West Science Economic and Entrepreneurship
Vol. 4, No. 03, August 2026, pp. 547~559

Human Capital: A Bibliometric Analysis of Research Evolution

Loso Judijanto[1], Paramita Andiani[2], Ilham Akbar Bunyamin[3]
[1] IPOSS Jakarta, Indonesia
[2,3] Universitas Nusa Putra

Article Info

Article history:

Received Aug, 2026
Revised Aug, 2026
Accepted Aug, 2026

Keywords:

Human Capital
Bibliometric Analysis
Research Evolution
Intellectual Structure
Innovation

ABSTRACT

Human capital has become a fundamental concept in explaining economic development, organizational competitiveness, innovation capability, and sustainable growth. However, the evolution of research themes, intellectual structures, and emerging directions within human capital studies remains fragmented across different disciplines. This study aims to examine the development and research landscape of human capital through a bibliometric analysis approach. Data were collected from the Scopus database using relevant search terms related to human capital, and the retrieved publications were analyzed using bibliometric techniques, including performance analysis, citation analysis, co-authorship analysis, keyword co-occurrence analysis, and thematic evolution mapping. The findings reveal that human capital research has experienced significant growth and has developed into a multidisciplinary field involving economics, management, entrepreneurship, education, innovation, and sustainability. The citation analysis identifies influential studies focusing on entrepreneurship, psychological capital, strategic management, and sustainable competitive advantage, while the keyword analysis demonstrates a transition from traditional themes such as education, employment, and productivity toward emerging themes including innovation, intellectual capital, social capital, and sustainable development. Furthermore, collaboration analysis highlights the dominant contribution of institutions and countries from North America, Europe, and Asia in shaping global human capital research. This study contributes to the literature by providing a comprehensive understanding of the intellectual evolution of human capital research and identifying future research opportunities related to digital capabilities, green human capital, and adaptive workforce development.

Corresponding Author:

Name: Loso Judijanto
Institution Address: IPOSS Jakarta, Indonesia
e-mail: losojudijantobumn@gmail.com

1. INTRODUCTION

In today's organizations and economies, human capital is increasingly becoming one of the most essential strategic assets due to the fact that it involves the knowledge, skills, abilities, creativity, and capacities possessed by people to create value and sustain development [1], [2]. Unlike economic assets, human capital highlights the role of the individual as an actor in creating

innovation, increasing productivity, and enhancing organizational competitiveness. This concept was created based on economic theories that viewed education, skills, and capacity of the labor force as important factors for economic growth. According to [3], investment in education and training enhances personal productivity and brings economic gains. Therefore, human capital laid the basis for modern human capital theory. However, later this theory went beyond economics to become a multidisciplinary term used in management, organizational behavior, entrepreneurship, education, and public policy [4].

Human capital is one of the important intangible assets in strategic management, which is used for obtaining competitive advantage for an organization. According to resource-based view (RBV), valuable, rare, inimitable and non-substitutable resources provide opportunities for organizations to outperform others [5]. Human capital qualifies as such because the knowledge, expertise, experience and problem solving skills of employees are very hard to imitate. According to [6], [7], human capital becomes a source of competitive advantage only in those cases where companies can effectively develop, manage and use their capabilities. Thus, the recent trend in studying human capital became the shift from treating employees as sources of operational capabilities to treating them as strategic capabilities [8].

Human capital research has further evolved in connection with technological revolution, globalization, and changes in work characteristics. The development of the knowledge economy has accentuated the significance of intellectual capacity, digital skills, and continuous learning as factors impacting the performance of organizations. Organizations face the need for the creation of adaptable human capital that can adjust itself to technological disruption, use of artificial intelligence, and constantly changing market environments [9]. In addition, the appearance of Industry 4.0 has broadened the conversation concerning digital skills, cooperation between humans and technology, and future workforce readiness. This is why the latest studies have analyzed not only human capital in regard to employees' skills but also in relation to innovation capacity, knowledge management, creativity, and learning orientation [10], [11].

As for the societal perspective on human capital, this type of capital is highly associated with sustainable development and competitive advantage. Human resource development affects productivity, entrepreneurship growth, poverty reduction, and the welfare of society. Endogenous growth theory offered by [12] shows that knowledge and human capabilities are the key factors of economic growth. International institutions point out that human capital development is important in order to increase productivity and deal with economic problems in the future. As a result, research on human capital has become interdisciplinary field which covers economics, education, medicine, public administration, and sustainability, among other branches of science.

