu Tsigu, G. (2022). Corporate entrepreneurship, employee engagement and innovation, a resource-based view and a social exchange theory perspective. *International Journal of Organizational Analysis*, 30(7), 1–20. <https://doi.org/10.1108/IJOA-05-2020-2172>
- Gomez Prado, R., Alvarez Rixco, A., Cuya Velasquez, B. B., Arias Meza, M., Campos Davalos, N., Juarez Rojas, L., Anderson Seminario, M. de las M., Aguila Arcentales, S., & Yañez, J. (2022). Product innovation, market intelligence and pricing capabilities as a competitive advantage in the international performance of startups: The case of Peru. *Sustainability*, 14(17), 10703. <https://doi.org/10.3390/su141710703>
- González, L. A. (2000). Reflections on the concept of globalization. *Revista de Humanidades: Tecnológico de Monterrey*, 7, 181–194. <https://www.redalyc.org/pdf/384/38400909.pdf>
- Gunawan, R. M., & Widodo, W. (2022). Intellectual capital and corporate governance affect organizational performance through competitive advantage: Evidence from Indonesia. *Quality - Access to Success*, 23(189), 257–264. <https://doi.org/10.47750/QAS/23.189.28>

- Hajiheydari, N., Kargar Shouraki, M., Vares, H., & Muhammad, A. (2022). Innovation in sustainable digital business models: Applied dynamic capabilities approach. *Foresight*, 24(5), 543–559. <https://doi.org/10.1108/FS-02-2022-0012>
- Hang, Y., Sarfraz, M., Khalid, R., Ozturk, I., & Tariq, J. (2022). Do corporate social responsibility and green product innovation drive organizational performance? A moderated mediation model of competitive advantage and green trust. *Economic Research–Ekonomiska Istraživanja*, 35(1), 5379–5399. <https://doi.org/10.1080/1331677X.2022.2026243>
- Harun, M. D., Hogset, H., & Mwesiumo, D. (2023). Dynamic capabilities and sustainability performance: Exploring the moderating role of environmental dynamism in the Norwegian fishing industry. *Sustainability*, 15(2), 1148. <https://doi.org/10.3390/su15021148>
- He, X., & Wu, X. (2022). Social networks and ambidextrous innovation in SMEs: the mediating role of dynamic capabilities and the moderating role of technological turbulence. *Technology Analysis & Strategic Management*, 36(10), 2662–2675. <https://doi.org/10.1080/09537325.2022.2157710>
- Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2020). Dynamic capabilities and SME performance: The moderating effect of market orientation. *Journal of Small Business Management*, 59(1), 162–195. <https://doi.org/10.1111/jsbm.12474>
- Kalaitzi, D., & Tsolakis, N. (2022). Supply chain analytics adoption: Determinants and impacts on organisational performance and competitive advantage. *International Journal of Production Economics*, 248, 108466. <https://doi.org/10.1016/j.ijpe.2022.108466>
- Lestari, S. D., Leon, F. M., Widyastuti, S., Brabo, N. A., & Putra, A. H. P. K. (2020). Antecedents and consequences of innovation and business strategy on SME performance and competitive advantage. *Journal of Asian Finance, Economics and Business*, 7(6), 365–378. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO6.365>
- Ma, L., Ali, A., Shahzad, M., & Khan, A. (2025). Factors of green innovation: The role of dynamic capabilities and knowledge sharing through green creativity. *Kybernetes*, 54(1), 54–70. <https://doi.org/10.1108/K-06-2022-0911>
- Markovich, A., Efrat, K., & Raban, D. R. (2021). Dynamic capabilities: Interrelations and distinct effects on performance in low and high competitive intensity environments. *Baltic Journal of Management*, 16(4), 539–563. <https://doi.org/10.1108/BJM-10-2020-0367>
- Marolt, M., Zimmermann, H. D., & Puchihar, A. (2022). Social network use and entrepreneurial performance in SMEs: The mediating roles of relational social commerce capability and competitive advantage. *Sustainability*, 14(22), 15029. <https://doi.org/10.3390/su142215029>
