



Research Article

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Business Competitiveness in the 21st Century: Trends, Challenges, and Opportunities

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Abstract

The study on business competitiveness in the 21st century reviews and synthesises the academic literature to identify trends, challenges and opportunities in a complex global context. Using a descriptive and analytical methodology based on the PRISMA guidelines, 2281 articles were evaluated, of which 50 were included in the review. The research identifies key challenges, such as technological challenges and supply chain management, as well as underlying factors, such as economic slowdown, inflation and poor education systems, which particularly affect Latin America, where low productivity and lack of infrastructure limit international performance. The findings highlight the need for countries, companies and education systems to adapt their strategies to strengthen competitiveness and promote inclusive and sustainable economic growth by aligning education programmes with market needs. This work not only enhances academic understanding of the phenomenon, but also provides an essential framework for formulating effective business strategies in a constantly evolving environment.

Keywords: Business competitiveness, Digital transformation, Higher education, Economic growth, Innovation

1. Introduction

Business competitiveness has become a critical factor for the success and survival of organizations in the 21st century. In an international context characterized by globalization, rapid technological progress and growing economic uncertainty, companies face the challenge of maintaining and improving their competitive position in increasingly dynamic and demanding markets (Halloui et al., 2022; Liao, 2021). At the Latin American level, emerging economies seek to strengthen their business fabric to compete in the global arena, facing particular challenges such as the technological gap,

political instability and social inequality (Pacheco et al., 2020) . In the specific case of Peru, although it has experienced sustained economic growth in recent decades, it still faces significant challenges to boost the competitiveness of its companies, especially in non-traditional sectors and in the area of small and medium-sized enterprises (Maldonado Salinas, 2022) .

In this scenario, business competitiveness has evolved beyond traditional factors such as costs and quality, to encompass aspects such as innovation, adaptability, sustainability and human capital management (Bocken & Geradts, 2020; Kristoffersen et al., 2021) . Digital transformation plays a key role, with technologies such as artificial intelligence, big data and the Internet, redefining business models and value chains (Ghobakhloo & Fathi, 2020) . However, despite their crucial importance, there is limited understanding of how these factors interact and evolve in the specific context of the 21st century, particularly in developing economies.

On the other hand, the existing literature on business competitiveness often focuses on case studies or sector-specific analyses, lacking a comprehensive view that examines global trends, emerging challenges and future opportunities (Gonda et al., 2020; H. Wang et al., 2022) . This fragmentation of knowledge makes it difficult to formulate effective strategies both at the firm level and in the public policy arena to foster competitiveness.

Likewise, the impact of business competitiveness on the education system has undergone a significant transformation in the last decade, revealing a direct correlation between the demands of the labor market and the adaptation of educational programs (Smith, 2001) . Recent research highlights that educational institutions have increased the inclusion of digital competencies by 47% and programs with a practical focus by 63%, responding to an increasingly technological and dynamic business environment (Soliman & Noorliza, 2022) . These adjustments reflect the growing demand for a workforce trained to meet the challenges of the global economy.

In this context, the following research question arises: What are the main trends, challenges and opportunities that define business competitiveness in the 21st century globally and in the Latin American context?

The general objective of this research is to analyze the main trends, challenges and opportunities that characterize business competitiveness in the 21st century through a systematic review of the literature. The specific objectives are: 1) To identify the key factors that influence business competitiveness in the global and Latin American context; and 2) To examine the emerging strategies and practices that companies are adopting to improve their competitiveness in the current environment.

The rationale for this study lies in the need to provide an updated and holistic understanding of business competitiveness in the contemporary context, filling a gap in the current literature that tends to address specific aspects of competitiveness in isolation. This research seeks to integrate diverse perspectives to provide a more comprehensive view of how businesses and education systems can navigate the challenges and seize the opportunities of the 21st century.

The social implications of business competitiveness have generated significant transformations in the structure of opportunities and social mobility, particularly in relation to access to education and workforce development. Research from (Lyausheva et al., 2023) reveals that regions with less access to quality education experience a 38% reduction in upward social mobility, directly correlated with the limited preparation of their labor force for highly competitive markets.

