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REVISIÓN

Intellectual Framework of Research on Intangible Assets in MSMEs: A Comparative Analysis Between Latin America and the International Context

Estructura intelectual de la investigación sobre activos intangibles en MiPymes: un análisis comparativo entre América Latina y el contexto internacional

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Abstract

Objective: This article examines the thematic evolution and intellectual structure of research on intangible assets in micro, small, and medium-sized enterprises (MSMEs) through a comparative approach between Latin America and the international context. Its aim is to identify the main theoretical streams, regional gaps, and research dynamics that shape this field, highlighting both the convergences and divergences between the two contexts.

Methodology: A mixed methodology was adopted, combining bibliometric techniques, such as co-citation analysis and thematic evolution, with a qualitative content review. The Scopus and Web of Science databases served as data sources, yielding a total of 683 documents published up to 2024, 54 of which correspond to Latin American affiliations.

Results: The results reveal lower conceptual and methodological density in Latin American scientific production, characterized by a fragmented structure and a limited presence of consolidated theoretical frameworks. Nevertheless, emerging regional themes were identified that position intangible assets as strategic tools for productive transformation.

Conclusions: The study concludes that Latin America is undergoing a delayed yet progressive alignment with the global agenda, and it highlights the need to strengthen context-specific frameworks that articulate global conceptual richness with regional realities.

Keywords: Intangible Assets, Latin America, Bibliometric analysis, Intellectual capital, Intellectual structure, Micro, small and medium-sized enterprises (MSMEs)

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Resumen

Objetivo: Este artículo analiza la evolución temática y la estructura intelectual de la investigación sobre activos intangibles en MiPymes, mediante un enfoque comparativo entre América Latina y el contexto internacional. Su objetivo es identificar las principales corrientes teóricas, brechas regionales y dinámicas investigativas que configuran este campo, visibilizando tanto las convergencias como las divergencias entre ambos contextos.
Metodología: Se adoptó una metodología mixta, combinando técnicas bibliométricas, como análisis de cocitación y evolución temática, con una revisión cualitativa de contenido. Las fuentes utilizadas fueron las bases de datos Scopus y Web of Science, integrando un total de 683 documentos publicados hasta el año 2024, de los cuales 54 corresponden a afiliaciones latinoamericanas.
Resultados: Los resultados evidencian una menor densidad conceptual y metodológica en la producción científica latinoamericana, caracterizada por una estructura fragmentada y menor presencia de marcos teóricos consolidados. No obstante, se identifican temas emergentes propios de la región que posiciona a los bienes intangibles como herramientas estratégicas en la transformación productiva.
Conclusiones: El estudio concluye que América Latina se encuentra en un proceso de alineación tardía, aunque progresiva, con la agenda global, y plantea la necesidad de fortalecer marcos situados que articulen la riqueza conceptual global con las realidades regionales.
Palabras clave: Activos intangibles, América Latina, Análisis bibliométrico, Capital Intelectual, Estructura intelectual, Micro, pequeñas y medianas empresas (MiPymes).

Introduction

In recent decades, the study of intangible assets has gained increasing relevance in organizational analysis, particularly due to their strategic role in generating sustainable competitive advantages. Concepts such as intellectual capital, organizational knowledge, and intangible resources have become pillars of contemporary business theories, especially in the field of micro, small, and medium-sized enterprises (MSMEs), which represent a significant portion of the productive fabric in both developed and emerging economies. In this context, intangible assets have ceased to be secondary elements and have become determining factors in the performance, innovation, and adaptive capacity of organizations. [1], [2].

International literature has consolidate robust theoretical lines articulated around regulatory frameworks, dynamic capabilities, and the measurement of intellectual capital [3], [4]. In contrast, the development of knowledge in regions such as Latin America has been slower and more fragmented, with less representation in global databases and limited influence in shaping theoretical paradigms [5]. This disparity raises key questions regarding how research approaches and results vary across regional contexts and about the extent to which Latin American micro, small, and medium-sized enterprises are integrated into conceptual and empirical advances in the field.

This study seeks to answer three fundamental questions: How has scientific production on intangible assets in small and medium-sized enterprises evolved globally? What are the main schools of

thought and theoretical frameworks that have underpinned research in this field? What differences are observed between the research dynamics in Latin America and those in other global regions? To address these questions, a mixed methodological approach was designed that integrates bibliometric techniques—through co-citation network analysis and thematic evolution—with qualitative content analysis, allowing for the contextualization and deeper interpretation of the findings.

The main contribution of this article lies in offering a comparative study of Latin American scientific production and international literature on intangible assets in MSMEs. By integrating data from Scopus and Web of Science databases and using tools such as VOSviewer and R-Bibliometrix, the study provides a structured view of thematic evolution, theoretical currents, and existing gaps in both regions. The analysis reveals not only convergences around the strategic role of knowledge but also significant divergences in methodological sophistication, the incorporation of emerging agendas (such as sustainability or digitalization), and theoretical orientation.

