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REVIEW

Distributed leadership from the perspective of economic and administrative sciences

El liderazgo distribuido desde la perspectiva de las ciencias económicas y de la administración

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ABSTRACT

Distributed leadership represents a management approach that addresses the inherent challenges of contemporary organizations, which face high complexity due to the need for constant adaptation. This research adopted a systematic literature review design to analyze the development of distributed leadership from economic and administrative sciences. A total of 623 documents indexed in Scopus between 2019 and 2024 were examined using bibliometric and qualitative analyses with tools such as VOSviewer. The results reveal exponential growth in scientific production (126,7 % since 2019), initially led by the United States and the United Kingdom but with increasing contributions from emerging economies such as Malaysia and Jordan. Four main thematic clusters were identified: hybrid leadership (transformational/ethical), organizational dynamics, critical contexts (education/health), and digital transformation. However, geographical gaps (Latin America, Africa) and methodological biases persist, with a predominance of cross-sectional quantitative studies over qualitative approaches. In education, distributed leadership was found to strengthen teacher collaboration and institutional effectiveness. In the business sector, it was associated with greater innovation and resilience, particularly in technology industries and crisis contexts.

Keywords: Distributed Leadership; Transformational Leadership; Bibliometric Analysis; Organizational Innovation; Digital Transformation.

RESUMEN

El liderazgo distribuido constituye una forma de dirección que transversaliza los desafíos inherentes en las organizaciones contemporáneas. Estas, se ven sometidas a una alta complejidad producto de la necesidad de adaptación constante. En esta investigación se asumió un diseño de revisión sistemática de la literatura que buscó analizar el desarrollo del liderazgo distribuido desde las ciencias económicas y administrativas. Para ello, se analizaron 623 documentos indexados en Scopus entre 2019-2024, empleando análisis bibliométricos y cualitativos con herramientas como VOSviewer. Los resultados revelan un crecimiento exponencial de la producción científica (126,7 % desde 2019), liderado inicialmente por Estados Unidos y Reino Unido, pero con creciente participación de economías emergentes como Malasia y Jordania. Se identificaron cuatro núcleos temáticos principales: liderazgo híbrido (transformacional/ético), dinámicas organizacionales, contextos críticos (educación/salud) y transformación digital. Sin embargo, persisten brechas geográficas (América Latina, África) y metodológicas, con predominio de estudios cuantitativos transversales sobre aproximaciones cualitativas. En el ámbito educativo, el liderazgo distribuido demostró fortalecer la colaboración docente y la

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eficacia institucional. En el sector empresarial, se asoció con mayor innovación y resiliencia, particularmente en industrias tecnológicas y contextos de crisis.

Palabras clave: Liderazgo Distribuido; Liderazgo Transformacional; Análisis Bibliométrico; Innovación Organizacional; Transformación Digital.

INTRODUCTION

Today's organizations face volatile environments and accelerated digitalization processes, which demand flexible structures, according to Rudenko[1]. Digital transformation, according to Chatterjee et al.[2], helps organizations to become more flexible and improves their competitiveness. In this sense, Cosa et al.[3] point out that it fosters dynamism and adaptability of performance measurement systems, requiring highly flexible systems to adapt to environmental changes.

Distributed leadership responds to this need by decentralizing decision-making and distributing responsibilities among multiple actors.[4,5] According to Sedrine et al.[6] and Youngs[7], distributed leadership positively impacts organizational commitment, with trust and an effective climate playing a positive role. Thus, as Agarwal et al.[8] note, a flexible and collaborative organizational culture supports knowledge sharing and adopting agile methods, enabling distributed leadership and fulfilling the psychological contract in project-based organizations.

Despite these limited benefits, Khan[9] comments that distributed leadership can lead to marginalization and epistemic injustice if not exercised under controlled conditions with regulated and specified guidelines. In this regard, Hickey et al.[10] note a need for more rigorous research on distributed leadership, with a more focused approach to understanding its perceptions, relationships, and culture in organizations. To this extent, the current literature has failed to synthesize economic and managerial factors in its analysis adequately.[11]

Despite the volume of studies published between 2020 and 2024, a lack of systematization prevents the identification of relevant contributions. This lack hinders the development of theoretical frameworks applicable to practical contexts, which affects evidence-based decision-making. Therefore, this research aims to identify the predominant theoretical foundations, applications, and methodologies in distributed leadership from economics and management sciences.

METHOD

The study analyzed distributed leadership through a systematic literature review and bibliometrics. Scopus was the primary source due to its relevance in economics and management sciences. The methodology integrated both approaches to examine the existing academic production.