In terms of background, several studies have addressed aspects related to business competitiveness in recent years. (Ranjan & Foropon, 2021) examined the role of information technologies in improving competitiveness, highlighting the importance of digital transformation. (Vostriakova et al., 2023) analyzed the impact of the bioeconomy and sustainability on firm competitiveness. (Gonda et al., 2020) focused on competitive factors in the fashion retail sector, highlighting the importance of innovation and adaptability.

(Wan et al., 2022) study competitiveness in the context of maritime transport networks, highlighting the relevance of infrastructure and logistics. (Varga, 2021) conducted a comprehensive analysis of the contribution of small and medium-sized enterprises to economic competitiveness.

(Maldonado Salinas, 2022) examines the factors that affect the competitiveness of Latin American firms, highlighting the role of innovation and human capital.

(Mikalef et al., 2020) investigated the implementation of technical strategies using artificial intelligence to improve competitiveness. (Todericiu, 2022) focused on the impact of intellectual capital on the performance of SMEs. (Liao, 2021) analyzed the economic model and innovation system of the Chinese private sector and its influence on global competitiveness. (Gladenkova, 2022) studied the spatial organization of the personal care and beauty industry, offering insights into competitiveness in specific sectors.

Other relevant studies include the work of (Batlle et al., 2020) on the web presence of cooperatives, (Rey Sanchez et al., 2022) on industry 4.0 and enterprise quality management, and (Mukherjee et al., 2024) on the use of deep learning in business analytics. In addition, research such as (Geringer, 2021), (Hrabyńska & Kosarchyn, 2022), and (Moreira & Dallavalle, 2024) have addressed specific aspects of competitiveness in different contexts and sectors.

2. Literature Review

Business competitiveness has evolved beyond traditional factors such as costs and quality to encompass aspects such as innovation, adaptability, sustainability and human capital management (Valdez-Juárez & Castillo-Vergara, 2021). In this sense, (AlTaweel & Al-Hawary, 2021) argue that competitiveness in the 21st century is intrinsically linked to the ability of companies to adopt systemic approaches that integrate sustainability, circular economy and stakeholder diversity into their business strategies.

A determining factor in today's competitiveness is digital transformation. As pointed out by (Garzoni et al., 2020), information technologies play a crucial role in the development of innovative and sustainable business ecosystems. In this context, (Nasiri et al., 2020) highlights the importance of implementing technical strategies based on artificial intelligence to improve competitiveness. This perspective is aligned with that proposed by (Ciampi et al., 2021), who underline the potential of deep learning in business analytics as a differentiating factor in today's market.

Another fundamental aspect in understanding modern competitiveness is the role of small and medium-sized enterprises (SMEs). (Falahat et al., 2020) argues that SMEs are essential drivers of innovation and job creation, contributing significantly to the economic competitiveness of nations. This view is complemented by (Gonda et al., 2020), who identify specific competitive factors in the fashion retail sector, highlighting the importance of innovation and adaptability in smaller firms.

In the context of emerging economies, the study of innovation and competitiveness models takes on particular nuances. (Liao, 2021) analyzes the economic model and innovation system of the Chinese private sector, offering valuable insights into how developing economies are adapting their business structures to compete globally. This analysis is complemented by research from (H. Wang et al., 2022) on the participation of specific regions, such as the Greater Guangdong Bay area- Hong Kong-Macao, in global shipping networks, illustrating how competitiveness manifests itself in strategic sectors.

Quality management emerges as another fundamental pillar of competitiveness in the 21st century. (Psarommatis et al., 2022) argue that contemporary quality management approaches in manufacturing companies are essential to increase the competitiveness, productivity, profitability and sustainability of their systems, in a globalized business environment. This perspective aligns with the view of (Kisel'áková et al., 2022) on the importance of Industry 4.0 in enterprise quality management.

An emerging aspect in the competitiveness discussion is the impact of tax and regulatory policies. (Geringer, 2021) examines the implications of digital taxation in Europe, highlighting how tax policies can affect the competitiveness of firms in the digital economy. This analysis is complemented by (Hrabyńska & Kosarchyn, 2022) study on the factors influencing the formation of super-cycles in global commodity markets, offering a macroeconomic perspective on

competitiveness.