Due to the growing number of articles that are written in connection with human capital, knowing about its intellectual evolution, the structure of scientific knowledge, and emerging trends in research has become necessary. Literature review gives a lot of theoretical insights, however, it might be difficult for it to reveal such aspects of scientific knowledge development as the publication pattern, the most influential publications, collaboration among authors, and thematic developments. Bibliometrics provides a structured way of looking into the development of scientific knowledge via quantitative analysis of publications, citation practices, authorship, and research themes [13]. With the help of bibliometrics, one is able to find out influential publications, intellectual base, conceptual changes, and possible directions for future research. Thus, using bibliometrics in human capital research is a chance to explore how this field evolved.

Even though the concept of human capital has received extensive attention from the perspective of many disciplines, there are still limitations in terms of fragmentation

within the research due to varying theoretical frameworks, methodological procedures, and research settings. Many existing works have explored the topic of human capital from different angles such as performance of employees, competitiveness of organizations, innovations, economic growth, and sustainability. Nonetheless, little is known about the development process of the body of literature on human capital as well as the key themes of the field, the most important publications, collaboration patterns, and directions for further research. Consequently, without an adequate overview of the existing literature base, it will be hard to understand how the field has evolved, what aspects have been explored, and where future research should be directed.

The objective of the current study is to perform bibliometric analysis on the evolution of human capital research through trends in publication, citation analysis, influential authors and sources, collaboration patterns, and themes in research. Through bibliometric analysis, the objective of the study is to determine the intellectual structure and evolution of human capital literature; major contributions to the development of the field and future research directions in the area. The use of bibliometrics in this study provides valuable contribution to the existing body of literature in human capital evolution and serves as an important reference source for further advancements in the field.

2. METHODS

This study applies a bibliometric analysis method that is used to systematically investigate the development and intellectual growth of human capital studies. Bibliometric analysis refers to a quantitative methodology which makes it possible for researchers to conduct a statistical analysis on scientific literature using methods such as publications patterns, citation analysis, co-occurrence analysis, and collaboration mapping [13]. The choice of this method of analysis is informed by the fact that it helps one to have an overall picture of knowledge structure, important contributions, and future research directions within a particular scholarly discipline.

In order to collect relevant scientific literature related to human capital, a systematic search of the scientific publications was done. In this regard, the main source of bibliographic information was chosen to be the Scopus database due to its rich content of peer-reviewed journals and academic publications. The systematic search was performed via the keyword "human capital" in the title, abstract, and keywords field. The scientific publications were screened according to the inclusion criteria such as publication in an English-language journal, relevant for human capital research and belonging to the required time frame. The final set of publications was exported in relevant bibliographic formats for further analysis.

Analysis of bibliographic data was performed using VOSviewer to produce knowledge maps and visualize connections between publications, authors, countries, and research themes. Different methods of analysis were used in this paper, such as performance analysis, citation analysis, co-authorship analysis, and co-occurrence of keywords analysis. Performance analysis was employed to investigate publication trends and research productivity, and citation analysis helped determine the most influential works and intellectual contributions in the field. Co-authorship analysis focused on collaboration between researchers and countries, whereas co-occurrence of keywords analysis revealed the key themes and trends in human capital research. In this way, this paper gives an overview of the development of human capital research in the past and present and the possible future.