Definition of the protocol and search strategy

The research was based on a structured protocol adapted from PRISMA to ensure transparency.[12] The central question examined distributed leadership in economics and administrative sciences between 2019 and 2024.

Search terms included ' distributed' and 'leadership,' limited to publications in the BUSI and ECON fields. The search formula used was (TITLE-ABS-KEY('distributed leadership') OR ('distributed leadership')) AND (DOCTYPE('ar') OR DOCTYPE("re") OR DOCTYPE('ch')) AND (PUBYEAR > 2018 AND PUBYEAR < 2025) AND (SUBAREA ('BUSI') OR SUBAREA ('ECON')). The initial strategy identified 799 relevant documents (figure 1).

Processing and selection of the document sample

The initial sample was cleaned in two stages. First, Scopus automatically removed duplicates and non-relevant documents using metadata. Researchers then manually evaluated titles, abstracts, and keywords to confirm that the texts addressed distributed leadership in economics and administration. Discrepancies were resolved by consensus. The final sample, refined and documented with exclusion criteria, underpinned the subsequent analyses.

Bibliometric analysis and systematic synthesis

The cleaned sample was examined using bibliometric techniques and qualitative synthesis. For the quantitative analysis, VOSviewer was used to assess productivity, collaboration between authors and institutions, and the impact of publications according to citations. At the same time, conceptual trends were identified through keyword mapping, which allowed us to re-evaluate thematic nuclei and their evolution over time.

The qualitative synthesis was based on a detailed review of key documents selected for their impact and thematic relevance. The analysis examined theoretical frameworks, methodological approaches, and main findings, identifying consensus and divergence in the literature.