Diversity and inclusion also emerge as crucial elements in modern business competitiveness. (Williams, 2023) argue that diversity leadership is essential to activate change and transformation in organizations, which in turn impacts their competitive capacity in a globalized world.

On the other hand, it is important to consider how workforce training has become a key factor in maintaining business competitiveness. According to (Sharipov et al., 2024) , business investment in training programs has increased by 42% in the last five years, with an average return on investment of 187%. This growth has been accompanied by innovations in educational methodologies, such as the integration of emerging technologies and personalized learning, which have improved learning effectiveness by 67% and knowledge retention by 43% (J. Wang et al., 2023) . These transformations underscore the importance of aligning education with business needs.

Finally, the development of technical and soft skills has positioned itself as a crucial element in the intersection between education and business competitiveness. Longitudinal studies show an 82% increase in the demand for technological skills and a 68% increase in leadership and interpersonal skills programs (Pereira & Manzo, 2024) . However, the implementation of these changes faces challenges, such as budgetary constraints (47%) and difficulties in teacher updating (63%) (Hart & Rodgers, 2024) . Despite these obstacles, investment in this alignment has reduced the skills gap by 28% and increased student satisfaction by 78% (Zhao & Ramirez, 2024), demonstrating its positive impact for both organizations and individuals.

In conclusion, the theoretical framework on business competitiveness in the 21st century reveals a complex and multifaceted landscape, where technological innovation, sustainability, adaptability and knowledge management are intertwined to define business success in an increasingly dynamic and challenging global environment.

3. Research Method

In methodological terms, a qualitative analysis was used to interpret the literature findings. This analysis focused on identifying key trends, significant challenges and emerging opportunities related to business competitiveness in the 21st century. Through thematic coding, the studies were classified according to common relationships and patterns, such as "innovation", "competitive advantage" and "sustainability". In addition, a keyword co-occurrence analysis and author citation analysis were conducted to identify the most influential topics and authors in the field.

Finally, it is essential to mention that the analysis of the information was performed following the guidelines of the 2020 PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) Statement. This statement, which consists of 27 items, seeks to standardize the reporting of systematic reviews to improve the quality of scientific evidence and facilitate the critical evaluation of the existing literature. These methods will make it possible to identify, select, evaluate and synthesize studies on business competitiveness, technological adaptation, innovation and competitive advantage.

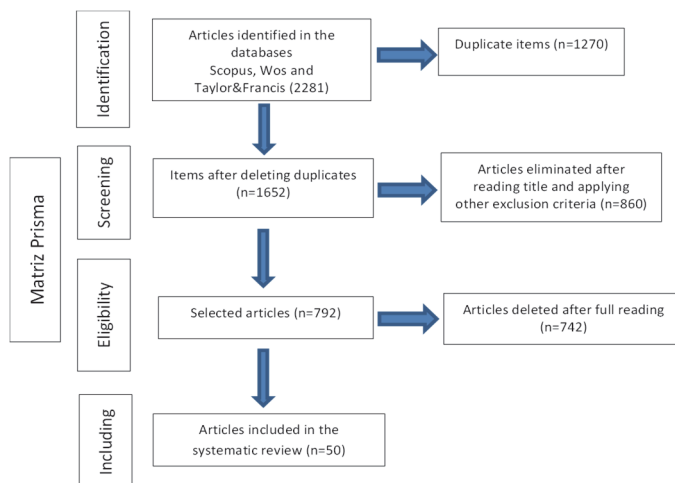


Figure 1 Matriz PRISMA

4. Codification Process:

1. Identification of Databases and Academic Repositories: The process began with the identification of 2,281 articles extracted from databases such as Scopus, Web of Science and Taylor & Francis. These articles were selected based on their relevance to topics such as competitiveness, dynamic capabilities, innovation and business sustainability.
2. Screening: Of the initial 2,281 articles, duplicates were eliminated (1,270 articles), which allowed screening to refine the most relevant documents, reducing the total number to 792. In addition, articles published in the last five years, in English and Spanish, and which were open access, were filtered.
3. Eligibility: The 792 selected articles were further evaluated for appropriateness. Those that had not been peer-reviewed were excluded, as well as non-academic reports and publications that were not directly related to the central theme of the study. After a thorough review, 50 articles were included in the final review, while the remaining 742 were discarded.