- Medeiros, V., Gonçalves Godoi, L., & Teixeira, E. C. (2019). Competitiveness and its determinants: A systemic analysis for developing countries. *CEPAL Review*, 2019(128), 41–60. <https://doi.org/10.18356/9c2a7060-es>

- Mehrbakhsh, N., Adbullah, B., Rabab, A., Keng Boon, O., Garry, W., Mihalis, G., & Yogesh, D. (2023). How can big data and predictive analytics affect the performance and competitive advantage of the food recycling and food waste industry? *Annals of Operations Research*, 326(1), 13–21. <https://doi.org/10.1007/s10479-023-05272-y>
- Munir, S., Rasid, S. Z. A., Aamir, M., Jamil, F., & Ahmed, I. (2023). Big data analytics capabilities and innovation: Effect of dynamic capabilities, organizational culture and the role of management accountants. *Foresight*, 25(3), 403–421. <https://doi.org/10.1108/FS-08-2021-0161>
- Muñoz Díaz, G. Alejandro, Lombeida Quintana, M. D., & Fierro, Mosquera, D. G. (2021). Competitiveness as a growth factor for organizations. *Innova Research Journal*, 6(1), 145–161. <https://doi.org/10.33890/innova.v6.n1.2021.1465>
- Novitasari, M., Alshebami, A. S., & Sudrajat, M. A. (2021). The role of green supply chain management in predicting Indonesian firm performance: Competitive advantage and influence of board size. *Journal of Legal, Ethical and Regulatory Issues*, 24(1), 349–383. https://doi.org/10.1163/_q3_SIM_00374
- Nuryakin, N., & Maryati, T. (2022). Do green innovation and green competitive advantage mediate the effect of green marketing orientation on green marketing performance of SMEs? *Cogent Business & Management*, 9(1), Article 2065948. <https://doi.org/10.1080/23311975.2022.2065948>
- Organisation for Economic Co-operation and Development - OECD. (2018). *Oslo Manual 2018: Guidelines for collecting, reporting and using data on innovation (4th ed.)*. OECD Publishing. <https://doi.org/10.1787/9789264304604-en>
- Özmutlu, S. Y., & Arun, K. (2023). Orchestration of the complex environmental context: How does strategic management affect and dynamic capabilities mediate performance? *Kybernetes*, 52(12), 6144–6162. <https://doi.org/10.1108/K-04-2022-0571>
- Paap, J. (2020). Mapping the technology landscape to accelerate innovation. *Foresight and STI Governance*, 14(1), 41–54. <https://doi.org/10.17323/2500-2597.2020.1.41-54>
- Rajan, R., & Dhir, S. (2021). Technology management for innovation in organizations: A modification based on argumentation TISM approach. *Benchmarking: An International Journal*, 27(10), 2903–2928. <https://doi.org/10.1108/BIJ-01-2020-0019>
- Randhawa, K., Wilden, R., & Akaka, M. A. (2022). Innovation intermediaries as collaborators in shaping service ecosystems: The importance of dynamic capabilities. *Industrial Marketing Management*, 107, 183–195. <https://doi.org/10.1016/j.indmarman.2022.03.016>
- Robayo Acuña, P. V. (2016). Innovation as a process and its management in the organization and application for the Colombian graphic sector. *Summa de Negocios*, 7(2), 135–143. <https://doi.org/10.1016/j.sumneg.2016.02.007>

- Saldarriaga Salazar, M. E., Guzmán González, M. F., & Concha Cerón, E. A. (2019). Business innovation: Factor of competitiveness and quality of life in Popayán, Colombia. *Revista Venezolana de Gerencia*, 24(2). <https://doi.org/10.37960/revista.v24i2.31486>
- Santos, G., Gomes, S., Braga, V., Braga, A., Lima, V., Teixeira, P., & Sá, J. C. (2019). Value creation through quality and innovation: A case study on Portugal. *The TQM Journal*, 31(6), 928–947. <https://doi.org/10.1108/TQM-12-2018-0223>
- Savastano, M., Cucari, N., Dentale, F., & Ginsberg, A. (2022). The interplay between digital manufacturing and dynamic capabilities: An empirical examination of direct and indirect effects on firm performance. *Journal of Manufacturing Technology Management*, 33(2), 213–238. <https://doi.org/10.1108/JMTM-07-2021-0267>