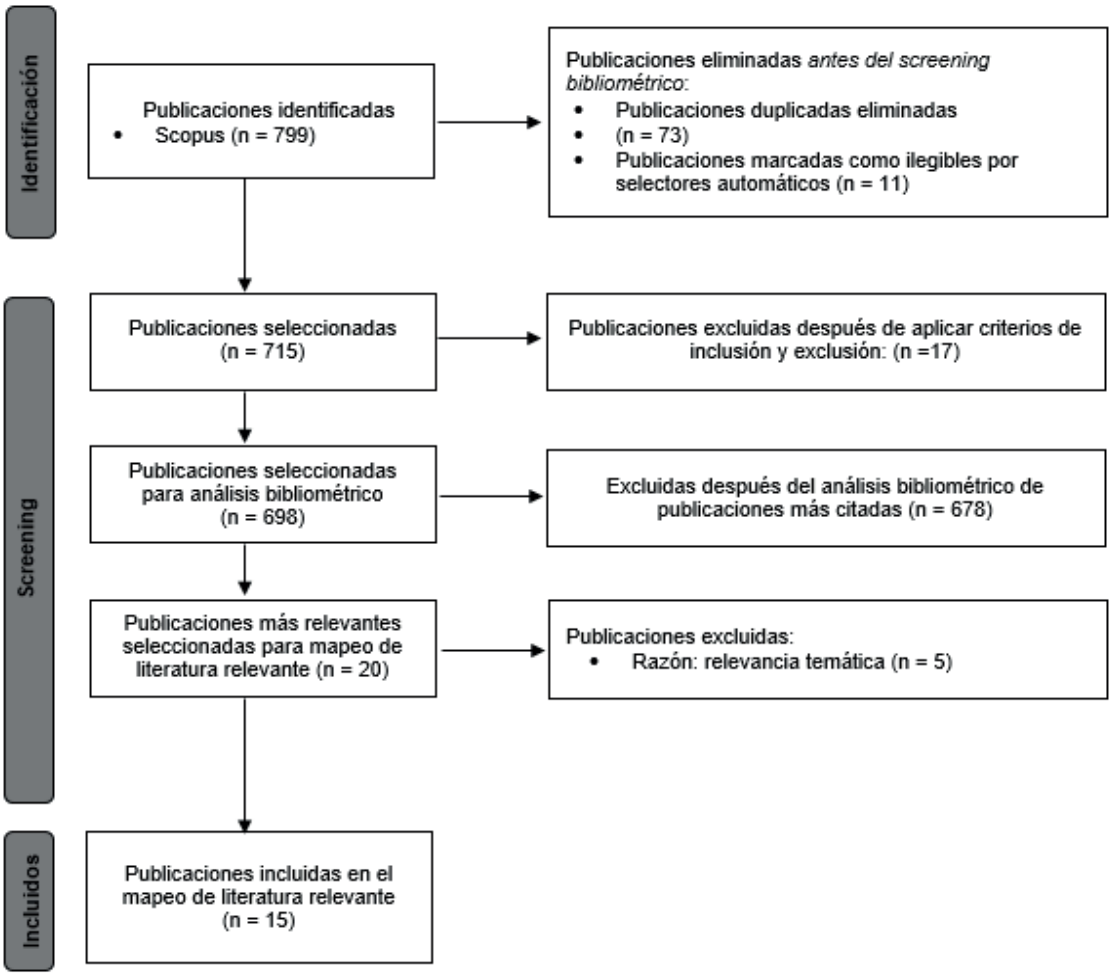

Figure 1. Publication selection process

RESULTS

Analysis of productivity and collaboration networks

Temporal evolution of academic production

The analysis of the annual scientific production reveals a clear upward trend from 2019 to 2024. However, as seen in figure 2, this growth has not been linear or uniform.

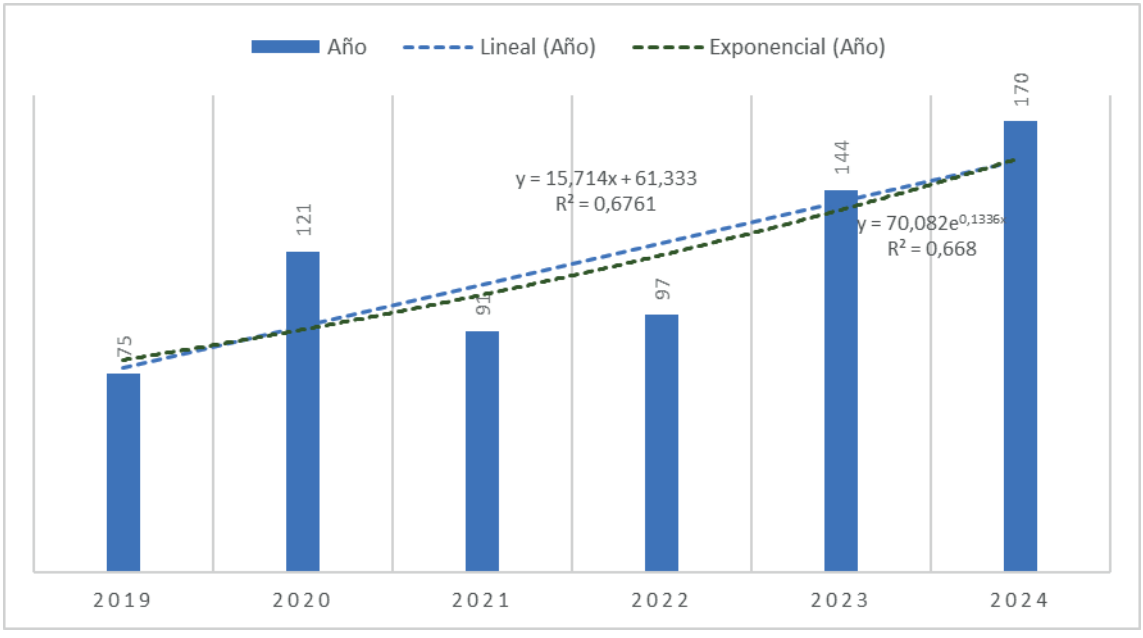

Figure 2. Distribution of scientific production by year

It is worth noting that after an initial sharp increase in 2020 (121 papers), a decrease was observed in 2021 (91 papers), followed by a progressive recovery until reaching the historical maximum in 2024. This inter-annual variability could indicate the influence of external factors that have impacted the dynamics of scientific publication on the subject under study.

Examination of the regression models applied shows that the exponential model (y = 70,082e^0,1336x, R^2 = 0,668) and the linear model (y = 15,714x + 61,333, R^2 = 0,6761) present similar coefficients of determination and explain approximately 67 % of the observed variability. Thus, both models suggest a general growth trend. However, the exponential model implies a progressive acceleration (13,36 % per year). On the other hand, the linear model proposes a constant increase of about 16 papers per year.

Scientific production by country and institution

The analysis of the distribution of documents by country shows that the United States (with 86 documents) and the United Kingdom (75 documents) lead the scientific production on management and economics (figure 3). Both countries account for 45 % of the global connections.

This shows, as the figure shows, an asymmetrical relationship (3:1) with the academic periphery. Despite this, the presence of multipolarity can be observed due to the fact that their relative share is 28,7 % of the combined total. Alongside this, Malaysia, Pakistan and Jordan appear to be inter-regional North-South and South-South connectors.