Table 1. Criteria for selecting scientific documents for research

Database	Search Terms	Articles found	Selected Articles
Scopus	"competitiveness" OR "competitive advantage" OR "education system and competitiveness" OR "competitiveness strategy" Filters 2020-2024 and limited subject área: Business, Management and Accounting and Limited to Social Sciences	1243	30
Web of Science		781	13
Taylor & Francis		257	7
Total		2281	50

Note : Selection, exclusion and determination of the number of selected scientific papers.

****Data Analysis:**** Qualitative analysis will be used to interpret the findings, highlighting key trends, significant challenges, and emerging opportunities in business competitiveness. We will seek to identify relationships, patterns and common themes among the different studies reviewed.

5. Results and Discussion

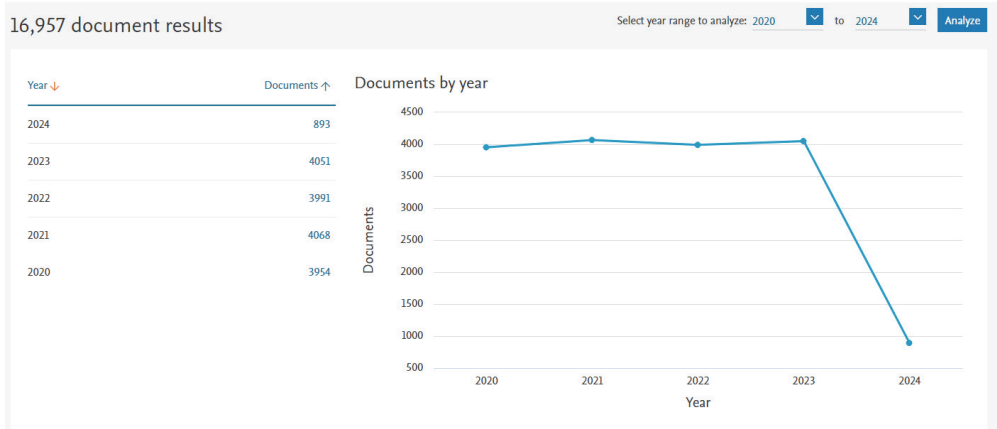


Figure 1. Scientific production in the Scopus database between 2020 – 2024

On Figure 1, regarding scientific production, a higher production is evidenced in the year 2021 with 4068 articles. It can be inferred that an increase has been registered by virtue of the relevance of the topic from the years 2020 to 2024, considering that we are approximately halfway through the present year, the scientific production is at 893 articles to date.

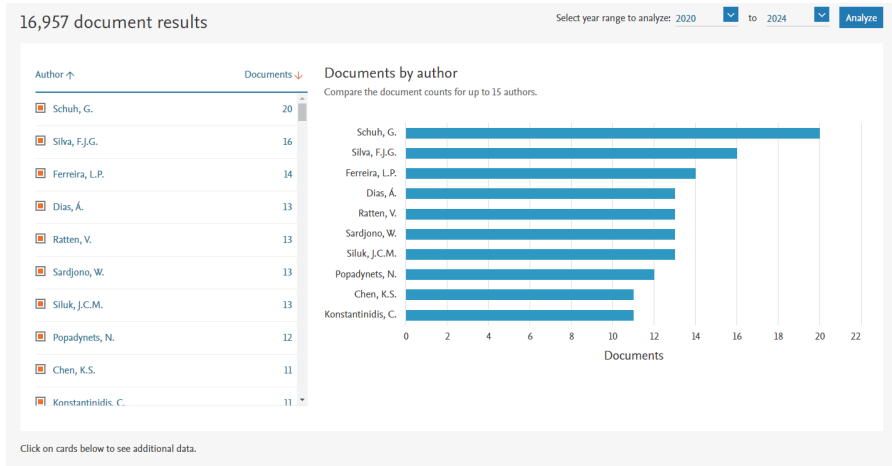


Figure 2. Scientific production by author in Scopus database between 2020 - 2024

On Figure 2, regarding the productivity of the authors, only two have more than 15 publications; likewise, one author is identified as having a large number of related publications: Schuh, G., with 20 documents. Most of the authors have more than 11 publications in the years.