Likewise, the article proposes a critical reflection on the need to develop situated theoretical frameworks that engage with the structural, institutional, and cultural conditions of the region, while maintaining the standards of rigor and validity required by the global scientific community.

Methodology

This study was developed using a mixed-method approach that integrates two complementary methodological perspectives. On the one hand, a quantitative approach was adopted through bibliometric techniques, specifically network analysis, which allowed for the identification and visualization of the structural characteristics of the research field [6]. On the other hand, a qualitative approach based on content analysis was implemented, carried out through critical reading and systematic processing of the selected documents [7]. Table 1 presents the methodological proposal that supports the study, detailing the type of approach, the sources used, and the results obtained.

Table 1. *Example of a generic table.*

Approaches	Sources	Results
Bibliometric analysis Content analysis	Scopus Web of science	Research field description Reference citation analysis (foundations and theoretical trends) Thematic evolution map (latin american regions – globalized) Comparative study
Mixed methods	Scientific articles	Research findings

Source: Authors.

Data collection was conducted using two databases widely recognized for their methodological rigor and broad subject coverage: Scopus and Web of Science. These platforms were selected due to their extensive volume of scientific publications, which ensures the quality, validity, and reliability of the information collected. Furthermore, both databases offer advanced tools for bibliometric analysis, facilitating the identification of publication patterns, collaborative dynamics, and knowledge network structures.

To identify literature relevant to the study, a search equation based on keywords was developed, validated by subject matter experts, and defined as follows:

("intangible assets" OR "intellectual capital" OR "knowledge assets" OR "intangible capital" OR "non-physical assets" OR "intangible resources") AND (("small and medium enterprises" OR "small and medium-sized enterprises" OR "SMEs" OR "SMBs" OR "micro, small and medium enterprises" OR "small businesses")

Subsequently, metadata was extracted from both databases, covering the period from the earliest available publications to the most recent year with closed data (2024). Only documents classified as research articles, literature reviews, and book chapters were included. This extraction generated two distinct datasets: i) international scientific literature (excluding Latin American countries), and ii) literature produced in Latin American countries.

For the bibliometric analysis, all retrieved records were considered. In contrast, for the qualitative analysis, a selective review was conducted based on the title, abstract, and main findings of the documents.

To integrate and refine the records from both sources, the software AteneaSires version 2.0, developed for bibliographic integration, was used. This tool made it possible to cross-reference information, standardize tags, eliminate duplicates, and consolidate a single data lake [8]. The consolidated results are presented in Table 2 and serve as the basis for the statistical and qualitative analysis developed in this study.

Table 2. *Total records per database. Source: SCOPUS; WoS*

Source	Number of documents
Scopus	588
Web of science	369
Total documents delivered by atenea	683

Source: Authors.

Additionally, to explore the territorial dynamics of scientific production in Latin America, documents from this region were specifically filtered and compared with those from other geographic areas.

This comparative analysis identified thematic and evolutionary gaps between Latin American literature and international scientific production, highlighting the particularities and limitations of research development in the regional context.

The Latin American records underwent the same cleaning, normalization, and refinement process applied to the global dataset, ensuring comparability of the results. Table 3 presents the datasets used as input for this phase of the study, which served as the basis for the comparative analysis between regions.

Table 3. *Latin American records by database. Source: SCOPUS; WoS*

source	Latin America	Without Latin América
Scopus	44	544
Web of Science	29	340
Total Documents Delivered By Atenea	54	629

Source: Authors.

To carry out the bibliometric exercise, we chose to perform the analysis of co-citations of references and a co-occurrence analysis of keywords within the software VOSviewer version 1.6.20 and R bibliometrix version 4.3.0.

Co-citations measure how many times two specific references are cited together in other works, indicating the thematic relationship between them [9]. This analysis allows for the detection of intellectual structures, theoretical currents and models, and patterns of interrelationships between authors and topics. Its mathematical formulation is as follows:

Where indicate whether references *i* and *j* are cited in the work *k.*

Keyword co-occurrence assesses how many times two terms or concepts co-occur in the same set of documents, revealing their thematic relationship [10]. This analysis is useful for detecting trends and the evolution of research fields. Its mathematical formulation is as follows:

Where represent the presence of keywords *i* y *j* in document *d*.

Results

Description of the field of research.

An analysis of the processed documents reveals a progressive growth trend in the field of research starting in 2010. This aligns with the incorporation of authors affiliated with Latin American institutions

into scientific production on the topic, who began publishing in 2009. Figure 1 shows a trend that marks the beginning of an upward trend in terms of publications.

