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Strategic Management of Human Capital and Organizational Performance in Ecuadorian SMEs

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Abstract

Human intellectual capital constitutes a strategic resource for value creation and corporate sustainability; however, its disclosure among Ecuadorian companies remains limited and heterogeneous. This study aimed to analyse the extent of sustainable human intellectual capital disclosure in Ecuadorian non-financial companies during the 2018-2023 period. A qualitative, descriptive research design was adopted, based on documentary research and content analysis of sustainability reports, corporate reports, and secondary sources. Initially, 1,145 companies registered with the Superintendence of Companies, Securities and Insurance of Ecuador were examined, resulting in the identification of six organisations that consistently disclosed sustainability reports throughout the study period. The information was coded and systematised according to three dimensions: general employee characteristics, training and development, and well-being and motivation. The findings reveal substantial differences in the disclosure of the analysed sub-indicators. The highest relative disclosure frequency corresponded to employee participation in occupational health and safety matters (di ≈ 1.00), followed by educational level and gender (di ≈ 0.49). Intermediate levels were observed for the number of employees (di ≈ 0.41), training plans (di ≈ 0.40), employee performance evaluation (di ≈ 0.29), non-monetary compensation, and gender pay equality (di ≈ 0.28). In contrast, employee recruitment (di ≈ 0.19), age (di ≈ 0.07), and specialised training and education (di ≈ 0.02) showed the lowest levels of disclosure. The study concludes that sustainable human intellectual capital disclosure in Ecuador remains at an emerging stage, characterised by a lack of consistency and depth in reported information. These findings highlight the need to strengthen transparency, comparability, and the standardisation of non-financial reporting in line with international reporting frameworks.

Keywords

Intellectual Capital, Sustainable Human Capital, Disclosure, Corporate Sustainability, Non-Financial Reporting, Ecuadorian Companies

1. Introduction

In recent years, strategic human capital management has undergone a significant conceptual transformation. International literature has evolved from approaches focused exclusively on human resource management toward comprehensive frameworks in which knowledge management, innovation, sustainability, strategic decision-making, and the creation of competitive advantages converge (Zheng & Sikora, 2025). The bibliometric analysis conducted in this study, based on 1560 scientific articles indexed in Scopus, confirms this evolution by identifying strategic human resource management, knowledge management, sustainable development, organizational economics, and strategic decision-making as the dominant thematic clusters (Garcia-Carbonell, Martin-Alcazar, & Sanchez-Gardey, 2018). These findings demonstrate that human capital is no longer viewed merely as an operational resource but rather as a strategic asset capable of generating economic value, fostering innovation, and enhancing organizational resilience.

Despite this substantial scientific progress, a significant gap remains between the knowledge generated at the international level and the empirical evidence available for emerging economies, particularly in Latin America. In the Ecuadorian context, research on strategic human capital management remains limited and, in most cases, examines variables such as employee training, leadership, or gender diversity in isolation, without integrating these dimensions within a comprehensive analytical framework. This limitation constrains the understanding of the mechanisms through which human capital strategies contribute to the organizational performance of micro, small, and medium-sized enterprises (MSMEs) and hinders the development of evidence-based managerial and public policies (Shaposhnykov et al., 2025).

To address this gap, the present study adopts an integrated methodological approach that combines a bibliometric analysis of the international scientific literature with an empirical investigation based on a sample of 937 Ecuadorian MSMEs operating in the manufacturing, commercial, and service sectors. The study simultaneously examines four strategic dimensions of human capital investment in employee training, female representation in executive positions, firm size, and organizational age and evaluates their relationship with multiple indicators of organizational performance (Slavković, Pavlović, & Jovanović, 2025). This dual perspective makes it possible to contextualize the empirical findings within the broader landscape of international scientific knowledge, thereby strengthening the interpretation of the results and expanding the body of evidence available for Latin American business environments.

From a scientific perspective, the principal contribution of this research lies in integrating bibliometric techniques with statistical analyses applied to real-world business data, thereby providing a multidimensional understanding of strategic human capital management (Serrano-Orellana et al., 2025). This approach not only identifies the major research streams shaping the field but also contrasts these global trends with the organizational reality of Ecuadorian MSMEs, offering relevant empirical evidence that advances both the theoretical and practical understanding of human capital management in emerging economies.

Within this context, the objective of the present study is to examine the relationship between different strategic human capital management practices and organizational performance in Ecuadorian MSMEs by integrating bibliometric evidence from the international scientific literature with empirical findings obtained through statistical analysis. In doing so, the study seeks to advance knowledge in the field of strategic human capital management while providing valuable insights for researchers, policymakers, and business leaders committed to enhancing organizational competitiveness and long-term sustainability (Mariappanadar, 2025).

2. Materials and Methods

2.1. Sample Inclusion and Exclusion Criteria

To construct the sample analyzed in this study, rigorous inclusion and exclusion criteria were established to ensure the validity and representativeness of the data (Hinojosa & Hernández, 2022). First, only companies that were officially registered and active in the National Information System and employed a minimum workforce of five employees were included, thereby ensuring a basic organizational structure suitable for analysis.

A second key inclusion criterion was the company's willingness and ability to complete the structured questionnaire in its entirety, a prerequisite for ensuring the statistical consistency and reliability of the analysis (Hinojosa & Acosta, 2021).