3. RESULTS AND DISCUSSION

3.1 Co-Authorship Analysis

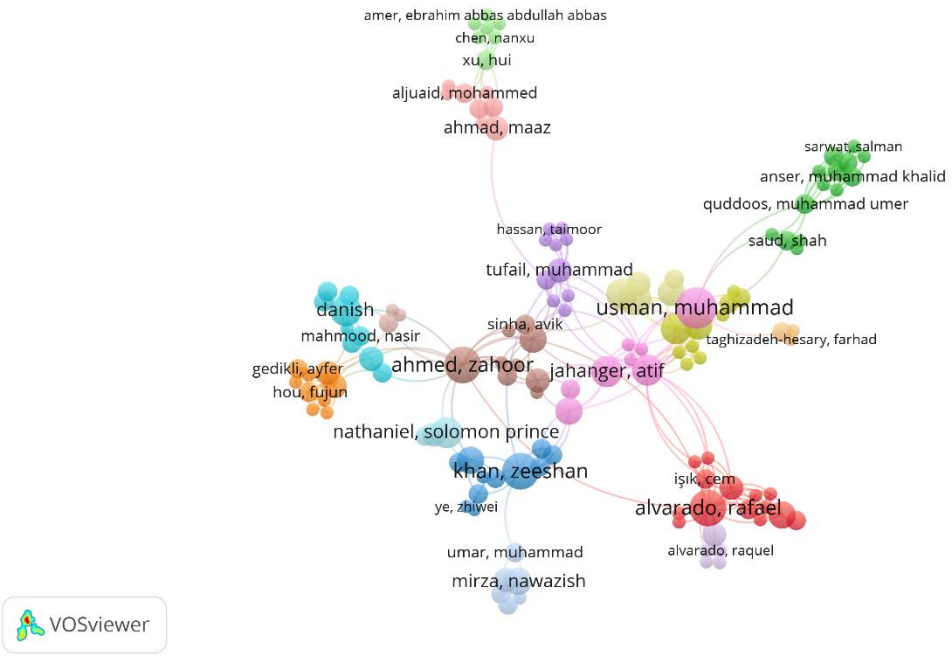

Figure 1. Author Visualization
Source: Data Analysis

The interconnection network among the authors involved in human capital research is illustrated in Figure 1 below. As is seen from the illustration, there are several clustered networks which indicate the existence of several research groups which take part in developing the field of research. There are several collaborative groups which are larger and central and which include authors such as Ahmed, Zahoor; Jahanger, Atif; Usman, Muhammad; Khan, Zeeshan; and Alvarado, Rafael whose research collaboration is quite high with other authors. This indicates the presence of their significant influence in linking various research groups since they are at the center of the research. There are several other research clusters such as Chen, Nanxu; Xu, Hui; Amer, Ebrahim Abbas Abdullah Abbas; and Aljuaid, Mohammed. The visual also shows that the human capital literature has evolved due to international and inter-disciplinary cooperation and not because of one research team. Multiple colored clusters show that there have been multiple themes and geographical research streams, and authors cooperate in their respective academic communities. The central authors, such as Ahmed, Zahoor and Jahanger, Atif, seem to be playing the role of knowledge brokers between different clusters.

Figure 2. Institution Visualization
Source: Data Analysis

According to Figure 2, the research on human capital requires collaboration between institutions located in various geographical locations; however, the network is relatively sparse with concentration at several important academic institutions. One of such institutions is represented by the University of South Carolina, United States which collaborates with other institutions in the network. Other institutions like IZA, Bonn, Germany and ESAI Business School, Universidad Espíritu Santo also play an important role in international collaboration process, thus suggesting that researchers from North America, Europe, and Latin America participate in human capital researches. The line network shows that the collaboration of institutions in this field is yet under development with some institutions serving as linkages between academic groups.

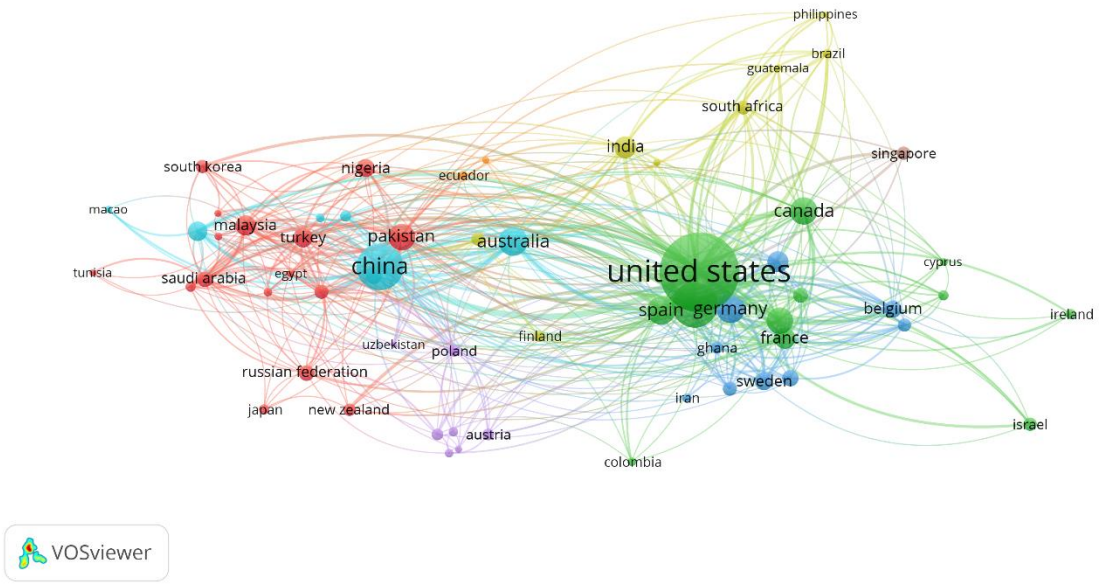

Figure 3. Country Visualization
Source: Data Analysis

Figure 3 highlights the geographical distribution and patterns of international collaborations in human capital research. The network shows a high level of centralization in favor of the USA because the latter emerges as the largest node with the highest centrality measure. This implies that the USA makes the greatest contribution to human capital studies and has strong relations with researchers from different countries. The USA has extensive connections with such countries as China, Canada, Germany, Spain, France, Australia, and the UK. This suggests that the USA plays an important role of the knowledge exchange hub in human capital studies. In addition, China is an important node that reveals the increasing contribution and collaboration with Asia and Western countries. There are also other nodes such as India, Malaysia, Pakistan, Turkey, Nigeria, and Saudi Arabia. Moreover, there are other clusters showing regional collaboration. However, most of the nations are linked to each other through collaborations across the globe rather than independent research. The inclusion of countries in Asia, Europe, North America, Africa, and Latin America shows that the study of human capital has become a global networked endeavor. Some of the European countries like Germany, France, Belgium, Sweden, and Ireland have shown great connections within the international network, while some developing nations like India, China, and Malaysia are participating in the global research network.