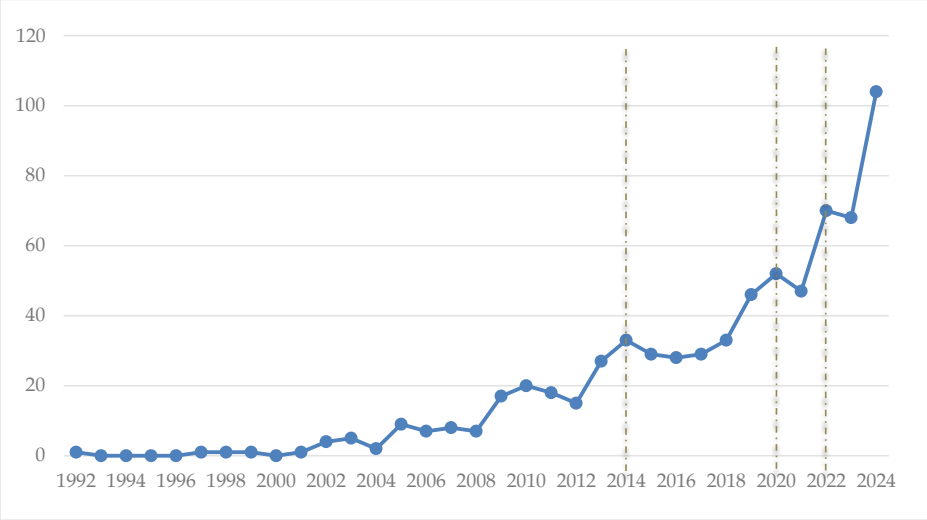

Figure 1. Evolution of publications in the research field

Source: Authors.

To identify the level of development of the research field in Latin America, publications were filtered by institutional affiliation, considering only countries in the region that have contributed publications on the topic: Mexico, Argentina, Peru, Ecuador, Chile, Venezuela, Paraguay, Cuba, El Salvador, Colombia, and Brazil.

Analysis of the Scopus database indicates that only 7.91% of publications are affiliated with Latin American institutions, while the remaining 92.09% come from other countries. Furthermore, scientific production in Latin America is shown to have begun in 2009, in contrast to the rest of the world, whose first recorded publication in this field dates back to 1992. This difference of more than 17 years, combined with the volume of production by region, highlights a significant gap in the development of the field of study within Latin America.

Theoretical currents and intellectual configuration of the field: An analysis of intangible assets in micro, small and medium-sized enterprises.

In order to identify the main theoretical currents that structure the research field, a co-citation analysis of references was applied, a bibliometric technique widely recognized for its ability to explore the connections between academic documents based on the frequency with which they are cited jointly in subsequent works [11], [12], [13]. This methodology is especially useful for reavealing patterns of

conceptual affinity between publications, which facilitates the identification of dominant schools of thought and interrelated thematic areas within the analyzed documentary corpus [14], [15].

Figure 2 shows the results of this analysis, displaying three thematic groupings or clusters represented in red, blue, and green. Each cluster reflects a particular theoretical approach or established line of research on intangible assets in small and medium-sized businesses. The visualization was generated using VOSviewer software, version 1.6.20, which allowed for structuring the relationships between references and graphically representing their links.

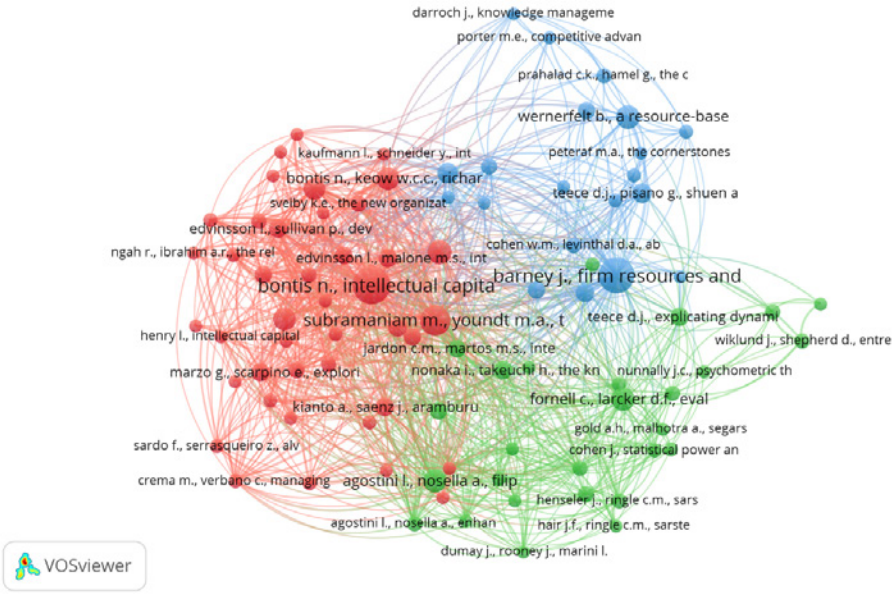

Figure 2. Theoretical currents that underpin the global research field

Source: Authors.