Regarding the exclusion criteria, companies with incomplete information or inconsistent responses in key variables were excluded. Organizations lacking a formal organizational structure were also omitted, as this limitation prevented an adequate assessment of their strategic human capital management practices. In addition, records containing duplicate or clearly biased responses were removed through cross-validation procedures applied during the initial stage of data processing (Hidalgo, Acosta, & Hinojosa, 2022). As a result of this data-cleaning process, 16 records were discarded, yielding a final sample of 937 companies with complete, internally consistent, and statistically robust data.

2.2. Variables of Analysis

The methodological design of this study incorporated two main categories of variables: independent and dependent variables. The independent variables were defined as follows: investment in employee training, measured as the proportion of organisational resources allocated to human capital development; female representation in executive positions, used as an indicator of gender inclusion in organisational decision-making; firm size, classified in accordance with the Ecuadorian standard classification into micro, small, medium-sized, and large enterprises; and organisational age, measured by the number of years since the company's establishment (Hidalgo & Hernández, 2019).

Regarding the dependent variables, three dimensions were defined to assess organizational performance. The first was the percentage of goal achievement, associated with operational and strategic performance indicators; the second was the assessment of goal attainment, referring to the organization's internal perception of objective accomplishment; and the third was the overall perception of organizational performance, representing a synthesis of achieved outcomes and perceived institutional effectiveness (Bravo Hidalgo & Monteagudo Yanes, 2019).

2.3. Data Analysis Techniques

Descriptive statistical techniques were used to characterise the sample and summarise the main study variables. Measures of central tendency and dispersion, including means, medians, frequencies, and standard deviations, were calculated as appropriate. To examine the relationships between the independent and dependent variables, Spearman's rank-order correlation was employed as a non-parametric measure of association suitable for ordinal data. The statistical analysis was further supported by graphical techniques, including scatterplots and boxplots, which facilitated a more comprehensive interpretation of the relationships and patterns observed in the data.

Data processing and analysis were conducted using Microsoft Excel and Python-based analytical tools, particularly the pandas, matplotlib, and seaborn libraries. During this stage, systematic data cleaning and validation procedures were performed, including outlier detection, category standardisation, and the conversion of percentage values into consistent numerical formats. Throughout the research process, institutional ethical principles were strictly observed to ensure the integrity, confidentiality, and anonymity of the information provided by the participating companies.

2.4. Theoretical Framework

The analysis of human capital strategies and their influence on organizational performance is primarily grounded in Human Capital Theory, which argues that education, experience, training, and competencies constitute investments that enhance workers' productivity and economic value (Zhang, Chen, & Du, 2025). From this perspective, organizations that promote capability development and effectively leverage human talent strengthen their competitiveness and improve organizational outcomes. Numerous studies have demonstrated that investment in training, professional development, and talent management contribute significantly to business growth and long-term sustainability, particularly within the context of micro, small, and medium-sized enterprises (MSMEs).

Complementarily, Zhang et al. (2025) provide a conceptual basis for understanding the barriers women encounter in accessing employment opportunities, professional development, and leadership positions. These theoretical perspectives argue that, although women often possess qualifications and competencies comparable to or even exceeding those of men, persistent cultural, structural, and organizational barriers continue to limit their participation in decision-making roles. The literature further indicates that such inequalities may hinder the effective utilization of available human capital, thereby constraining organizational innovation and overall performance.

In addition, Organizational Diversity Theory posits that the inclusion of individuals with diverse characteristics, experiences, and perspectives enhances creativity, innovation, and the quality of organizational decision-making (Zhang & Wu, 2025). Likewise, Institutional Theory suggests that organizations adopt gender equity and inclusion practices in response to normative, social, and regulatory pressures arising from their external environment (Zahoor, Sahaf, & Shah, 2025). Collectively, these theoretical perspectives indicate that promoting diversity and equal opportunities is not only a matter of organizational justice but also a strategic mechanism for strengthening organizational performance and enhancing the competitiveness of Ecuadorian MSMEs.

2.5. Human Capital and Its Management

Female participation in micro, small, and medium-sized enterprises (MSMEs) should be examined from a multidimensional perspective, as it is shaped not only by individual employment decisions but also by structural, organizational, and institutional factors that influence women's access to, retention within, and professional development in organizations. In Ecuador, labor market evidence reveals persistent gender disparities. In 2024, the rate of adequate employment reached 41.4% for men compared with only 28.4% for women, highlighting a substantial inequality in the quality of women's labor market integration (Pizarro, 2017). Likewise, the Global Gender Gap Report identifies gender inequality as a continuing challenge for labor markets across Latin America and worldwide (Lammi, 2024).

According to Human Capital Theory, education, professional experience, training, and workforce competencies constitute strategic resources that significantly influence organizational performance (Mariappanadar, 2025). However, when women have limited access to training opportunities, promotion, or performance evaluation processes, the available human capital within organizations becomes underutilized. Consequently, low female participation may constrain the diversity of competencies, innovation capacity, and adaptive capabilities of MSMEs, ultimately undermining their long-term competitiveness and sustainability (Muslimin et al., 2025).

Labor Market Discrimination Theory explains that differences between men and women are not necessarily attributable to productivity or qualifications but rather to biases in recruitment, compensation, promotion, and the allocation of responsibilities (Medina-Reyes et al., 2025). In Ecuador, recent labor market studies indicate that female labor force participation continues to be constrained by employment gaps, labor informality, and wage inequality, all of which directly affect workforce stability and organizational efficiency (Mebratie et al., 2025). Furthermore, the International Monetary Fund reported that female labor force participation in Ecuador remains significantly lower than that of men, reflecting persistent inequalities in access to formal employment (Martins & Moreira, 2025).