3.2 Keyword Co-Occurrence Analysis

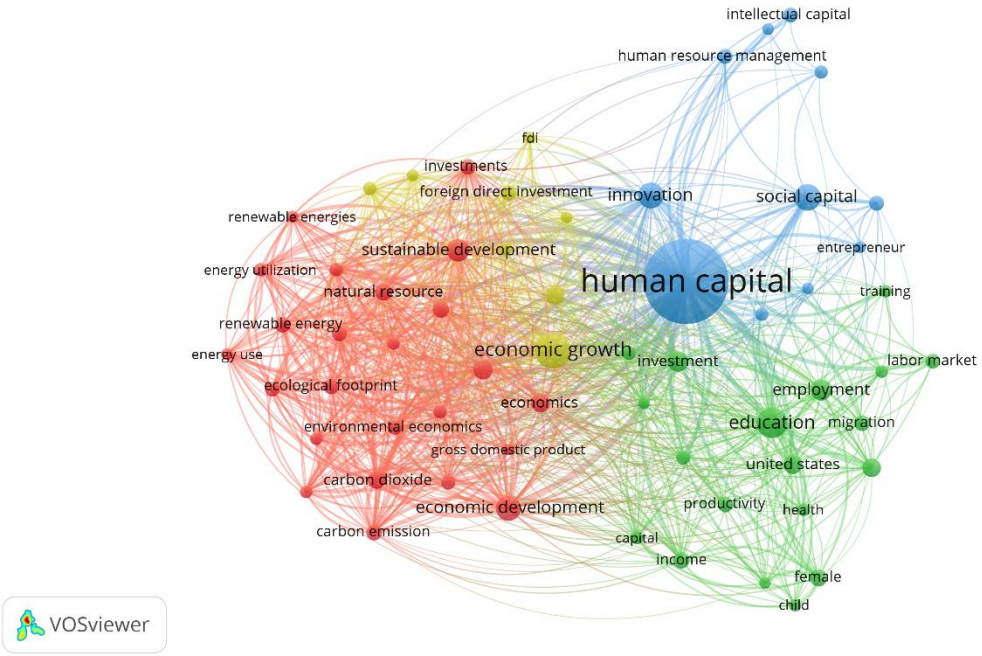

Figure 4. Network Visualization
Source: Data Analysis

As presented in Figure 4, this network provides the conceptual framework and theme of the human capital research. As shown in the figure below, the term "human capital" is the dominant keyword and is indicated by the biggest circle at the center of the network. This suggests that human capital is the key concept linking all streams of research. Since there is a very high connectivity of human capital with many other keywords such as economic growth, education, employment, innovation, social capital, intellectual capital, and sustainable development, it implies that human capital research has moved far from its conventional approach of only workforce quality and productivity.

The first prominent group of terms is connected with the economic development and growth approach. Terms such as economic growth, economic development, gross domestic product, income, productivity, investment, and capital show that there is a significant number of studies that investigate human capital as one of the main sources of macroeconomic efficiency. Such clusters show the impact of the classical concept of human capital, when education, qualifications, and knowledge are seen as the main instruments for increasing labor productivity and income levels and thus ensuring economic competitiveness. The link between human capital and economic growth proves that human capital investments are still important for the explanation of the differences in economic development.

The second most noticeable cluster is based on the links among human capital, education, employment and labor market issues. The terms like education, employment, labor market, migration, training, health, female, and child suggest that scholars more often tend to study human capital formation from social and demographic perspectives. Education and training are considered as key means for the formation of people's abilities, and at the same time, health and demographic factors are seen as other determinants of human capital formation.

Another research avenue is captured in the interrelationships among human capital, innovation, intellectual capital, and human resource management. Concepts such as innovation, intellectual capital, human

resource management, entrepreneur, and social capital signal a growing trend of studying human capital at the organizational level. This group of concepts implies a tendency of researchers to conceptualize human capital as an organizational strategic resource associated with knowledge generation, innovative capacity, competitive advantage, and entrepreneurship. The linkage of human capital with intellectual capital and innovation demonstrates the transition from viewing employees only as a means of production to treating them as strategic resources.