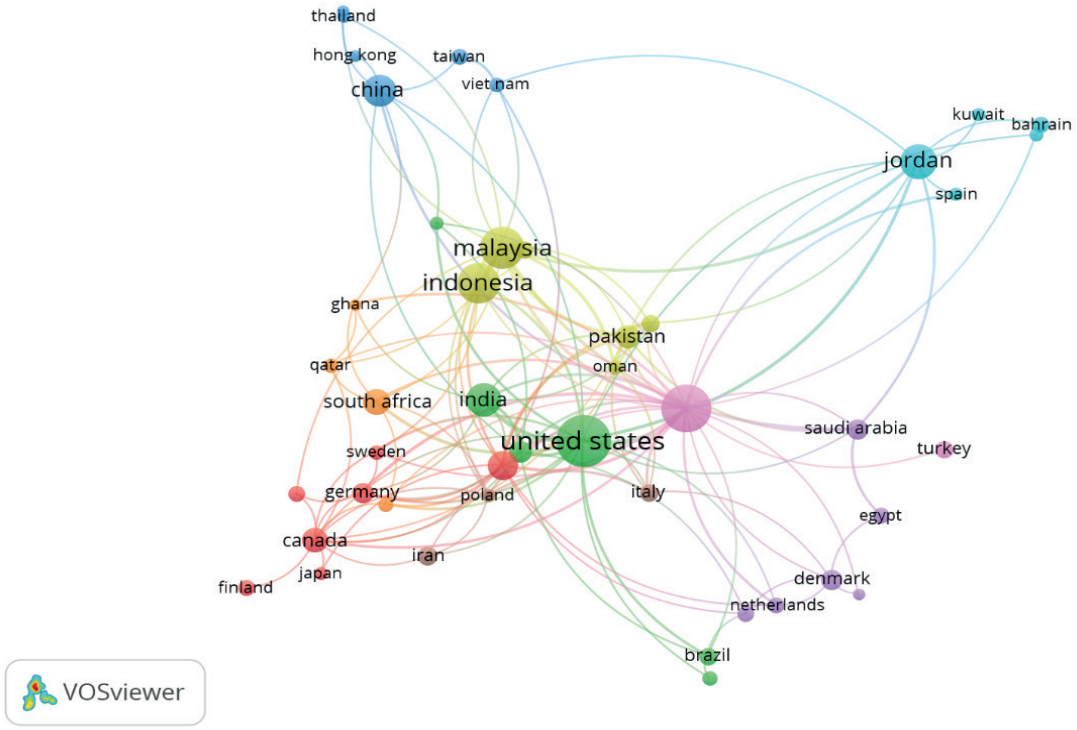

Figure 3. Network of collaboration between countries

Table 1. Emerging poles of scientific production

Geopolitical clusters	Evidence in scientific production
Asian Leadership	Malaysia (59) and Indonesia (53) emerge as academic powerhouses, outperforming European economies such as Germany (13) and France (15). This productivity reflects strategic investment in organisational studies applied to transforming economies.
Middle East Regional Force	Jordan (40) and Saudi Arabia (14) show an unusual critical mass for their size. This indicates a prioritisation of the issue in national development agendas.
Latin American Disconnection	The absence of Latin American countries in the top 15 indicates a geographical gap in scientific production on the topic.

As can be seen, the network of collaborations between countries is organised into well-defined geo-cultural clusters, represented in table 1. For example, Malaysia leads scientific production in Southeast Asia; in the

Middle East, Saudi Arabia and Jordan lead academic production; and in the particular case of Latin America, there is evidence of poor regional integration.

Ten institutions with the highest research output account for 14,3 % of the total output. However, it is striking that none produced more than nine papers (table 2). This is the case of Universiti Utara Malaysia and Al-Balqa Applied University (9 papers each), leaders in scientific output. In addition, four universities in the ranking are based in Malaysia(Utara, Sains, Kebangsaan, Putra), which indicates a coordinated national ecosystem in the field.

Table 2. Academic output by affiliation

Affiliation	Documents
Universiti Utara Malaysia	9
Al-Balqa Applied University	9
Universiti Sains Malaysia	7
Aarhus Universitet	7
University of Bahrain	6
University of Johannesburg	6
Universiti Kebangsaan Malaysia	6
University of Kent	6
The University of Jordan	6
Bina Nusantara University	6
Jadara University	6
University of Pretoria	5
University of Technology Sydney	5
Universiti Putra Malaysia	5
Isra University	5

Impact analysis of scientific output

Temporal trajectory of citations

The analysis of the evolution of annual citations shows a remarkable growth with an h-index of 40 (figure 4). It shows an increase from just 70 citations in 2019 to 2581 in 2024, representing a growth of almost 37 times in just six years. This growth was not uniform, as seen in the marked acceleration from 2021 onwards.