From the perspective of Glass Ceiling Theory, the mere presence of women within organizations does not guarantee equal opportunities when invisible barriers continue to restrict access to executive positions, strategic decision-making roles, and leadership responsibilities (Micu & Roznovietchi, 2025). This perspective is particularly relevant for MSMEs, where women may be incorporated into operational positions while remaining substantially underrepresented in strategic management roles. In Latin America and the Caribbean, the Inter-American Development Bank reported significant business-related gender disparities, indicating that women occupied only 15% of managerial positions and owned merely 14% of registered (Manreal et al., 2025).

Organizational Diversity Theory argues that gender-diverse teams enhance decision-making quality, broaden organizational perspectives, strengthen problem-solving capabilities, and foster innovation. Recent empirical studies on gender diversity and corporate performance have found that most research reports a positive relationship between female participation and financial performance, although the strength of this relationship depends on institutional conditions, industry characteristics, and the hierarchical level at which women participate (Madaan et al., 2025). Accordingly, increasing female representation across different organizational levels may constitute a significant source of competitive advantage for MSMEs (Khan et al., 2025).

Institutional Theory also provides a relevant analytical framework, as gender equality practices are shaped by regulatory frameworks, public policies, organizational culture, and broader societal pressures. In emerging economies such as Ecuador, formal legal equality may coexist with persistent disparities in recruitment, compensation, and leadership opportunities. The World Bank has noted that although Ecuador has made considerable progress in strengthening its legal framework, substantial gaps remain between formally recognized rights and the effective implementation of mechanisms designed to guarantee equal opportunities (Khan, Majid, & Ahmed, 2025). These institutional conditions directly influence strategic human capital management practices and women's opportunities for professional advancement.

Considering the findings obtained from the analysis of 937 Ecuadorian MSMEs operating in the manufacturing, commercial, and service sectors, female participation should be regarded as a critical dimension of strategic human capital management. Limited female participation or representation may reflect deficiencies in talent recruitment, training, promotion, and retention policies (Khamiliyah et al., 2025). Conversely, greater female inclusion may enhance organizational performance by expanding the organization's competency base, strengthening internal equity, and improving the long-term sustainability of its human capital (Kelly et al., 2025).

Additional studies conducted in Ecuador have examined the relationship between gender, institutional context, and innovation among women entrepreneurs, demonstrating that both institutional conditions and entrepreneurs' individual characteristics significantly influence innovative performance (Kamanli & Balcioğlu, 2025). Likewise, research on female labor force participation in Ecuador indicates that labor informality and structural constraints continue to hinder women's economic integration (Kalimashe, du Plessis, & Sehularo, 2025). Consequently, the findings of the present study should be interpreted from a critical perspective: female participation should not be viewed merely as a demographic characteristic but rather as a strategic indicator of organizational inclusion, effective talent utilization, and organizational performance (Kahreman, 2025).

3. Results

This scientific contribution presents two areas of results, bibliometric analysis and a mathematical analysis of the research.

3.1. Bibliometric Analysis Using VOSviewer

Using "Strategic management of human capital" as the search query in the title, abstract, and keywords of scientific articles published between 2000 and 2025, a total of 1560 articles were retrieved from the Scopus database. The indexed keywords associated with these publications were subsequently extracted to construct the dataset used for the bibliometric analysis performed with VOSviewer.

VOSviewer is a specialized software application for the analysis and visualization of bibliometric networks and is widely used to investigate the intellectual and thematic structure of scientific research fields. Developed by the Centre for Science and Technology Studies (CWTS) at Leiden University, the software generates scientific maps from major bibliographic databases, including Scopus, Web of Science, Dimensions, and PubMed. It analyzes relationships among different bibliographic entities such as authors, institutions, countries, journals, cited references, and keywords through co-authorship, co-citation, bibliographic coupling, and keyword co-occurrence analyses. One of its principal strengths lies in the generation of network and density visualizations, in which the spatial proximity between elements reflects the strength of their relationships. In density maps, warm colors (yellow) indicate areas with a high concentration of occurrences and stronger relationships, whereas cooler colors (green and blue) represent lower frequencies and weaker connectivity. These visualizations facilitate the identification of well-established research themes, emerging trends, and underexplored areas within a scientific domain. Owing to its intuitive interface and robust normalization and clustering algorithms, VOSviewer has become one of the most widely adopted tools for bibliometric and scientometric analyses across diverse scientific disciplines.

Figure 1 illustrates that research on strategic human capital management has evolved into a distinctly multidisciplinary field in which three major scientific domains converge:

- Human talent and human resource management;
- Economics and strategic management;
- Sustainability, innovation, and organizational health.

In this type of density map, yellow represents the highest concentration of keyword occurrences and the strongest relationships among terms, whereas green and blue indicate progressively lower levels of density and connectivity. Consequently, the yellow regions identify the principal conceptual cores that structure the international scientific literature on strategic human capital management.