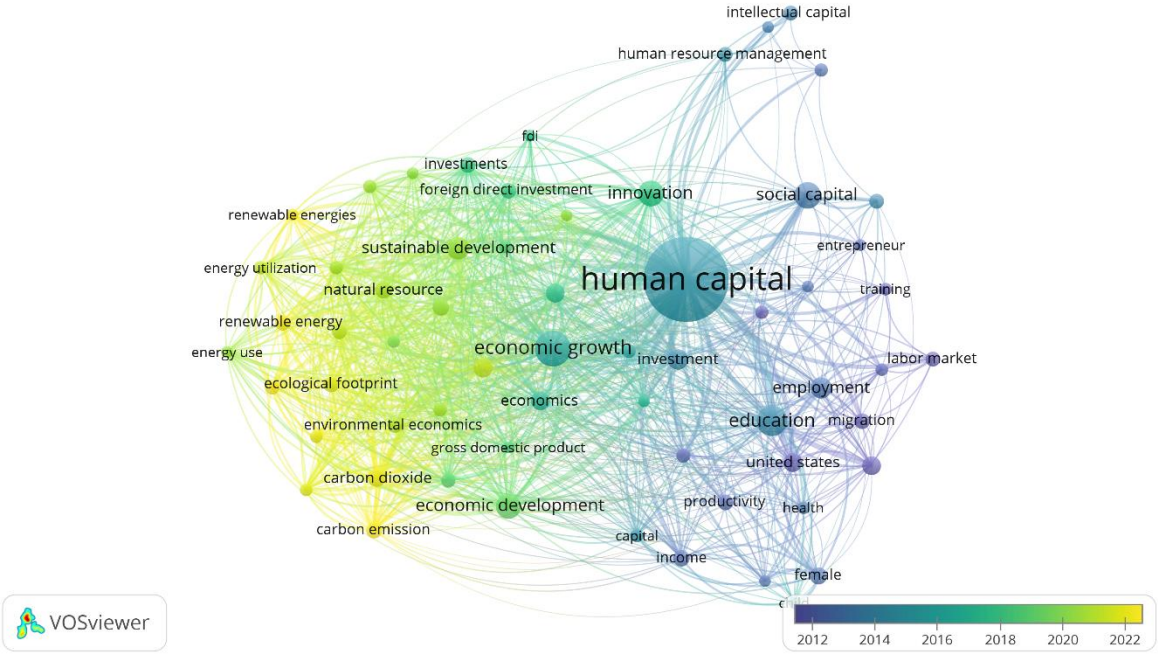

Figure 5. Overlay Visualization

Source: Data Analysis.

Figure 5 provides the development of keywords related to human capital studies, where color marks the average time period during which each research theme was published. According to the figure, human capital still serves as the leading and persistent research theme that has strong links with many concepts. Themes of older researches presented in darker blue colors refer to the traditional views of human capital, such as education, labor market, employment, health, productivity, and human resource management. These research themes relate to the initial notion of human capital as knowledge and abilities.

Over the course of time, there has been a gradual broadening of the scope of the research into organizational and socioeconomic aspects. The shift from white to green color in relation to keywords reflects the growing importance of issues like innovation, economic growth, investment, social capital, sustainable development, and intellectual capital in the middle period. These facts point to the fact that researchers have gone past the stage where they were concerned with studying human capital at an individual level and moved on to studying its importance in terms of organizational competitiveness and national economic progress.

The latest trends in research, which are marked with yellow highlighted key terms, refer to sustainability and environmental issues such as renewable energy, environmental economics, ecological footprint, carbon emissions, energy usage, and natural resources. These trends reflect the modern tendency of incorporating the role of human capital in solving sustainability issues,

where the importance of knowledge and innovative abilities is recognized.