Cluster 1: Conceptualization between Intellectual Capital and Measurement of Organizational Knowledge

Identified in red, this cluster represents the historical foundation of the field of intellectual capital, with a strong emphasis on its conceptualization, measurement, and organizational management, particularly in the context of micro, small, and medium-sized enterprises (MSMEs). Its roots date back to the pioneering work of Edvinsson and Sullivan [16], who developed the Skandia Navigator, one of the first systematic models for assessing intellectual capital using non-financial indicators. In parallel, Roos and Roos [17] proposed a framework for measuring a firm's intellectual performance, establishing the conceptual basis for intellectual capital in key dimensions such as human, structural, and relational. Stewart [2] further disseminated the concept by presenting intangible assets as "the new wealth of organizations,"

advocating for strategic knowledge management. These contributions laid the groundwork for treating intangibles as essential resources in generating business value.

Bontis [18] examined the challenges of measuring intellectual capital due to its intangible nature and the lack of consensus around its dimensions and metrics. Moving toward more applied approaches, Subramaniam and Youndt [19] analyzed how the different components of intellectual capital influence organizational dynamics. Complementarily, Cohen and Kaimenakis [20] studied the relationship between intellectual capital and performance in knowledge-intensive firms. Subsequently, Zéghal and Maaloul [21] sought to directly link knowledge management with organizational performance.

Despite these advances, measuring intellectual capital remains a central challenge. Nevertheless, the literature agrees that these assets constitute a key strategic factor in explaining differential performance, especially in knowledge-based economies.

Cluster 2: Relationship between Intellectual Capital, Performance, and Innovation

This cluster, highlighted in green, represents a contemporary trend that links intellectual capital to organizational outcomes, particularly in terms of organizational performance and innovation. The theoretical foundation includes contributions such as those of Fornell and Bookstein [22], who lay the methodological groundwork for assessing reliability and validity in structural equation models.

The use of structural equation models becomes central to this line of research, as it enables the measurement of latent relationships between complex variables such as knowledge, innovation, and performance [23]. Approaches such as PLS-SEM have been consolidated, disseminated, and updated in methodological guides by Hair [24], [25], which provide clear guidelines for their application in organizational studies. This cluster stands out for its strong empirical emphasis and methodological rigor in validating models that explain how intangible knowledge translates into competitive advantage, particularly in the micro, small and medium-sized enterprises environment.

Cluster 3: Strategic Vision: Resources and Organizational Capacity

Identified in blue, this cluster brings together the classic theoretical foundations that explain the value of intangible assets in small and medium-sized enterprises from a strategic and evolutionary perspective. The starting point is Penrose's [26] work on firm as a result of the efficient use of internal knowledge. Decades later, authors such as Wernerfelt [27] and Prahalad and Hamel [28] consolidated new strategic approaches: Wernerfelt established the first foundations of the resource-based view (RBV), while Prahalad and Hamel introduced the notion of core competencies.

Likewise, Nonaka [29] contributes from the theory of organizational knowledge, offering a dynamic view of the knowledge creation process in organizations. Over time, this trend evolved into the theory of dynamic capabilities, represented by works such as those by Teece [30] and Eisenhardt and Martin [31], who highlight the ability of organizations to adapt to change by reconfiguring their intangible resources.

Overall, this cluster supports the idea that small and medium-sized enterprises can build lasting advantages if they manage to strategically identify, combine, and transform their intangible resources.

Global Map of thematic evolution excluding Latin America

Figure 3 presents the thematic evolution in a globalized context, that is, worldwide literature excluding Latin America, in order to identify international thematic diversity. The predominant themes can be observed by period. The first period comprises the years 1992–2014; the second period, 2015–2020, the third period, 2021–2022; and the fourth period, 2023–2024. These time intervals are consistent with the previous review of the publication dynamics and the inflection points discussed in session 3.1.

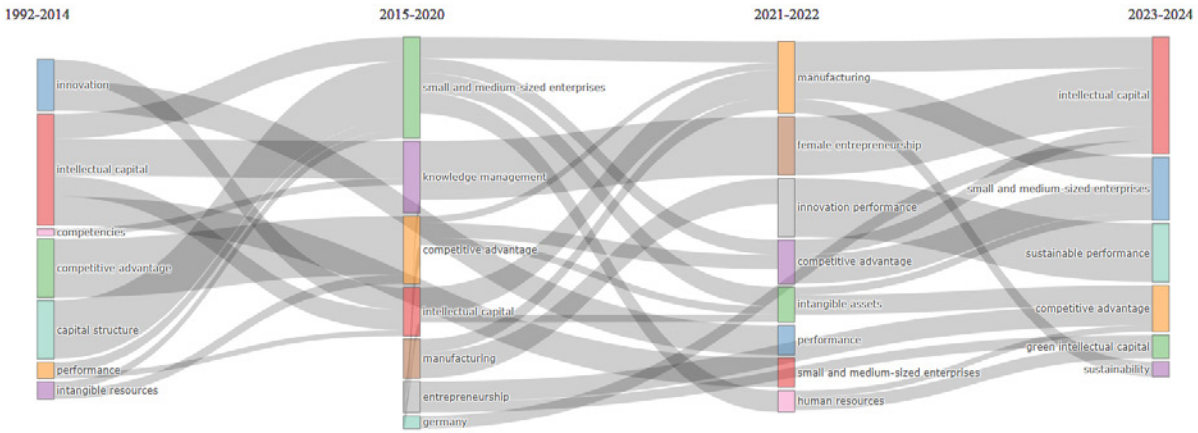

Figure 3. Thematic evolution in the globalized context

Source: Authors.