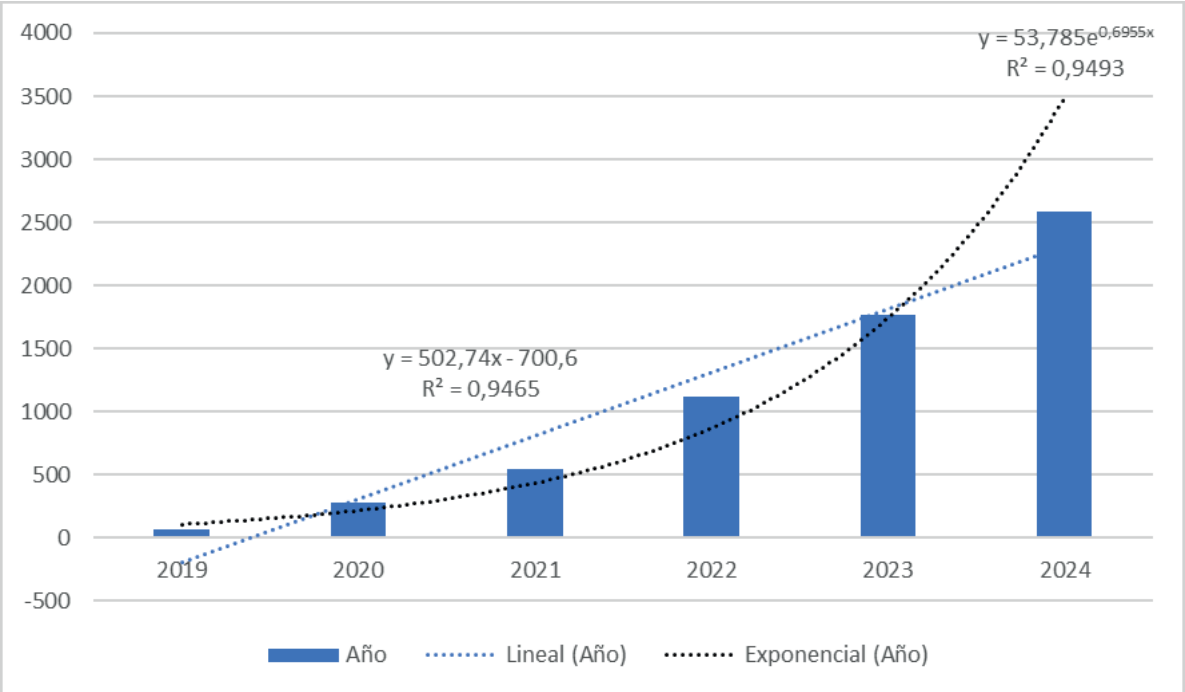

Figure 4. Time projection of citations

In this case, the applied statistical models confirm this accelerated growth trend, with exceptionally high coefficients of determination ($R^2 > 0,94$) for both models (linear and exponential). Although both models explain the observed behavior with similar precision, they have different implications for interpreting the phenomenon, as highlighted in table 3.

The exponential model shows a growth rate of 69,55 % per year. From a mathematical point of view, this indicates a characteristic pattern of emerging topics gaining rapid academic traction. The linear model shows an absolute increase of approximately 503 citations per year, emphasizing the concrete magnitude of this growth in absolute terms.

Table 3. Arguments explaining the asymmetric distribution of citations

Distribution implications	Arguments
Discursive Saturation Effect	The 320 % increase in citations between 2021 (545) and 2022 (1122) suggests that the field reached critical theoretical mass. The conceptual frameworks developed in the initial phases (2020-2021) were consolidated as obligatory references, generating recursive citation cycles.
Hypercitation of Foundational Publications	The h-index 40 indicates that there is a hard core of seminal contributions. These documents function as citation anchors that structure the subsequent discourse.
Thematic-Attentional Feedback	The citation increase in 2023-2024 (4343 citations) responds to the fact that more output attracts more research, which in turn cites more recent works. This phenomenon is typical in fields with high immediate practical applicability, where the literature is constantly being updated.