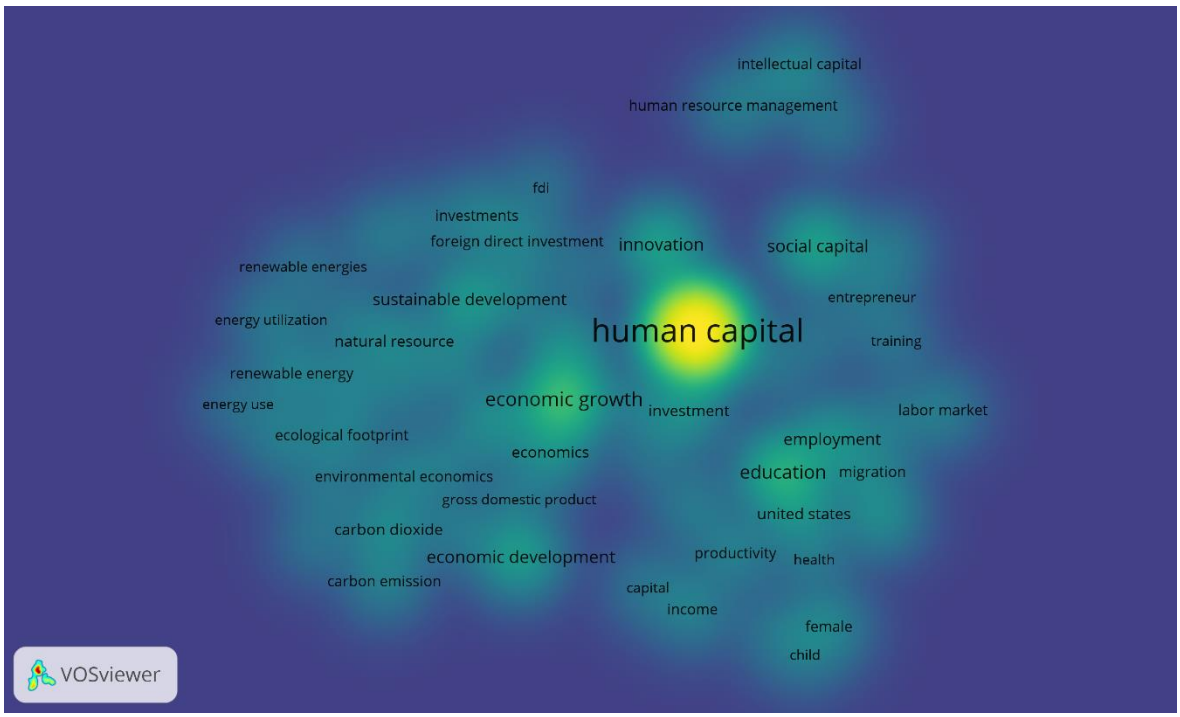

Figure 6. Density Visualization

Source: Data Analysis

Figure 6 shows the distribution of the research areas in the literature of human capital. The area with the highest density is the one surrounding the keyword "human capital," which is shown as the brightest spot on the graph. Thus, it is clearly indicated that human capital is the leading theme in the body of literature. The fact that human capital occupies this center position is an indication that human capital serves as the key body of knowledge that links different research approaches. Other themes surrounding the bright area with relatively high density include economic growth, education, employment, innovation, social capital, and sustainable development. The distribution of density also provides an indication of the overall thematic expansion in human capital research. Those concerned with education, labor market, productivity, and health are indicative of the classical roots of human capital theory, which focuses on skills and knowledge. Emerging links with innovation, intellectual capital, environmental economics, renewable energy, carbon emissions, and sustainable development represent a move towards contemporary interdisciplinary perspectives. Sustainability themes in particular signal that contemporary human capital research is paying more attention to the way in which human capabilities drive economic change and environmental problems.

3.3 Citation Analysis

Table 1. Top Cited Literature

Citations	Authors and Year	Title
3391	[14]	The role of social and human capital among nascent entrepreneurs

3061	[15]	Maternal and child undernutrition: consequences for adult health and human capital
2415	[16]	Psychological Capital: Developing the Human Competitive Edge
1729	[17]	Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective
1483	[18]	Human capital and entrepreneurial success: A meta-analytical review
1232	[19]	Human, social, and now positive psychological capital management: Investing in people for competitive advantage
1151	[20]	Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes
1104	[21]	Examining the human resource architecture: The relationships among human capital, employment, and human resource configurations
1092	[22]	Moving towards a sustainable environment: The dynamic linkage between natural resources, human capital, urbanization, economic growth, and ecological footprint in China
1090	[23]	Human capital and learning as a source of sustainable competitive advantage

Source: Scopus 2026

Table 1 depicts the most significant literature in human capital research based on citation counts and presents the seminal contributions made to shape the evolution of the area. The highest cited article is [14] with the title "The Role of Social and Human Capital among Nascent Entrepreneurs" with 3,391 citations, indicating the importance of human and social capital in developing entrepreneurship. The second article is [24], with 3,061 citations, which illustrates the importance of nutritional and health status in early life in forming the outcomes of human capital throughout the life cycle. Other frequently cited articles like [25] about psychological capital, [17] regarding human capital as a strategic resource, and [18] about human capital and successful entrepreneurship show that human capital research has gone from its traditional focus on education and skill formation to psychological resources, strategic management, and entrepreneurship. Also, the contribution of [21] and [26] supports the role of human capital in the formation of organizational capabilities and sustained competitive advantage. Moreover, the inclusion of [23] among the high-cited recent papers indicates the emerging link between human capital and sustainability, including natural resource management and economic and environmental performance.