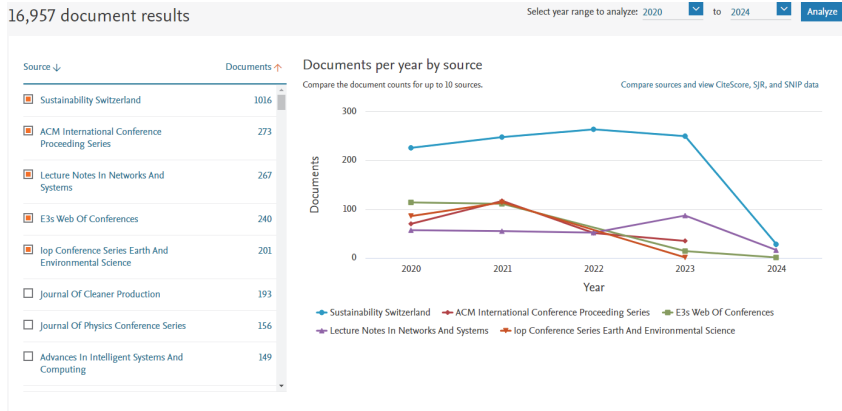
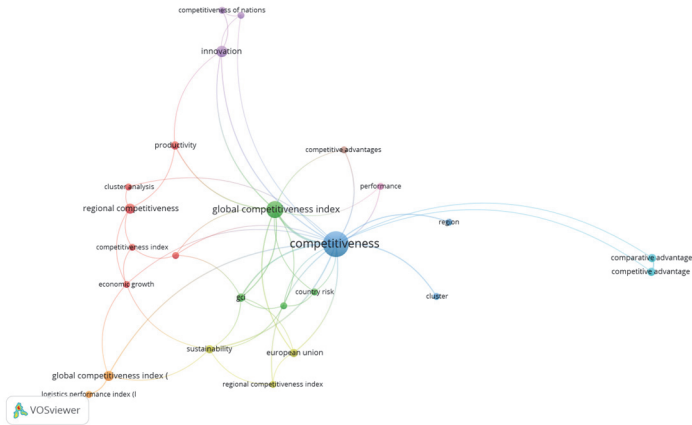


Figure 3. Papers per year by source from the Scopus database

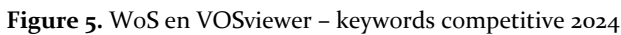
In relation to documents per year by source the highest number of documents in the years from 2020 to the present is led by the journals Sustainability Switzerland with 1016 documents, followed by the journal ACM International Conference Proceeding Series with 273 documents and Lecture Notes In Networks And Systems with 267 documents.



Nota: elaboración propia extraída de la base de Datos Scopus

Figure 04. Scopus in VOSviewer – keywords competitive 2024

Figure 1 shows the co-occurrence analysis of the main node, which is competitiveness in the Scopus database. From there, terms such as "global competitiveness index", "competitive advantages", "regional competitiveness", "comparative advantage", "innovation", "performance", "sustainability", "productivity", "competitiveness of nations", among others, are highlighted.



In summary, this analysis suggests that the themes of "competitive advantage", "performance" and "management" are central to the field under investigation, and that there are sub-themes such as knowledge management, dynamic capabilities and competitiveness that are strongly related to these core concepts. The bibliometric network reflects a complex research landscape where studies interrelate multiple key concepts within the field of management and organizational performance.