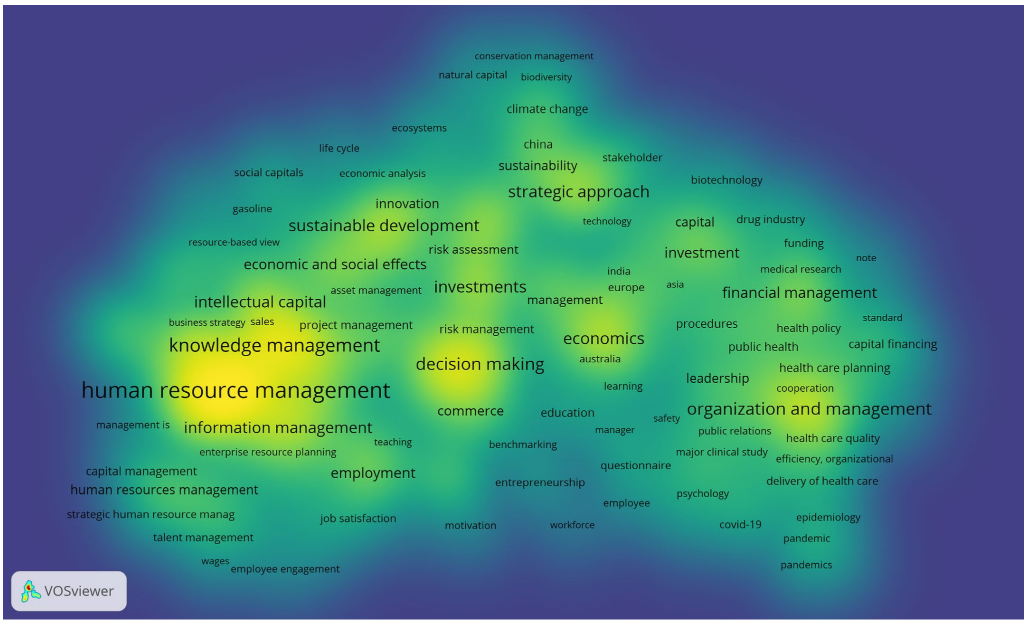

Figure 1. Density map of terminus, by indexing keywords.

The Dominant Core: Human Resource Management. The highest concentration of terms in the density map is centered on human resource management, accompanied by concepts such as knowledge management, information management, intellectual capital, and employment. This configuration indicates that strategic human capital management continues to be grounded in people management as the central axis of scientific research. However, the close association with concepts related to intangible assets reflects a significant conceptual evolution. Literature no longer views human resources merely as an operational factor but rather as a strategic asset whose ability to generate, manage, and transfer knowledge constitutes a sustainable source of competitive advantage. Consequently, human talent management has become increasingly integrated with the knowledge economy and with approaches that emphasize organizational learning and value creation through intellectual capital.

The Second Core: Decision Making. The term decision making represents the second most prominent area of density within the map and is closely associated with investments, economics, management, risk management, and commerce. This thematic structure indicates that scientific literature recognizes human capital as a critical determinant of strategic decision-making within organizations. Beyond the administrative management of personnel, current research highlights the role of employees' knowledge, competencies, and experience in strengthening planning processes, efficient resource allocation, and risk management. Consequently, human capital is no longer analyzed solely from a functional perspective but is increasingly regarded as an essential component of organizational strategic intelligence.

Connection with Sustainability. Another major finding is the high density of terms such as sustainable development, sustainability, climate change, natural capital, and biodiversity. The prominence of these concepts reflects an important shift in research orientation over recent years; whereby strategic human capital management has become increasingly linked to the principles of sustainable development. This trend indicates that organizations are integrating human capabilities with corporate social responsibility, environmental governance, and sustainable value creation strategies, in alignment with the Sustainable Development Goals (SDGs) and Environmental, Social, and Governance (ESG) principles. Consequently, human capital is increasingly regarded as an indispensable resource for addressing contemporary economic, social, and environmental challenges.

The Importance of Knowledge Management. The prominence of the term knowledge management, closely connected with intellectual capital, innovation, information management, and project management, confirms that knowledge management constitutes one of the fundamental pillars of human capital research. The scientific literature consistently argues that sustainable competitive advantage depends not merely on employees' educational background or professional experience but on an organization's ability to capture, share, store, and apply knowledge within its operational and strategic processes. This pattern reinforces the dominant influence of Intellectual Capital Theory and the Resource-Based View (RBV), both of which consider knowledge to be one of the most valuable, difficult-to-imitate strategic resources and, therefore, a sustainable source of organizational differentiation.

Economics and Investments. The central region of the map exhibits a substantial concentration of terms associated with economics, investments, investment, and financial management, indicating that human capital is also examined from economic and financial perspectives. This thematic relationship demonstrates that a significant portion of the literature focuses on issues such as the return on investment in employee training, labor productivity, organizational efficiency, and the economic value generated through the development of human capabilities. From this perspective, human capital is no longer regarded as an operational expense but rather as a strategic investment whose effective management directly enhances financial performance and organizational competitiveness.

Leadership and Organizational Management. On the right-hand side of the map, a significant cluster of terms including organization and management, leadership, procedures, management, and benchmarking represent the organizational dimension of strategic human capital management. This thematic cluster encompasses research related to leadership, organizational structure, corporate governance, continuous improvement, and process management. The proximity of these concepts suggests that the effective utilization of human talent depends not only on employees' individual capabilities but also on the quality of organizational systems designed to coordinate, support, and maximize those capabilities. Within this context, leadership emerges as a fundamental mechanism through which individual knowledge is transformed into organizational performance.