DISCUSSION

The results of the bibliometric analysis indicate that the human capital area has grown to become a multi-disciplinary body of research with clear linkages with entrepreneurship, management, economic development, innovation, and sustainability. It is shown through the keyword analysis that human capital is still the main term that binds different research streams together, whereas related concepts like education, employment, productivity, economic development, and innovation are the traditional pillars of the literature. It is fully aligned with Human Capital Theory suggesting that investment in knowledge, skills, education, and health improves an individual's capabilities and contributes to the economic and organizational performance. The significant citation impact of papers by [14], [17], and [18] proves that human capital has been considered as an essential resource for entrepreneurship and business success for a long time.

The change in the research topics shows a clear shift from the traditional economic approach to the strategic and

multidisciplinary one. In particular, while early works mainly concentrated on education, labor markets, productivity and workforce development, more recent research tends to link human capital to innovation, intellectual capital, social capital, and sustainable development. The fact demonstrates that the importance of the concept of human capital is not only its accumulation of knowledge and skills but rather the ability to apply it strategically to adapt to environmental, social, and technological changes. The fact that innovation and sustainability become popular topics in the research indicates that future research in human capital will be dedicated to solving global problems using creativity and capabilities of humans.

Moreover, the analysis of the collaboration and citations provides more evidence to show that the field of human capital is an international field with contributions from the USA, China, as well as other European nations, being significant in the development of knowledge and international collaboration. Nevertheless, there exist chances for better collaboration of the emerging economies and consideration of the perspectives of different regions in the network. The future research should pay attention to studying human capital within the framework of new perspectives, which include digital human capital, green human capital, artificial intelligence-based skills building, as well as sustainable human capabilities.

4. CONCLUSION

The current study presents an extensive literature review of the history and development of the human capital research paradigm using bibliometric analysis approach. The results obtained prove that the human capital research is becoming more and more interdisciplinary with contributions made by the fields of economics, management, entrepreneurship, education, innovation, and sustainability. The analysis of publication dynamics, collaborative relationships, citations and keywords shows that at the early stages the main focus of researches was on education, skill development, labor productivity and economic growth, whereas recent publications pay more attention to such issues as strategic capabilities, innovation, social capital, and sustainable development. The growing role of human capital in new issues, including environmental sustainability, digitalization, and organizational competitiveness, shows its adaptability to new challenges of the modern world.

REFERENCES

[1] E. E. Bailey and C. E. Helfat, "External management succession, human capital, and firm performance: An integrative analysis," *Manag. Decis. Econ.*, vol. 24, no. 4, pp. 347–369, 2003, doi: 10.1002/mde.1119.

[2] B. Elsner and I. E. Isphording, "A big fish in a small pond: Ability rank and human capital investment," *J. Labor Econ.*, vol. 35, no. 3, pp. 787–828, 2017, doi: 10.1086/690714.

[3] S. Mosey and M. Wright, "From human capital to social capital: A longitudinal study of technology-based academic entrepreneurs," *Entrep. Theory Pract.*, vol. 31, no. 6, pp. 909–935, 2007, doi: 10.1111/j.1540-6520.2007.00203.x.

[4] J.-L. Capelleras, I. Contin-Pilart, M. Larraza-Kintana, and V. Martin-Sanchez, "Entrepreneurs' human capital and growth aspirations: the moderating role of regional entrepreneurial culture," *Small Bus. Econ.*, vol. 52, no. 1, pp. 3–25, 2019, doi: 10.1007/s11187-017-9985-0.

[5] L. Zhang, D. I. Godil, M. Bibi, M. K. Khan, S. Sarwat, and M. K. Anser, "Caring for the environment: How human capital, natural resources, and economic growth interact with environmental degradation in Pakistan? A dynamic ARDL approach," *Sci. Total Environ.*, vol. 774, 2021, doi: 10.1016/j.scitotenv.2021.145553.

[6] J. S. Coleman, "Social capital in the creation of human capital," *Knowledge and Social Capital*. Taylor and Francis Inc., University of Chicago, United States, pp. 17–42, 2009. [Online]. Available:

https://www.scopus.com/pages/publications/85072000713?origin=resultslist

[7] K. Schilt and M. Wiswall, "Before and after: Gender transitions, human capital, and workplace experiences," *B.E. J. Econ. Anal. Policy*, vol. 8, no. 1, 2008, doi: 10.2202/1935-1682.1862.

[8] L. I. O. Berge, K. Bjorvatn, and B. Tungodden, "Human and financial capital for microenterprise development: Evidence from a field and lab experiment," *Manage. Sci.*, vol. 61, no. 4, pp. 707–722, 2015, doi: 10.1287/mnsc.2014.1933.

[9] F. Cinnirella and J. Streb, "The role of human capital and innovation in economic development: evidence from post-Malthusian Prussia," *J. Econ. Growth*, vol. 22, no. 2, pp. 193–227, 2017, doi: 10.1007/s10887-017-9141-3.