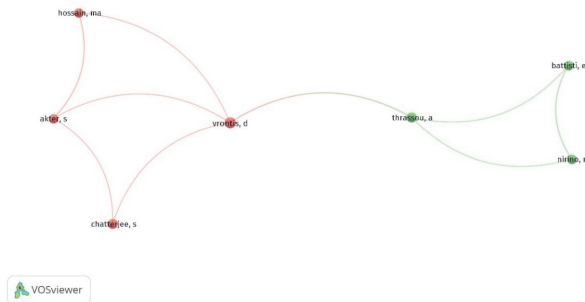


Figure 6. WoS en VOSviewer – Author co-citation analysis competitive 2024

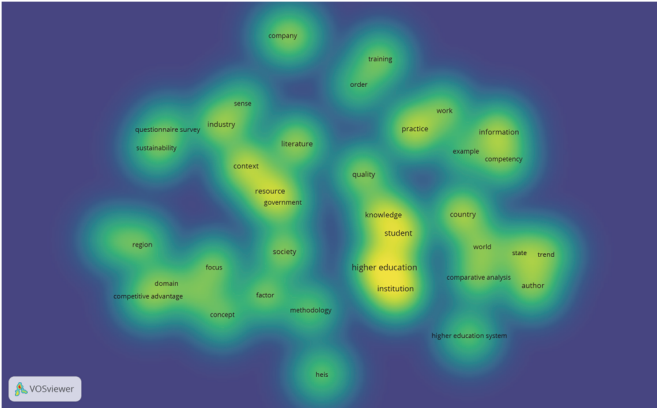
According to Figure 6, this network analysis yielded 7 authors and 26 co-citation links divided into 2 clusters represented in colors, the first cluster and the second cluster identified by the colors red and green, respectively. Each cluster was composed of 4 and 3 authors respectively and these were the most relevant for Competitiveness, with a total of 25 papers published between 2020 and 2024.

Table 2. Most relevant articles from Scopus, Web of Science & Taylor&Francis, in relation to the research topic.

Title and year	Methodology	Sample	Summary and Conclusions
Kovačić S.; Čimbaljević M.; Pavluković V.; Jovanović S. (2024). "Exploring tourism competitiveness in developing economies: residents' perspective".	In-depth literature review, Pilot testing and Model set and validation.	456	This study explores how residents' perceptions of tourism can strengthen the competitiveness of destinations in developing economies, using Serbia as a case study. Using a model based on five key factors and 32 indicators.
Jaaffar A.H.; Abd Majid N.; Kasavan S.; Isa A.; Alwi M.N.R.; Zahari A.R. (2024). "The effect of innovative mindset and behavior on innovation performance and competitive advantage: a case of halal SMEs owner-managers from Malaysian energy-intensive industry".	Data were analyzed with the partial least squares technique (SmartPLS 3.0).	140	The results show that an innovative mindset drives innovative behavior, which in turn improves innovation performance, strengthening competitiveness in the global halal market.
AlKhars M.; Masoud M.; AlNasser A.; Alsubaie M. (2024). Sustainable practices and firm competitiveness: an empirical analysis of the Saudi Arabian energy sector.	Structural equation modeling (SEM)	166	The significant correlations detected between sustainable practices and business competitiveness provide practical guidelines for promoting a more sustainable and competitive environment.
Abdul Rahman A.A.; Chong P.L.; Ong T.S.; Teh B.H.; Ong T.C. (2024). Business network and balanced scorecard: an analysis of small and medium enterprises in Malaysia.	Structural equation modeling (SEM)	404	The results show that the business network plays a good role and partnership in the balanced scorecard (BSC) results of Malaysian SMEs. This will improve the success of all companies.
Abad-Segura E.; Castillo-Díaz F.J.; Batlles-de-la-Fuente A.; Belmonte-Ureña L.J. (2024). Enhancing competitiveness and sustainability in Spanish agriculture: The role of technological innovation and corporate social responsibility.	Statistical analysis and literature review	33	The results argue for integrating technological innovation with CSR strategies to ensure long-term sustainability and competitiveness in the agricultural sector.
Gómez-Vega M.; Boal I.; Alonso-Villa P. (2024). Does the accumulation of creative capital influence the competitiveness of the tourism sector in European regions?	Data envelopment analysis	171	The findings show that this model of tourism efficiency and creativity optimizes competitive advantages in the management of the tourism sector.
Salkynbayeva F.; Turekulova A.; Tayauova G.; Niyazov M.; Yesturliyeva A.; Bermukhamedova G. (2024). The Influence of Social, Labor and Economic Potential on the Growth of Competitiveness of Organizations.	Literature review	250	It argues that factors such as the quality and motivation of human capital, together with the effective use of their skills, are crucial to improving economic performance. It also considers that the development of economic capabilities - including financial resources, innovation and technology - drives organizational competitiveness.
Yi Y.; Kim E. (2024). Is Shanghai a rival to Seoul? Analysis on complementary and competitive relationships in trade.	Dendrinos-Sonis model	14	The evidence shows that the economic growth of the Seoul metropolitan area is complementary to the growth of the Shanghai metropolitan area in terms of regional export share, but not the other way around.
Sheykan S.; Boozary P.; GhorbanTanhaei H.; Behzadi S.; Rahmani F.; Rabiee M. (2024). Creating a fuzzy DEMATEL-ISM-MICMAC -fuzzy BWM model for the organization's sustainable competitive advantage, incorporating green marketing, social responsibility, brand equity and green brand image.	The Fuzzy DEMATEL, ISM, MICMAC Analysis and Fuzzy BWM method.	16	This study develops a model for achieving sustainable competitive advantage. The results highlight the importance of sustainability objectives, customer awareness and quality, providing strategic guidance for decision makers.
Agazu B.G.; Kero C.A. (2024). Innovation strategy and firm competitiveness: a systematic literature review.	Literature review	40	The results of this review show that a large majority of the studies reviewed have concluded that innovation strategy has a positive relationship and effect on firm competitiveness.
Pumiviset W.; Suttipun M. (2024). Corporate social responsibility and smes' performance: mediating role of sustainable competitive advantage.	Statistical analysis and literature review	336	A competitive advantage significantly influences both strategic management and organizational performance. The CSR is a process of transforming a company's sustainable initiatives into sustainable competitive advantages that impact organizational performance.