From a bibliometric perspective, the density map demonstrates that research on strategic human capital management has evolved beyond a traditional human resource management approach toward a systemic perspective that integrates knowledge management, organizational economics, sustainability, and innovation. The highest-density terms (Human Resource Management, Knowledge Management, and Decision Making) constitute the conceptual core of the field, indicating that the creation of sustainable competitive advantage depends on organizations' ability to transform individual knowledge into strategic decisions that generate both economic and sustainable value. Furthermore, the presence of concepts related to sustainable development and the healthcare sector reflects the expansion of the field toward broader global challenges, whereas the relatively limited occurrence of digital technologies suggests an emerging research frontier. Overall, the thematic structure reveals a mature, interdisciplinary research domain focused on value creation through the integration of human capital, organizational strategy, innovation, and sustainability.

3.2. Mathematics

A descriptive-correlational analysis was conducted using a valid sample of 937 Ecuadorian MSMEs from the production, trade, and service sectors. Rigorous data processing routines were applied using Excel and Python (pandas, matplotlib, and seaborn libraries), including outlier removal, percentage normalization, and category homogenization. The results are structured around four key variables: investment in training, female participation in management positions, company size, and organizational age.

3.2.1. Investment in Training and Goal Achievement

The variable "investment in training" showed an average of 38.2%, with a standard deviation of 28.9%, a median of 40%, a minimum of 0%, and a maximum of 100%. This wide range reveals the heterogeneity in organizational strategies: some companies allocate no resources to training, while others exceed 70%. See **Figure 2**.

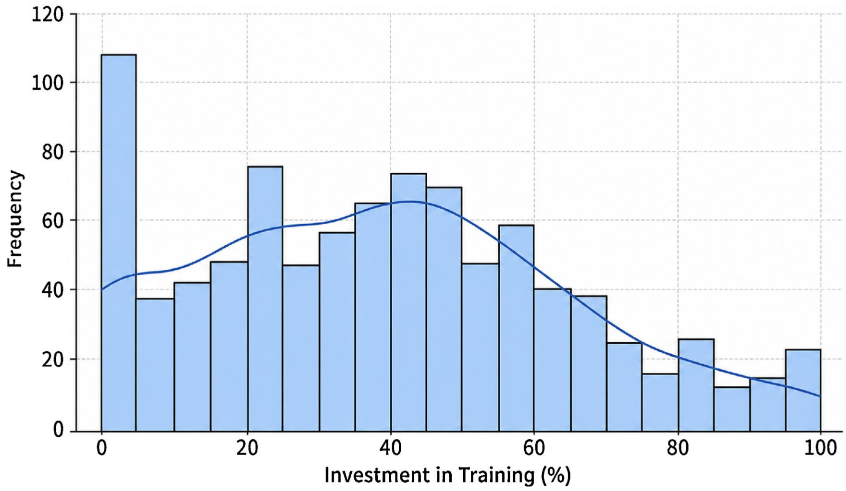

Figure 2. Distribution of investment in training (%).

The figure reveals a clear concentration of companies allocating between 20% and 50% of their resources to staff training, suggesting the prevalence of moderate investment approaches within the MSME sector. This trend could be interpreted as a manifestation of reactive rather than strategic training practices, as many organizations seem to limit their investment to the bare minimum, without integrating it as a structural component of their management model.

At the same time, considerable dispersion is observed, with isolated cases of both zero investment and allocations exceeding 80%, reflecting significant heterogeneity in organizational capacities and priorities. This variability may be related to differences in access to financing, level of formalization, corporate culture, and awareness of the advantages associated with human talent development.

In this sense, the results demonstrate the need to design and implement differentiated public policies that promote not only the professionalization of human resources in the MSME segment, but also the adoption of regulatory and fiscal frameworks that incentivize continuous training as a strategic pillar of business development. Fostering an organizational culture based on learning and innovation is key to improving the competitiveness and sustainability of this sector within the Ecuadorian economic context.

Spearman correlation: A positive and significant correlation was identified between investment in training and goal achievement ($\rho = 0.512$; $p < 0.001$), validating the study's main hypothesis: companies that invest in human talent tend to achieve better performance.

3.2.2. Female Participation in Management Positions

The average number of women in management positions was 1.94 per company, with a low standard deviation (0.23), suggesting a homogeneous but structurally limited representation of female leadership within the MSME business sector. This low variability indicates that the presence of women in decision-making roles is not only reduced but also persistently confined to a minimal margin, with no significant cases of parity or robust female leadership observed.

This pattern can be interpreted as a reflection of organizational dynamics rooted in traditional models of corporate governance, were women access management positions marginally or symbolically, without achieving substantive or structural participation. The homogeneity of this low representation reinforces the idea that these are not statistical exceptions, but rather a systemic condition affecting all the companies analyzed, regardless of sector or size.

From a critical perspective, these data reveal a stagnation in progress toward gender equality in the business world, which poses significant challenges for both the formulation of public policies and the design of internal inclusion strategies. Despite international evidence positively linking gender diversity to innovation, decision quality, and organizational performance (Jusoh & Alwi, 2025), the results obtained suggest that Ecuadorian MSMEs have not yet fully capitalized on this potential. This finding can be interpreted in light of the (Jeremiah & Atiku, 2025), which argue that structural and cultural barriers persist, limiting women's access to and participation in strategic and leadership positions, thus reducing opportunities to fully leverage their skills and competencies. Consequently, the presence of women within organizations does not guarantee improved organizational performance if it is not accompanied by effective conditions for inclusion and professional development.