Period 1992–2014: Fundamentals of intellectual capital and competitive advantage based on intangibles.

One of the first relevant contributions is that of McLarty [32], who analyzed the relationship between intellectual capital and graduate competencies in relation to the business environment. Later, Spillan and Ziemnowics [33] addressed the role of advanced technology in entrepreneurship, specifically focusing on contexts not yet dominated by the notion of micro, small, and medium-sized enterprises as a central category. Along the same lines, Formica [34] contributes from the idea of entrepreneurial universities as engines of intellectual value creation.

Innovation also appears as a transversal concept, and case studies were predominantly used as a methodological approach to explore complex organizational realities. This qualitative emphasis suggests an exploratory and formative stage. For example, Khalique [35] presents a case study of intellectual capital in micro, small, and medium-sized enterprises in Pakistan, using a mixed-methods approach to understand how intangible components contribute to business performance in specific contexts. This type of study reinforces the predominance of case study methodologies as a tool for exploring complex phenomena at this early stage.

During this stage, studies focused more on the conceptual framework of intellectual capital and its components, without micro, small, and medium-sized enterprises being the central focus of the discussion.

Period 2015–2020: Emergence of micro, small, and medium-sized enterprises and knowledge management as a strategic axis

Between 2015 and 2020, micro, small, and medium-sized enterprises (MSMEs) took center stage in the literature on knowledge management and intellectual capital. Key concepts such as knowledge management, competitive advantage, entrepreneurship, and manufacturing were consolidated, evidencing a transition from conceptual discussions to more applied research. Intellectual capital began to be understood as a strategic resource essential for achieving sustainable competitive advantages, especially in manufacturing environments.

Throughout this period, several studies provided empirical evidence from different perspectives. Massaro et al. [36] offered a structured review of knowledge management in micro, small and medium-sized enterprises, highlighting its role in improving organizational performance. Crema and Verbano [37] linked technological innovation strategy with intellectual capital, demonstrating its positive impact on manufacturing micro, small, and medium-sized enterprises. This research marked an evolution in the understanding of organizational knowledge as a driver of business transformation.

Finally, Mahmood and Mubarik [38] explored the balance between knowledge exploration and exploitation as a key elements for sustainable innovation in micro, small and medium-sized enterprises. Overall, this period demonstrates the consolidation of intellectual capital as a strategic axis in dynamic organizational contexts, accompanied by increasingly robust methodologies and more defined sectoral approaches.

2021–2022 Period: Innovation, manufacturing, and gender at the center of the debate

In 2021 and 2022, the literature on micro, small, and medium-sized enterprises further examined the role of intellectual capital as a driver of innovation and organizational performance, particularly in the manufacturing sector. Studies such as those by Hanifah et al. [39] and Ur Rehman et al. [40] highlight the

importance of entrepreneurial orientation and innovative capacity, mediated by shared knowledge and intellectual capital. These works reflect a growing trend to understand innovation not only as a technological outcome, but as a strategic process deeply linked to intangible assets. For their part, Farzaneh et al. [41] point out that innovative ambidexterity, that is, the ability to explore and exploit simultaneously, depends on the degree of intellectual capital development and its strategic orientation toward innovation.

The literature during this period also addressed issues of sustainability, organizational resilience, and financial performance in crisis contexts. Ali et al. [42] explore how green intellectual capital drives the adoption of green innovations in manufacturing micro, small, and medium-sized enterprises, while Grözinger et al. [43] highlight the role of organizational psychological capital as a source of resilience to external shocks. In parallel, studies such as Aljuboori et al. [44] and Ramírez et al. [45] reinforce the positive relationship between intellectual capital and business performance by considering moderating variables such as family management and innovation capacity.

Period 2023–2024: Sustainability, green transformation and conceptual evolution of intellectual capital

During the 2023–2024 period, studies on MSMEs have delved into the connection between intellectual capital and sustainable performance, highlighting its role as a key element of strategies aimed at sustainability and competitiveness. Ahmad et al. [46] demonstrated how intellectual capital and corporate social responsibility positively impact the sustainable competitive performance of MSMEs through the mediation of organizational innovation.

The focus on innovation is combined with structural factors such as digital capabilities, organizational resilience, and strategic investment. Truong et al. [47] highlight the interaction between intellectual capital, knowledge management, and environmental compliance as levers for improving innovation and corporate performance. Chaudhuri et al. [48] link human capital to entrepreneurial ecosystems through digital capabilities, while Civelek et al. [49] point out that the competitive skills of MSMEs are essential for mitigating financial risks. Together, these findings reflect a holistic approach in which sustainability, innovation, and intangible capital are articulated as interdependent dimensions.