[10] J. Y. Yong, M. Y. Yusliza, T. Ramayah, K. Farooq, and M. I. Tanveer, "Accentuating the interconnection between green intellectual capital, green human resource management and sustainability," *Benchmarking*, vol. 30, no. 8, pp. 2783–2808, 2023, doi: 10.1108/BIJ-11-2021-0641.

[11] G.-G. Hu, "Is knowledge spillover from human capital investment a catalyst for technological innovation? The curious case of fourth industrial revolution in BRICS economies," *Technol. Forecast. Soc. Change*, vol. 162, 2021, doi: 10.1016/j.techfore.2020.120327.

[12] H.-L. Chen, W.-T. Hsu, and C.-Y. Chang, "Independent directors' human and social capital, firm internationalization and performance implications: An integrated agency-resource dependence view," *Int. Bus. Rev.*, vol. 25, no. 4, pp. 859–871, 2016, doi: 10.1016/j.ibusrev.2015.10.010.

[13] N. Donthu, S. Kumar, D. Mukherjee, N. Pandey, and W. M. Lim, "How to conduct a bibliometric analysis: An overview and guidelines," *J. Bus. Res.*, vol. 133, pp. 285–296, 2021.

[14] P. Davidsson and B. Honig, "The role of social and human capital among nascent entrepreneurs," *J. Bus. Ventur.*, vol. 18, no. 3, pp. 301–331, 2003, doi: 10.1016/S0883-9026(02)00097-6.

[15] C. G. Victora *et al.*, "Maternal and child undernutrition: consequences for adult health and human capital," *Lancet*, vol. 371, no. 9609, pp. 340–357, 2008, doi: 10.1016/S0140-6736(07)61692-4.

[16] F. Luthans, C. M. Youssef, and B. J. Avolio, *Psychological Capital: Developing the Human Competitive Edge*. University of Nebraska, United States: Oxford University Press, 2007. doi: 10.1093/acprof:oso/9780195187526.001.0001.

[17] M. A. Hitt, L. Bierman, K. Shimizu, and R. Kochhar, "Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective," *Acad. Manag. J.*, vol. 44, no. 1, pp. 13–28, 2001, doi: 10.2307/3069334.

[18] J. M. Unger, A. Rauch, M. Frese, and N. Rosenbusch, "Human capital and entrepreneurial success: A meta-analytical review," *J. Bus. Ventur.*, vol. 26, no. 3, pp. 341–358, 2011, doi: 10.1016/j.jbusvent.2009.09.004.

[19] F. Luthans and C. M. Youssef, "Human, social, and now positive psychological capital management: Investing in people for competitive advantage," *Organ. Dyn.*, vol. 33, no. 2, pp. 143–160, 2004, doi: 10.1016/j.orgdyn.2004.01.003.

[20] B. C. Martin, J. J. McNally, and M. J. Kay, "Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes," *J. Bus. Ventur.*, vol. 28, no. 2, pp. 211–224, 2013, doi: 10.1016/j.jbusvent.2012.03.002.

[21] D. P. Lepak and S. A. Snell, "Examining the human resource architecture: The relationships among human capital, employment, and human resource configurations," *J. Manage.*, vol. 28, no. 4, pp. 517–543, 2002, doi: 10.1016/S0149-2063(02)00142-3.

[22] Z. Ahmed, M. M. Asghar, M. N. Malik, and K. Nawaz, "Moving towards a sustainable environment: The dynamic linkage between natural resources, human capital, urbanization, economic growth, and ecological footprint in China," *Resour. Policy*, vol. 67, 2020, doi: 10.1016/j.resourpol.2020.101677.

[23] N. W. Hatch and J. H. Dyer, "Human capital and learning as a source of sustainable competitive advantage," *Strateg. Manag. J.*, vol. 25, no. 12, pp. 1155–1178, 2004, doi: 10.1002/smj.421.

[24] C. G. Victora *et al.*, "Effects of early-life poverty on health and human capital in children and adolescents: analyses of national surveys and birth cohort studies in LMICs," *Lancet*, vol. 399, no. 10336, pp. 1741–1752, 2022, doi: 10.1016/S0140-6736(21)02716-1.

[25] F. Luthans, K. W. Luthans, and B. C. Luthans, "Positive psychological capital: Beyond human and social capital," *Bus. Horiz.*, vol. 47, no. 1, pp. 45–50, 2004, doi: 10.1016/j.bushor.2003.11.007.

[26] J. H. Dyer and N. W. Hatch, "Using supplier networks to learn faster," *MIT Sloan Manag. Rev.*, vol. 45, no. 3, pp. 57-63+94, 2004, [Online]. Available: https://www.scopus.com/pages/publications/3042774710?origin=resultslist