Thematic network analysis

Configuration of the Conceptual Cores

The analysis of the co-occurrence of keywords indicates the presence of four domains that, interconnected with each other, cross-cut the current research landscape, as can be seen in figure 5. The central core comprises two seminal constructs: distributed leadership' (with 122 occurrences) and leadership' (with 121 occurrences). From this core, three thematic content networks can be observed, which, in the authors' opinion, indicate the lines of development of the subject matter (table 4).

Table 4. Content networks that flow from the central thematic core

Trends	Thematic networks
Hybrid Leadership Styles	It groups transformational leadership (53, 93), shared leadership (15, 41) and ethical leadership (12, 15) with empowering leadership (6, 16). This network reflects the dominant paradigmatic hybridisation, where distributed leadership is integrated with established approaches through conceptual synergies.
Organisational Dynamics and Human Capital	It connects organisational culture (17, 74), human resource management (16, 58) and job satisfaction (18, 72) with employee performance (11, 32) and innovation (22, 64). Exhibits the tension between structure and agency: how organisational cultures facilitate or hinder distributive practices.
Critical Application Contexts	It includes higher education (14, 41), health care personnel (6, 57) and construction industry (4, 13) linked to crisis management (7, 22) and *covid-19* (23, 82). This constellation is evidence of the sectoral primacy of education and health as empirical laboratories.
Technology and Digital Transformation	It brings together artificial intelligence (10, 35), digital transformation (7, 21) and blockchain (6, 21) with innovation (22, 64). It shows the disruptive emergence of digital in reconfiguring distributive networks.

Other critical thematic bridges can also be observed. Among them, the connective role of 'innovation' (22) between educational leadership and business management stands out. In addition, the mediating role of 'organizational culture' (17) between leadership styles and performance (18) can also be observed.

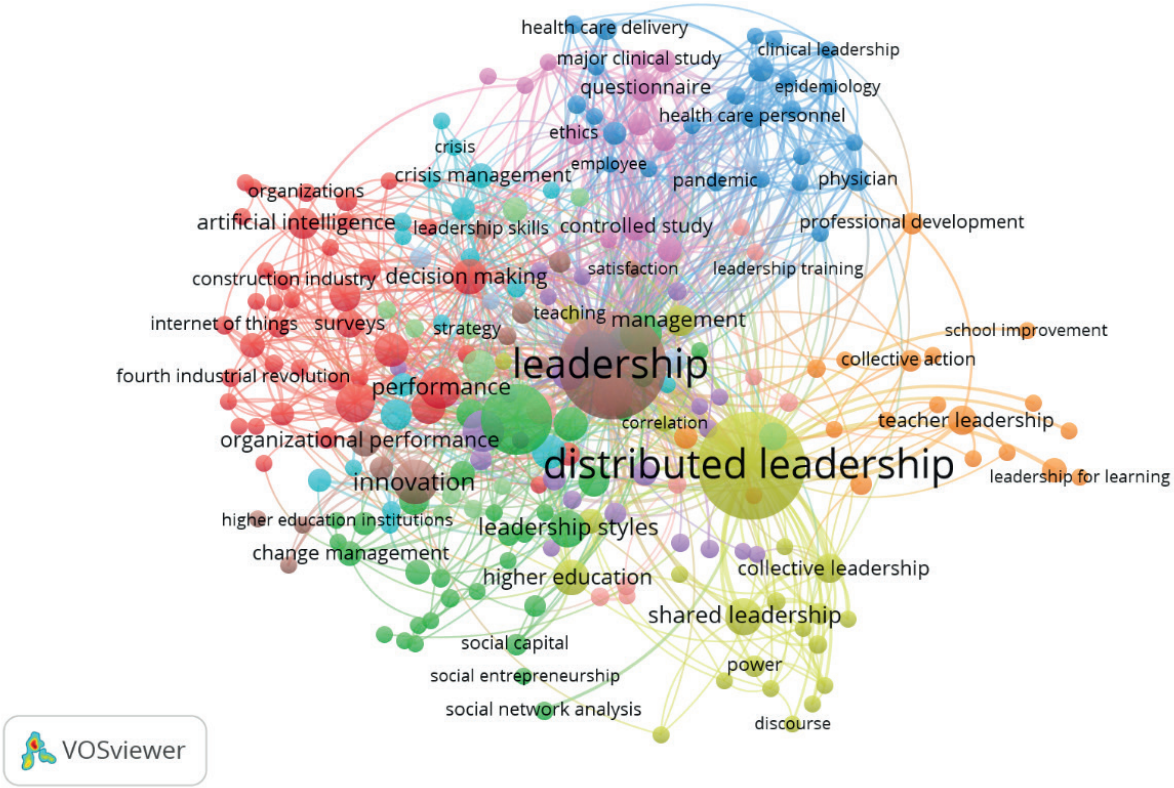

Figure 5. Keyword co-occurrence network

Analysis of the most cited articles

The fifteen most cited articles (83-255 citations) present differentiated impacts reflecting the field's maturation (table 5). Article #1 establishes a crucial foundation by demonstrating how transformational leadership fosters innovation, an effect mediated by motivation to learn and moderated by contextual factors.