From the perspective of Organizational Diversity Theory, the generation of benefits derived from diversity depends on the existence of inclusive environments that allow for the integration of different knowledge, experiences, and perspectives in decision-making processes (Jashari-Goga, 2025). Likewise, Jain & Mitra (2025) posit that organizations often adopt equality and diversity practices in response to normative, social, or regulatory pressures; however, these practices do not always translate into substantive changes in organizational culture. Therefore, the results could reflect that many Ecuadorian MSMEs are in a transitional stage, where the incorporation of women into the workforce is not yet fully accompanied by mechanisms that promote their effective participation in decision-making spaces, thus limiting the positive impact that gender diversity can have on organizational performance. See **Figure 3**.

The data reveals that over 80% of companies have only one or two women in strategic positions, while less than 1% have more than four female leadership roles. This highly concentrated and asymmetrical distribution highlights a persistent structural gap in women's access to decision-making positions within the Ecuadorian business ecosystem.

Far from being a random statistical fluctuation, this limited representation reflects the existence of institutional, cultural, and organizational barriers that restrict women's participation in business leadership. These barriers include a

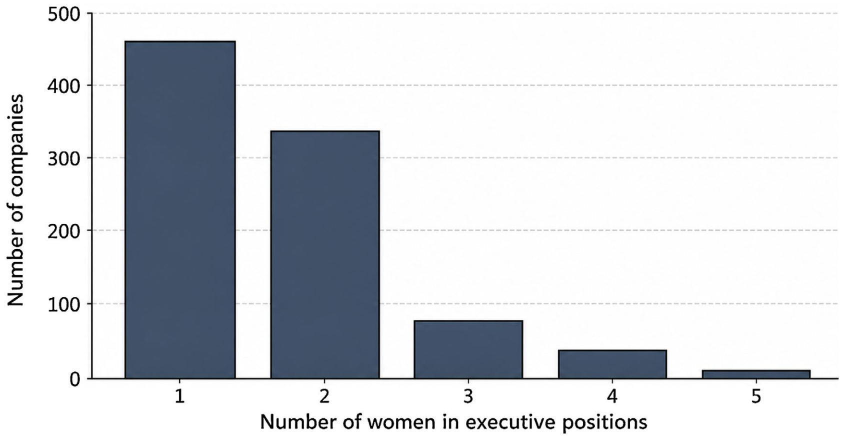

Figure 3. Frequency of companies according to women in management positions.

lack of internal equality policies, gender bias in selection and promotion processes, and the limited institutionalization of inclusive practices within the MSME sector.

This phenomenon not only represents an omission in terms of social equity but also a loss of intellectual capital and cognitive diversity. Several international studies support the notion that women's participation in management positions is a strategic factor for innovation, sustainability, and organizational performance. From an organizational diversity perspective, the inclusion of women in leadership teams broadens the diversity of knowledge, experiences, and approaches to problem-solving, strengthening companies' creativity and innovative capacity. Research (Iqbal et al., 2025) demonstrates that female representation in senior management improves corporate governance mechanisms and is positively associated with business performance. Similarly, the OECD maintains that gender diversity in management contributes to increased productivity and more effective decision-making, while recent studies show that companies with more diverse leadership achieve better results in sustainability and ESG (environmental, social, and governance) performance. Immadi (2025) concludes that human capital diversity fosters innovation processes by combining complementary perspectives within the organization. Consequently, literature widely recognizes gender diversity as a strategic resource that strengthens competitiveness, innovation, and business sustainability. However, the results obtained in Ecuadorian MSMEs suggest that these benefits have not yet been fully realized due to persistent structural and cultural barriers that limit women's participation in leadership positions. These results underscore the need to move towards more inclusive organizational models, as well as to strengthen regulatory frameworks and incentives that promote gender equality as a cross-cutting theme in business development.

Spearman correlation: The coefficient was $\rho = -0.403$; $p < 0.001$, indicating a moderate negative relationship between women's participation and goal achievement. This finding should not be interpreted as causality, but rather as a warning of unfavorable contexts where diversity has not yet translated into inclusive structures or visible competitive advantages. See **Table 1** and **Figure 4**.

Table 1. Descriptive statistics of the main variables (n = 937).

Variable	Mean	Median	Standard deviation	Minimum	Maximum
Training investment (%)	38.2	40	28.9	0	100
Women in management positions (n)	1.94	2	0.23	1	5
Company size (1 to 3)	1.63	2	0.65	1	3

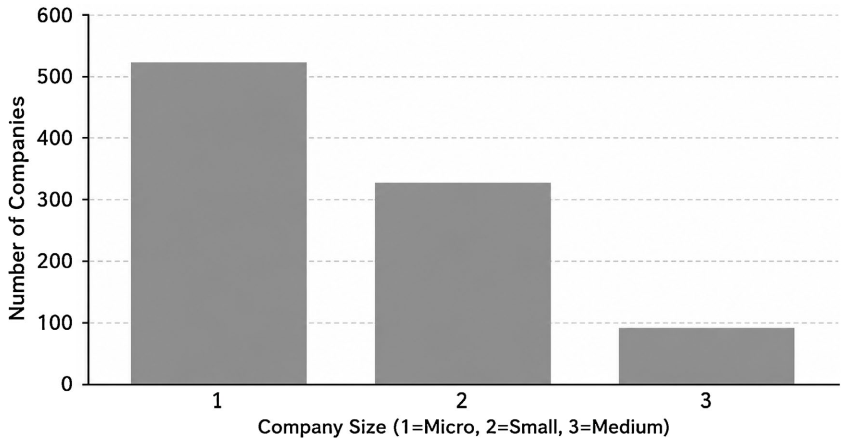

Figure 4. Distribution of companies according to their size.