Title and year	Methodology	Sample	Summary and Conclusions
Ma L.; Yu P.; Zhang X.; Wang G.; Hao F. (2024). How AI use in organizations contributes to employee competitive advantage: The moderating role of perceived organization support.	Statistical analysis and literature review	264	It confirms that generative AI drives skill expansion and agility, strengthening competitive advantage. However, while AI improves proactivity, it does not significantly impact competitiveness.
Fang T.M.; Ahmad N.H.; Halim H.A.; Iqbal Q.; Ramayah T. (2024). Pathway towards SME competitiveness: Digital capability and digital business model innovation.	The PLS-SEM analysis.	132	It reveals that digital capability strengthens all components of DBMI. Among them, value creation, value proposition and value capture contribute significantly to competitiveness, while innovation in value delivery does not have the same effect.
Probojakti W.; Utami H.N.; Prasetya A.; Riza M.F. (2024). Building Sustainable Competitive Advantage in Banking through Organizational Agility.	The PLS-SEM analysis.	185	The results indicate that transformational leadership and digital transformation do not have a significant effect on sustainable competitive advantage. However, organizational agility can significantly mediate this impact on sustainable competitive advantage.
Dong B. (2024) Environmental dynamism's influence on firm growth: Transformational leadership and strategic flexibility insights.	Structural equation modeling (SEM)	134	Results show that environmental dynamism significantly influences the sustainability of growth, while transformational leadership drives innovation and change, strengthening growth capacity. Strategic flexibility allows companies to adapt to changes in the environment, improving their competitiveness.
Macinnes M.; Garfinkel B.; Dafoe A. (2024). Anarchy as Architect: Competitive Pressur e, Technology, and the Internal Structure of States.	Macrohistorical study.	does not specify	It is concluded that technological change and human intervention are key in the evolution towards forms of state that promote welfare, although certain technologies, despite their apparent benefit, can reduce welfare by favoring unequal structures.
Tolossa A.T.; Singh M.; Gautam R.K. (2024). Unveiling the Nexus: the crucial role of competitive advantage in bridging entrepreneurial marketing practices and sustainable firm performance in small and medium enterprises.	Structural equation modeling (SEM)	387	Competitive advantage was found to partially mediate the relationship between marketing and sustainability. Entrepreneurial, strategic and socially responsible SMEs excel in sustainability and long-term success.
del Socorro Encinas-Grijalva M.; Olivieri-Sangiacomo F.A.; Galván-Vela E.; Ravina-Ripoll R. (2024) Business readiness for dual transformation: an analysis of business capabilities for digital and sustainable transformation.	Statistical analysis and literature review	148	Key factors for the success of this transformation were identified: strategy, organizational culture, technical and organizational capabilities, which will increase the scalability and competitiveness of the adopting companies.
Martínez-Falcó J.; Sánchez-García E.; Marco-Lajara B.; Georgantzis N. (2024). The interplay between competitive advantage and sustainability in the wine industry: a bibliometric and systematic review.	Literature review	31	The study highlights the importance of innovation and technology in promoting sustainable practices, offering valuable information on how these tools can improve their operational efficiency and competitive advantage.
Hameed T.; Alemayehu F.K.; Kumbhakar S.C. (2024). Green innovation (GI) in Norwegian firms: Navigating the complexity of productivity and performance.	SPSC-SF model	3,130	The findings highlight the crucial role of GI in sustainability, underscoring its strategic importance in all sectors. We find a positive neutral pathway effect, but it negatively impacts productivity through non-neutral pathways.