Overall, this period is characterized by an explicit integration of knowledge, sustainability, and strategic alliances. Intellectual capital evolves from being an operational resource to becoming the linchpin of sustainable organizational transformation and the knowledge-based economy.

Map of thematic evolution in the context of Latin America

In contrast to the global dynamic, where scientific production on intellectual capital and MSMEs has shown sustained and progressive growth, the Latin American context presents a much more limited and

discontinuous trajectory. Of the 683 documents identified worldwide in this field, only 54 publications correspond to authors whose studies focused on Latin America, representing less than 7.8% of the total sample analyzed.

An important peculiarity identified during the time segmentation process is the total absence of Latin American publications in 2014, which required the bibliometric software to automatically adjust the cutoff of the first thematic period to 2013. This contrasts with the global dynamic, in which 2014 marked a significant peak in production. Consequently, the thematic evolution in the Latin American case has been divided into four-time blocks, defined by the observed publication patterns and the identified thematic flows: (i) Period 2009–2013, (ii) Period 2015–2020, (iii) Period 2021–2022, and (iv) Period 2023–2024. Figure 4 presents thematic evolution in Latin America.

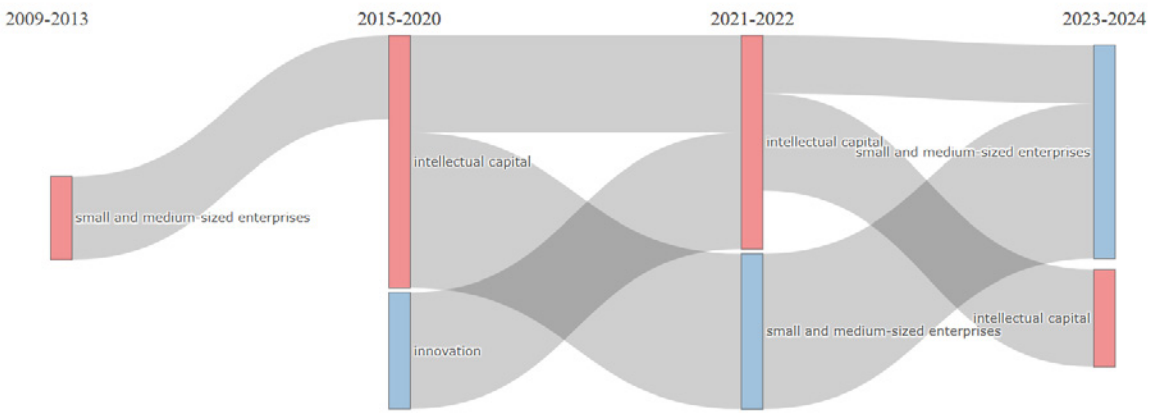

Figure 4. Thematic evolution in the Latin American context

Source: Authors.

A visual analysis of the thematic evolution map suggests a high concentration of topics around concepts such as intellectual capital, innovation, and small and medium-sized enterprises, with a progressive integration among these nodes over time. However, unlike the global context, conceptual diversity and expansion into areas such as sustainability, gender, and digital transformation have been more limited, likely reflecting lower scientific density and scarce structural funding at the regional level.

Period 2009–2013: Emergence of micro, small, and medium-sized enterprises as a focus of analysis in Latin America.

During this initial period, Latin American scientific production on intangible assets and intellectual capital in MSMEs was characterized by low intensity and an exploratory orientation. The thematic evolution map reflects a still nascent landscape in which the term "small and medium-sized enterprises"

appears as the only significant thematic node, indicating an emerging interest in this business category, albeit without a clear connection with intellectual capital or innovation.

In this sense, the identified studies address disparate but convergent topics related to knowledge management, organizational sustainability, and the development of internal capabilities. For example, Capote et al. [50] analyze the implementation of knowledge management processes in software development, a key sector in the Latin American productive transformation.

Subsequently, Medel et al. [51] explored reporting models for corporate sustainability, anticipating a concern for non-financial impacts that would later be linked to the strategic sustainability of intellectual capital. In 2012, Zapata-Cantu et al. [52] introduced a spatial and technological dimension to organizational studies, highlighting how the physical environment and information technologies can affect knowledge dynamics in companies.

Finally, in 2013, two papers were published that delve deeper into knowledge management in Latin America. On the one hand, Pérez-Soltero et al. [53] diagnose knowledge management processes in organizations, emphasizing the need to strengthen internal structures to improve competitiveness. On the other hand, Banchieri et al. [54] develop a self-assessment model for managing family microbusinesses, highlighting the role of human and social capital in their sustainability.

Period 2015–2020: Consolidation of intellectual capital and knowledge networks in micro, small and medium-sized enterprises.

Between 2015 and 2020, Latin American scholarship on MSMEs underwent a notable shift: intellectual capital consolidated its position as the connecting factor between knowledge management, innovation, and competitiveness. Thematic analysis of this period reveals that intellectual capital and innovation gained prominence, becoming closely integrated with the small and medium-sized enterprises node. Jordão & Novas [55] exemplify this trend by demonstrating that the alignment between intellectual capital and knowledge management positively impacts the performance of family businesses, underscoring the importance of a strategic approach to leveraging intangible assets.