- Shi, Z., Yuan, L., & Lee, S. H. (2021). Dynamical capabilities and entrepreneurial performance of Chinese start-ups: The mediating roles of managerial attitude toward risk and entrepreneurial behavior. *Asia Pacific Business Review*, 28(3), 354–379. <https://doi.org/10.1080/13602381.2020.1854983>
- Suandi, E., Herri, , Yuliharsi, , & Syafrizal. (2023). Evaluating the relationship between entrepreneurial marketing, competitive advantage, and Islamic bank performance. *Journal of Financial Services Marketing*, 28(3), 599–614. <https://doi.org/10.1057/s41264-022-00169-6>
- Tan, K., Siddik, A. B., Sobhani, F. A., Hamayun, M., & Masukujjaman, M. (2022). Do environmental strategy and awareness improve firms' environmental and financial performance? The role of competitive advantage. *Sustainability*, 14(17), 10600. <https://doi.org/10.3390/su141710600>
- Teguh, S., Hartiwi, P., Ridho, B. I., Bachtiar, S. H., Synthia, A. S., & Noor, H. A. (2021). Innovation capability and sustainable competitive advantage: An entrepreneurial marketing perspective. *Journal of Asian Finance, Economics and Business*, 8(5), 127–134. <https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART002716350>
- Tufan, C., & Mert, I. S. (2023). The sequential effect of absorptive capacity, strategic agility, and sustainable competitive advantage on sustainable business performance of SMEs. *Environmental Science and Pollution Research*, 30(19), 55958–55973. <https://doi.org/10.1007/s11356-023-26207-x>
- Universidad CESUMA. (2024). *Everything you need to know about competitive advantage*. <https://www.cesuma.mx/blog/todo-lo-que-debes-saber-de-la-ventaja-competitiva.html>
- Vanickova, R., & SzczepanskaWoszczyzna, K. (2020). Business plan innovation and marketing of growth strategy and competitive advantage in the exhibition industry. *Polish Journal of Management Studies*, 21(2), 425–445. <https://doi.org/10.17512/pjms.2020.21.2.30>

- Varela, R. (2008). *Innovación empresarial: Arte y ciencia en la creación de empresas* (3.^a ed.). Pearson Educación de Colombia, Ltda. <https://s49fcc581ae900b19.jimcontent.com/download/version/1459720725/module/13123776030/name/231047690-Innovacion-Empresarial.pdf>
- Walter, C. E., Au-Yong Oliveira, M., & Miranda Veloso, C. (2021). Management and innovation in micro and small enterprises: A research proposal through structural equation modeling. *Quality – Access to Success*, 22(183), 23–28. <http://www.researchgate.net/publication/351936310>
- Waqas, M., Xue, H., Ahmad, N., & Khan, S. A. R. (2022). Triggering sustainable firm performance, supply chain competitive advantage, and green innovation through lean, green, and agile supply chain practices. *Environmental Science and Pollution Research*, 29(12), 1–22. <https://doi.org/10.1007/s11356-021-16707-z>
- Wójcik, P., & Ciszewska-Mlinarič, M. (2021). The impact of cognitive and behavioral factors on the export performance: A dynamic capabilities perspective. *European Business Review*, 33(3), 427–449. <https://doi.org/10.1108/EBR-03-2019-0031>
- Wongsansukcharoen, J., & Thaweepaiboonwong, J. (2023). Effect of innovations in human resource practices, innovation capabilities, and competitive advantage on small and medium enterprises' performance in Thailand. *European Research on Management and Business Economics*, 29(1), 100210. <https://doi.org/10.1016/j.iedeen.2022.100210>
- Yan, B., Yao, B., Li, Q., & Dong, Q. (2022). Study on the impact of supply chain dynamic capabilities on long-term performance of enterprises. *Sustainability*, 14(19), 12441. <https://doi.org/10.3390/su141912441>
- Yi, L., Lee, M. J., & Jung, J. S. (2022). Dynamic capabilities and an ESG strategy for sustainable management performance. *Frontiers in Psychology*, 13, 887776. <https://doi.org/10.3389/fpsyg.2022.887776>