This finding is complemented by study #7, which extends understanding by showing that such leadership enhances creativity, especially when there is support for innovation and complex tasks. Both papers underline the importance of contextual factors in leadership effectiveness, although #1 focuses on innovative behaviors while #7 explores creative processes.

Table 5. Coding of the most cited articles

Code	Author (year)	Title	Target	Main result
#1	Afsar et al.[13]	Transformational leadership and innovative work behavior: The role of motivation to learn, task complexity and innovation climate	To investigate the effect of transformational leadership on innovative behaviour, with motivation to learn as a mediator and task complexity/innovative climate as moderators.	Transformational leadership positively impacts innovative behaviour. Motivation to learn mediates this relationship, while task complexity and innovative climate moderate it.
#2	Liu et al.[14]	The Effect of Instructional Leadership and Distributed Leadership on Teacher Self-efficacy and Job Satisfaction	To examine the relative effects of instructional and distributed leadership on teacher self-efficacy and satisfaction, considering collaborative school culture as a mediator.	Both leadership styles positively affect teacher outcomes. Distributed leadership shows greater indirect effects through teacher collaboration.
#3	Upadhyay[15]	Demystifying blockchain: A critical analysis of challenges, applications and opportunities	Critically analyse the challenges and opportunities of blockchain, proposing a theoretical framework for its adoption.	Identifies 23 key propositions for blockchain adoption and future areas of information management research

#4	Ahmad et al.[16]	Promoting green behavior through ethical leadership: a model of green human resource management and environmental knowledge	To investigate how ethical leadership promotes green behaviours, with green HR management as a mediator and environmental knowledge as a moderator.	Ethical leadership influences green behaviours through green HR practices, an effect that is intensified with increased environmental knowledge.
#5	Zuraik et al.[17]	The role of CEO transformational leadership and innovation climate in exploration and exploitation	Study the relationship between transformational CEO leadership, innovative climate and innovation performance (exploration/ exploitation).	CEO leadership affects exploitation more, while innovative climate influences exploration more
#6	Alaghbari et al.[18]	Factors affecting construction labour productivity in Yemen	Identifying and prioritising factors affecting labour productivity in construction in Yemen	Technical-technological factors are the most relevant, with work experience and availability of materials being the most critical.
#7	Mahmood et al.[19]	The influence of transformational leadership on employees' creative process engagement.	Analyse the impact of transformational leadership on creativity, considering intrinsic motivation, task complexity and innovation support.	Transformational leadership increases creativity, moderated by task complexity and support for innovation.
#8	Ospina et al.[20]	Collective dimensions of leadership: Connecting theory and method	Propose a theoretical and methodological framework for studying collective leadership.	Develops a two-dimensional map to classify research on collective leadership according to locus and conception of collectivity.
#9	O'Mahony et al.[21]	From proprietary to collective governance: How do platform participation strategies evolve?	Examine how participants adapt strategies when platform governance rules change.	Participation increases when access is open, but decreases when leadership is unclear. Distributed leadership emerges under collective governance
#10	Azorín et al.[22]	Taking a distributed perspective on leading professional learning networks	Analysing leadership in professional learning networks from a distributed perspective	It proposes distributed leadership as a theoretical framework for understanding and improving professional collaboration in educational networks.
#11	Kirchner et al.[23]	COVID-19 leadership challenges in knowledge work	Investigating managers' challenges in working remotely during COVID-19	Identifies 12 areas where managers faced greater challenges than employees in remote work
#12	Gfrerer et al.[24]	Ready or Not: Managers' and Employees' Different Perceptions of Digital Readiness	Comparing perceptions of digital readiness between managers and employees	Reveals significant gaps in perceptions of digital skills and barriers to innovation across hierarchical levels
#13	Bilan et al.[25]	Sustainability and Economic Performance: Role of Organizational Learning and Innovation	Examine the mediating role of organisational learning between capabilities, governance, leadership styles and sustainability.	Organisational learning significantly mediates these relationships, an effect moderated by innovative culture.
#14	Lipscombe et al.[26]	School middle leadership: A systematic review	Synthesising research on middle school leadership (2006-2020)	Identifies four key findings on definition, responsibilities, impact and professional development of middle leaders
#15	Alotaibi et al.[27]	Does emotional intelligence and empowering leadership affect psychological empowerment and work engagement?	To study the impact of emotional intelligence and empowering leadership on psychological empowerment and commitment.	Emotional intelligence and empowering leadership enhance psychological empowerment, which in turn increases work engagement.