During this period, cognitive and relational capabilities acquired increasing value in building sustainable competitive advantages. De Vasconcellos et al. [56] identify organizational creativity as an essential component of human and intellectual capital in micro, small, and medium-sized enterprises, while Oliveira et al. [57] examine the importance of internal knowledge-sharing networks in enhancing organizational performance.

Towards 2020, emphasis on knowledge networks and organizational infrastructure intensified. Beltramino et al. [58] explored the role of structural capital in transforming knowledge into tangible innovation

in manufacturing micro, small, and medium-sized enterprises. Jordão et al. [59], in turn, analyzed the influence of knowledge-based networks on internationalization processes. Thus, intellectual capital has ceased to be a marginal concept and has become a strategic tool in the organizational analysis of Latin America, repositioning MSMEs as hubs for knowledge creation and transfer in the region.

2021–2022 Period: Thematic diversification and new strategic connections.

During the 2021–2022 period, Latin American literature on intellectual capital MSMEs showed significant thematic diversification. Although the relative volume of publications declined and intellectual capital ceased to be the central node, micro, small, and medium-sized enterprises strengthened their role as the articulating axis of organizational dynamics. This transition reflects a shift in theoretical interest toward practical applications related to innovation, sustainability, and strategic impact.

The research agenda of the period was characterized by the integration of new, combined perspectives. Fernandes Crespo et al. [60] proposed the concept of entrepreneurial capital as a mediator between innovation and organizational performance, highlighting the value of entrepreneurial knowledge as a source of competitive advantage. Complementarily, Erazo Álvarez [61] examined how the articulation of human, structural, and relational components of intellectual capital enhances organizational transformation in Latin American companies, underscoring the importance of strategic management of intangibles.

2023–2024 Period: Sustainability, applied knowledge and strengthening of micro, small and medium-sized enterprises.

During the 2023–2024 period, Latin American scientific production on intellectual capital and micro, small, and medium-sized enterprises shows an intensification in the practical application of knowledge, with an emphasis on sustainability, digital transformation, and organizational resilience. The thematic evolution map reveals a decrease in the centrality of intellectual capital, accompanied by a strengthening of the role of MSMEs as the articulating axis of organizational dynamics. This transformation demonstrates a maturation of the field, in which intangible assets are strategically incorporated into business processes [62], [63].

Research from this period highlight how intellectual capital is directly linked to organizational performance and sustainability. Ricardo et al. [64] underscore the importance of relational capital as a driver of competitiveness in Mexican micro, small, and medium-sized enterprises. Subsequently, Ortiz-Regalado and Guevara [65] analyze the impact of strategic intangible management on the financial performance of MSMEs, while Paredes Chacín et al. [66] investigate how knowledge transfer drives sustainable performance. In addition, Valencia-Arias et al. [67] highlight the role of knowledge management practices in strengthening sustainable competitiveness.

From a critical perspective, Bergmann et al. [68] analyze how Latin American MSMEs address the challenges of institutional informality by using knowledge as an adaptive resource. Overall, this period marks a paradigm shift where MSMEs are seen as active agents of transformation, capable of managing their intangible assets based on innovation, resilience, and sustainability.

Comparison between the Latin American context and the context without Latin America.

The thematic evolution of intellectual capital in small and medium-sized enterprises presents differentiated trajectories when comparing Latin American and non-Latin American contexts.

Main divergences and convergences between Latin America vs. Other Regions.

One of the main differences lies in the volume of scientific production. This gap reflects not only a lower research density in Latin America but also inequalities in the consolidation of sustained thematic lines.

Furthermore, the Latin American case exhibit temporary gaps, such as the complete absence of publications in 2014, which required modifying the standard bibliometric segmentation. This contrasts with the global scenario, where 2014 marked a significant peak in production. In this sense, the development of the field in Latin America has been more discontinuous and fragmented, likely due to structural limitations, such as access to funding and a lower presence in international collaboration networks.

At the global level, the evolution shows a growing diversification towards topics such as sustainability, gender, digitalization, and the circular economy in MSMEs, especially starting in the 2021–2022 period. In contrast, in Latin America, the literature remains more focused on traditional topics, without broadly expanding into new, emerging areas. This difference suggests less flexibility in the thematic approach in the Latin American context.

Among the main convergences is the recognition of intellectual capital as a competitive advantage. In both the global and Latin American contexts, the central role of intellectual capital as a source of competitive advantage in MSMEs is consistently recognized. Starting with the second period analyzed (2015–2020), the idea that intangible assets—human, structural, and relational capital—are decisive in driving innovation, sustainability, and business growth is consolidated in both scenarios.