The sample analysis reveals that microenterprises constitute most of the analyzed business fabric, followed by small businesses, while medium-sized businesses represent a clear minority. This structure reflects the characteristic composition of the Ecuadorian productive ecosystem, where small-scale units with limited resources and less formalized organizational structures predominate.

Spearman's rank correlation coefficient between company size and goal achievement was $\rho = 0.226$ with a p-value < 0.001, indicating a weak but statistically significant positive relationship. Interpretively, this result suggests that a larger organizational size may be associated with better performance levels, although it does not act as a sufficient or exclusive determinant.

The weak strength of the coefficient reinforces the idea that, while larger companies may have more favorable structural conditions such as access to financing, a clearer functional division, greater formalization of processes, or more specialized technical teams, these factors do not, in themselves, guarantee greater organizational effectiveness. In fact, micro and small businesses can achieve comparable levels of performance if they develop internal strategic capabilities such as effective leadership, a results-oriented organizational culture, and robust human capital management policies.

Consequently, size should be understood as a potential enabler of performance, but not as a determining factor. This finding supports approaches that prioritize knowledge management, organizational innovation, and the professionalization of human resources as key drivers for improving productivity, regardless of the company's operational scale.

3.2.3. Age of the Organization

Although a direct correlation analysis between company age and performance levels was not conducted, the descriptive examination of the sample reveals a consistent pattern: organizations with more than a decade of existence tend to exhibit higher levels of institutional formalization, more stable training programs, and more robust strategic planning structures.

This finding suggests that longevity contributes to consolidating key internal processes that strengthen adaptive capacity and organizational sustainability. The experience accumulated over time fosters not only institutional learning but also the implementation of systematic practices in human talent management, decision-making, and the efficient allocation of resources.

In this sense, age can be understood as an organizational asset that, while intangible, positively influences the maturity of management systems. Longer-established companies have typically weathered various economic cycles, which compels them to refine internal mechanisms for resilience, performance evaluation, and strategic alignment. These factors, taken together, enhance their ability to withstand volatile environments and compete more effectively.

While a causal relationship cannot be established without a formal correlation, the observed patterns justify a future line of research focused on the longitudinal analysis of seniority as a moderating variable between human capital strategies and levels of organizational performance.

4. Discussion

The findings of this study provide a basis for a critical reflection on the relationship between human capital strategies and organizational performance within the context of Ecuadorian micro, small, and medium-sized enterprises (MSMEs). Based on the empirical analysis of a sample of 937 companies operating in the manufacturing, commercial, and service sectors, the results demonstrate that human talent management is not a peripheral organizational function but rather a structural component that significantly influences organizational outcomes.

The central hypothesis that strategic human capital management contributes to improved organizational performance is supported by empirical evidence, although with important nuances depending on the dimension analyzed. The positive correlation between investment in employee training and goal achievement confirms the propositions of the Resource-Based (González-Pinos et al., 2025; Griffin, 2025), which emphasizes the competitive advantage derived from valuable, rare, inimitable, and non-substitutable (VRIN) intangible resources. In this regard, organizations that invest in continuous employee development cultivate not only technical competencies but also dynamic capabilities that enable them to respond to changing environments with greater flexibility and resilience.

From the perspective of Strategic Human Capital Management (Griffin, 2025), these findings reinforce the notion that human talent extends beyond workforce staffing and becomes a strategic organizational resource when managed with a long-term perspective. Investment in employee training not only enhances operational efficiency but also strengthens organizational culture, improves talent retention, and promotes innovation.

In contrast, the observed negative correlation between female representation in executive positions and organizational goal achievement should be interpreted with caution. Although the relationship is statistically significant, it should not be construed as evidence of a direct causal effect. Rather, it may reflect structural and contextual constraints that limit the effectiveness of female leadership, including the concentration of women in traditionally less profitable sectors, insufficient institutional support networks, and the limited implementation of internal equal-opportunity policies.

Far from questioning women's leadership capabilities, this finding highlights the structural gender barriers that continue to characterize the Ecuadorian business environment. The consistently low level of female representation observed across the sample suggests that the transformative potential of inclusive leadership has not yet been fully leveraged by Ecuadorian MSMEs. Consequently, these findings underscore the need to reconsider the design of public policies and organizational incentives aimed at promoting the meaningful participation of women in decision-making positions, recognizing that diversity is not only a matter of social justice but also a strategic driver of organizational competitiveness.