Nota: Own elaboration obtained from the Scopus, WoS and Taylor&Francis databases..



Nota. Elaboración propia obtenida de la base de datos de Scopus

Figure 7. Scopus en VOSviewer – keywords competitive and education system 2020 – 2024.

According to Figure 7, 37 articles were identified in the Scopus database that address this interconnection, showing an increase in scientific production on the subject in recent years. In 2021 there were 12 publications, while in 2022 and 2023 there were 6 in each year, reaching a maximum of 13 articles in 2024. This trend suggests a growing recognition of the role of education in improving business competitiveness. The most frequent keywords in these studies include "innovation", "higher education", "competitiveness", "university social responsibility" and "sustainability", indicating that education not only strengthens competitiveness through the development of skills and knowledge, but also fosters innovation and sustainable business practices.

Studies show that the intensification of business competitiveness has amplified existing socioeconomic gaps, with a 23% increase in the income disparity between skilled and unskilled workers

over the last decade (Arredondo-Trapero et al., 2024) . This trend is exacerbated by unequal access to quality educational resources, where marginalized communities experience a technological and training gap that limits their effective participation in the knowledge economy (Baitassov et al., 2021) .

Analysis of the relationship between business competitiveness and educational access in underserved communities reveals significant patterns of systemic exclusion. (Xing et al., 2024) identifies that areas with lower investment in educational infrastructure have a 63% greater technological skills gap than well-served urban areas, severely limiting opportunities for participation in high value-added economic sectors. This disparity is amplified in a context of increasing digitalization, where limited access to technological educational resources acts as a multiplying barrier to social mobility.

6. Conclusions

In short, innovation remains one of the fundamental pillars of business competitiveness in the 21st century. Companies that invest in research and development, as well as in the adoption of new technologies, tend to maintain a sustainable competitive advantage. This contrasts with traditional theories of competitiveness, such as competitive advantage based solely on physical resources and organizational capabilities. In the modern era, constant innovation and the ability to adapt quickly to changes in the technological environment are crucial to remain at the forefront of the market.

Likewise, sustainability, both environmental and social, has emerged as a key factor in business competitiveness. While classical theories of competitiveness focused mainly on profit maximization and economic efficiency, the current context requires a broader vision, in which companies must demonstrate social and environmental responsibility in order to be competitive.

A relevant conclusion is the evolution of the concept of competitive advantage, which now includes intangible factors such as corporate reputation, the ability to collaborate in global networks and resilience in the face of crises. Qualitative analysis suggests that successful companies must not only excel in terms of cost and differentiation, but also in their ability to adapt to emerging trends and anticipate disruptive change. This perspective reflects a broadening of the competitive approach that goes beyond conventional strategies and is underpinned by the theory of dynamic capabilities reflected in the ability of firms to remain agile and flexible in a dynamic and globalized environment (Teece, 2023) .

Finally, the adaptation of educational systems to meet the demands of competitive markets requires a comprehensive transformation that encompasses multiple dimensions. Research shows that this adaptation must be based on three main pillars: dynamic curricular transformation, which includes the continuous updating of content and the integration of emerging technologies; effective linkage between business and academia, which facilitates the alignment of educational programs with market needs; and the development of key competencies, both technical and soft.

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