Discussion

Comparative analysis of the Latin American and international contexts reveal a structural and epistemological gap that transcends bibliometric indicators. The difference is not merely quantitative but lies in how knowledge about intangible assets in MSMEs is conceived, theorized, and applied. While

the global literature presents a mature theoretical framework based on established models, such as the Skandia Navigator and the Resource-Based View, Latin American research exhibit a more pragmatic and contextual approach, focused on addressing challenges related to management, competitiveness, and structural informality.

The gap of more than 17 years between the first international publications (1992) and the first Latin American publications (2009) reflects not only a matter of research scale, but also a historical disconnect between the academic agenda and regional business realities. This temporal gap coincides with periods of low investment in R&D, institutional fragmentation, and weak collaboration between universities and businesses. The complete cessation of publications in 2014 suggests a critical moment of discontinuity in theoretical development, possibly associated with dependence on exogenous models and the difficulty of sustaining stable lines of research over time.

This gap implies the coexistence of another logic of knowledge production, viewed from an applied and resilient epistemology that prioritizes the resolution of local problems over theoretical abstraction. Consequently, Latin American research tends to focus on how small, and medium-sized enterprises survive, innovate, or adapt in restrictive environments, rather than on constructing universal models of intellectual capital.

In the international context, the three consolidated theoretical clusters—(1) conceptualization and measurement of intellectual capital, (2) the relationship between intellectual capital, innovation, and performance, and (3) a strategic vision based on resources and capabilities—show interconnection and progressive evolution. This articulation was identified through co-citation and co-occurrence analysis, which allowed us to demonstrate the methodological convergence of the studies, including the use of advanced quantitative techniques such as PLS-SEM modeling.

The lack of integration among these three major global clusters in the Latin American case may be interpreted as an opportunity to build an alternative theoretical framework. Instead of replicating intellectual capital models designed for formal and highly technological economies, the region can contribute its own approaches that recognize cognitive informality, organizational resilience, and community relational capital as valid forms of intangible assets.

Another substantial difference identified is the slow incorporation of "green" and "digital" agendas in Latin American literature. While the global context articulates sustainability, green innovation, and digitalization as interdependent dimensions of intellectual capital, in Latin America these topics are still treated as peripheral. This is partly due to the productive structure based on traditional sectors and limited access to technologies. However, recent regional research is beginning to link knowledge

management with environmental sustainability and digital transformation, demonstrating a transition toward a more contemporary agenda.

In this sense, the bibliometric and qualitative analysis presented here suggests the need to move toward theoretical models of situated intellectual capital that would allow us to redefine the concept of Latin American intellectual capital not as an incomplete copy of Nordic or Anglo-Saxon models, but as an adaptive system emerging from the interaction between culture, social networks, and business survival strategies. In this sense, the theoretical lag can be transformed into an epistemic advantage that contributes to the global debate on how to measure and manage intangibles in emerging contexts.

The articulation of these concepts can give rise to a Latin American theory, with the potential to enrich international frameworks and contribute to the global debate on the knowledge economy in emerging contexts, thereby fostering the creation of models that recognize the dynamics of knowledge and value, which can be addressed from future studies.

Conclusions and future studies

A comparative analysis between Latin America and the international context reveals that the differences in scientific production on intangible assets in small and medium-sized enterprises are not attributable solely to a quantitative deficit, but rather to structural and epistemological divergences in how knowledge and its role in value creation are conceived. The gap of more than 17 years in the consolidation of the field, together with the interruption of publications in 2014, reflects institutional vulnerability and dependence on exogenous models, while also signaling the emergence of a situated research logic that prioritizes adaptation, empirical experience, and innovation.

Globally, the literature on intellectual capital has evolved from the conceptualization and measurement of intangibles toward their integration with sustainability, digitalization, and organizational strategy. In contrast, Latin American research has followed a more pragmatic trajectory, oriented toward resolving local challenges related to competitiveness, informality, and knowledge management.

The articulation of these perspectives opens avenues for future research within a new field of study on the knowledge economy in emerging environments. This field has the potential both to enrich global theories of intellectual capital and provide a critical perspective on the epistemological dependence of traditional models on reinterpretations when applied to productive contexts with less institutional formalization and greater technological constraints.

At the applied level, the findings call for differentiated commitments from key stakeholders: i) public policymakers, who must promote knowledge ecosystems that recognize informal forms of learning and innovation in MSMEs; ii) universities and research centers, which must strengthen international

cooperation and the development of situated metrics that measure the impact of intangibles beyond financial indicators; and iii) business managers, who must identify, document, and capitalize on their intangible assets, especially those of a relational and cognitive nature, as the basis of their competitiveness and sustainability.

Finally, this study acknowledges as a limitation the exclusive reliance on internationally indexed sources (Scopus and Web of Science), which may exclude some forms of regional knowledge not fully presented in dominant publishing circuits. Rather than constituting a methodological bias, this limitation confirms the structural inequality that this study seeks to highlight. Latin America is not on the sidelines of theoretical developments regarding intangible assets; it is developing an alternative paradigm, based on resilience, cooperation, and knowledge as characteristics of emerging contexts, which can decisively contribute to redefining intellectual capital in the global knowledge economy.

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