Furthermore, the positive yet relatively weak correlation between firm size and organizational performance contributes to the ongoing debate regarding the role of organizational scale as a determinant of business success. Although larger firms generally possess greater resources and more formalized organizational structures, the results indicate that firm size alone does not guarantee substantial improvements in organizational performance. This finding is consistent with previous studies demonstrating that small and medium-sized enterprises can achieve performance levels comparable to or even exceeding those of larger organizations when they develop strategic flexibility, adaptability, and innovation capabilities. The literature suggests that the lower structural complexity of MSMEs enables faster responses to environmental changes, allowing organizations to adjust processes, products, and business strategies more efficiently. In this regard, Gonçalves et al. (2025) argue that strategic flexibility constitutes a critical competitive advantage for SMEs because of their ability to respond rapidly to dynamic market conditions. Ghavamipour, Booshehri, & Tavakoli (2025) demonstrate that organizational adaptability positively influences business growth and performance, particularly when translated into market-oriented actions. Similarly, Gerigoorian et al. (2025) report that strategic flexibility and the ability to balance exploration and innovation contribute significantly to sustainable organizational performance. Collectively, these findings suggest that organizational performance depends less on firm size itself than on an organization's ability to manage its resources effectively, adapt to changing environmental conditions, and capitalize on emerging opportunities.

Finally, although no direct correlation analysis was conducted for organizational age, the descriptive findings suggest that companies with more than a decade of operation tend to develop more stable human talent management systems, stronger strategic planning practices, and more institutionalized organizational processes. These findings can be interpreted through the lens of Organizational Learning Theory, which argues that organizations develop superior managerial capabilities through the accumulation of knowledge and experience over time (George et al., 2025). From this perspective, experiential learning enables organizations to refine processes, correct deficiencies, strengthen coordination mechanisms, and establish more effective organizational routines. Garti et al. (2025); Gaur, Patnaik & Khan (2025) argue that firms capable of effectively exploiting accumulated knowledge develop sustainable competitive advantages by transforming experience into organizational capabilities that are difficult for competitors to replicate. Complementarily, Geantimir & Lupu (2025) maintains that learning organizations cultivate a culture of continuous improvement that promotes innovation, adaptability, and the strengthening of internal organizational systems. Consequently, organizational age or institutional maturity should be understood not merely as the length of time a firm has operated in the marketplace but also as the accumulation of knowledge, managerial practices, and organizational competencies that contribute to higher levels of efficiency and organizational performance. Numerous empirical studies have confirmed that firms with greater operational experience tend to develop stronger administrative structures, more effective knowledge management systems, and higher-quality decision-making processes, all of which contribute positively to their long-term sustainability and competitiveness.

5. Conclusion

This study demonstrates that strategic human capital management is one of the primary determinants of organizational performance among Ecuadorian micro, small, and medium-sized enterprises (MSMEs). Based on the analysis of a sample of 937 companies operating in the manufacturing, commercial, and service sectors, the findings confirm that strategies aimed at strengthening human talent are significantly associated with the achievement of organizational objectives, thereby establishing human capital as a strategic resource for enhancing business competitiveness in emerging economies.

The results indicate that investment in employee training is the variable exerting the strongest positive influence on organizational performance. This finding supports the core assumptions of both Human Capital Theory and the Resource-Based View by demonstrating that continuous professional development strengthens organizational competencies, enhances adaptability to dynamic environments, and facilitates the development of sustainable competitive advantages. Consequently, employee training should be regarded as a strategic investment rather than an operational expense.

The study also reveals that firm size exhibits a positive, although moderate, relationship with organizational performance. However, the findings indicate that organizational scale alone is not a determining factor of business success. MSMEs can achieve high levels of organizational performance when they develop internal capabilities associated with leadership, organizational learning, innovation, and effective knowledge management, regardless of their structural constraints.

With respect to female representation in executive positions, the observed negative correlation should not be interpreted as evidence of lower leadership capability among women. Instead, this finding most likely reflects the persistence of structural, institutional, and cultural factors that constrain women's opportunities for career advancement and access to leadership positions within the Ecuadorian business environment. Accordingly, the results reinforce the need to promote organizational policies aimed at strengthening equal opportunities and eliminating barriers that hinder the full utilization of available human talent.

From a bibliometric perspective, the keyword co-occurrence analysis conducted using VOSviewer revealed that strategic human capital management has become a consolidated and multidisciplinary scientific domain characterized by the convergence of knowledge management, sustainability, innovation, organizational economics, and strategic decision-making. This evidence confirms that international literature has evolved beyond traditional human resource management approaches toward comprehensive frameworks in which human capital serves as the central mechanism for organizational value creation.

The main scientific contribution of this study lies in its integration of international bibliometric evidence with empirical findings derived from a large sample of Ecuadorian MSMEs. By connecting global research trends with the organisational realities of an emerging economy, the study provides a broader understanding of how human capital strategies are associated with organisational performance. In doing so, it also contributes to expanding the empirical evidence available from Latin American contexts, which remain comparatively underrepresented in the international literature.

From a practical perspective, the findings underscore the importance of incorporating strategic human capital management as a central component of organisational planning. They also highlight the role of institutions responsible for economic development in promoting employee training, supporting the professionalisation of business management, and designing policies that encourage equal opportunities, leadership development, and the strengthening of organisational capabilities related to innovation and continuous learning.

Finally, the cross-sectional and correlational nature of the study does not allow causal relationships to be established. Nevertheless, the findings provide a useful empirical basis for future research. Subsequent studies could employ longitudinal designs and multivariate econometric approaches to examine the role of additional factors, including digital transformation, artificial intelligence in talent management, innovation, sustainability, organisational culture, and leadership. Such approaches could contribute to the development of more robust explanatory models and to a better understanding of the factors that may enhance the competitiveness of Latin American MSMEs in an increasingly complex and technologically evolving business environment.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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