In education, study #2 provides comparative evidence on the differential effects of instructional and distributed leadership and highlights that the latter has a greater indirect impact through teacher collaboration.

This perspective is extended in #10, which proposes distributed leadership as a theoretical framework for professional learning networks, and in #14, which synthesizes two decades of research on middle school leadership. Together, these papers show an evolution from traditional hierarchical models to more collaborative approaches in educational settings, although #14 reveals persistent challenges in the definition and professional development of these roles.

Research on leadership in specific contexts presents distinctive contributions. Six identifies critical construction productivity factors, placing effective leadership as the third determinant. On the other hand, #4 explores green behaviors in organizations, demonstrating that ethical leadership operates through green HR practices.

Meanwhile, #13 links leadership, organizational learning, and sustainability showing that innovative culture enhances these effects. Although these studies are diverse in their contexts (construction, corporate sustainability), they coincide in highlighting the mediating role of organizational variables between leadership and results.

The articles on leadership in digital and disruptive environments (#3, #9, #11, #12) form a cohesive block that responds to contemporary challenges. #3 looks at blockchain by proposing an adoption framework, and #9 examines strategies for digital platforms under different governance models. Both highlight the emergence of distributed leadership in decentralized environments.

Studies #11 and #12 explore specific challenges of the digital pandemic and transformation, revealing perceptual gaps between managers and employees. This line of research evidences the adaptation of leadership theories to new technological and crisis contexts.

From a theoretical perspective, #8 proposes a two-dimensional framework for studying collective leadership, complemented by #5, which differentiates the effects of transformational CEO leadership on exploration/exploitation. While #8 offers a methodological classification, #5 provides empirical evidence on mechanisms of influence, representing conceptual and validation advances, respectively. 15 closes this analysis by showing how emotional intelligence and empowering leadership enhance work engagement, broadening the understanding of underlying psychological mechanisms.

DISCUSSION

The results obtained in this research show that the applications of distributed leadership, from an economics and management science perspective, is a topic of growing interest in the scientific community. These results are consistent with those reported in previous studies on the subject (see, for example, Harris et al.[28] and Phillips et al.[29]), which highlight its effectiveness in environments that require high coordination among professionals.

On the other hand, in the business sector, the data indicate that distributed leadership favors innovation and organizational adaptation processes.[30,31,32] This position is especially and importantly relevant in technology industries in crisis contexts as it provides flexibility in decision-making, according to Schulze et al.[33] and Niu[34].

This trend is particularly evident in technology industries and crisis contexts, where decision-making flexibility is crucial.[35,36] However, it contrasts with research such as that of Licier et al.[37], who point out limitations in its implementation in highly hierarchical structures or traditional organizational cultures.[38]

A relevant finding is the growing scientific production on the subject in emerging economies. This differs from previous reviews that located research mainly in Anglo-Saxon countries.[39,40,41,42,43] However, the current evidence consulted in this research indicates that distributed leadership is being adapted to diverse cultural contexts. Despite this, significant gaps remain in Latin America and Africa.

These findings point to the acquired value of distributed leadership in economic performance. In this respect, Zgrzywa-Ziemak et al.[44] point out that distributed leadership positively impacts the relationship between organizational learning and corporate sustainability, with the latter partially mediating this relationship.

Based on these data, this research confirms the current relevance of the application of distributed leadership in business and management science. In this regard, Parast et al.[45] indicate that distributed leadership, strategic planning, and process quality management have a positive impact on customer focus, satisfaction, quality, and operational and operating results in small businesses, but these scores decline over time.[46,47,48,49,50,51]

CONCLUSIONS

This study proved that distributed leadership is consolidated in the scientific literature as a feasible model for organisations operating in emerging economies or developing countries. In this sense, its value is confirmed in sectors that require flexibility and collaborative work.

Moreover, from an economic point of view, the role of distributed leadership has not been sufficiently addressed, especially in Latin America or Africa. However, its implementation in Anglo-Saxon contexts also faces challenges in traditional hierarchical structures and centralized organizational cultures. A key finding was the scarcity of research on its impact on macroeconomic indicators and its comparative cost-effectiveness vis-à-vis other management models.

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