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Mapping Research on Human Development Index (HDI) in Indonesia (2020–2024): A Scopus based Bibliometric Study

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Abstract: This study aims to analyze scientific publication trends related to the Human Development Index (HDI) in Indonesia using a bibliometric approach. Data analysis covered author distribution, institutional affiliation, subject area, country of publication, and keyword mapping visualized through VOSviewer. The findings indicate that the most active contributors are from Universitas Gadjah Mada and Universitas Indonesia, with dominant research areas including medicine, social sciences, and economics. Indonesia leads in publication output, followed by Malaysia and China. Keyword mapping reveals three major clusters: health-related terms (obesity, epidemiology, body mass index), socio-economic themes (human development index, poverty, sustainable development), and demographic aspects (human, adult, covid-19). Overall, the study concludes that HDI research in Indonesia adopts a multidisciplinary perspective, highlighting the strong interconnection between health, social, and economic dimensions in advancing human development.

Keyword: Human Development Index, Indonesia, Sustainable Development.

INTRODUCTION

The Human Development Index (HDI) is a composite measure developed by the United Nations Development Programme (UNDP) to evaluate overall human progress by combining three fundamental dimensions: health, education, and standard of living. Since its introduction in 1990, HDI has become a central indicator for assessing human welfare, going beyond mere economic growth. It offers a multidimensional lens through which the quality of life and social well-being can be understood, providing a more holistic foundation for national development policy formulation.

Indonesia's HDI has shown consistent improvement over the past two decades. According to the Human Development Report 2023/2024, Indonesia achieved an HDI value of 0.713, placing it in the "high" development category. However, the 2020–2024 period was marked by the COVID-19 pandemic, which disrupted various human development indicators. Astari & Chotib (2024) found that the pandemic slowed HDI growth across most provinces, especially in education and income dimensions. Regional disparities persist as a major challenge for Indonesia in achieving equitable human development (Setiawan et al., 2022).

Academic research on HDI in Indonesia has examined diverse dimensions including economic factors (GRDP per capita, poverty, and unemployment), social indicators (education and health access), and spatial inequalities (Yusuf & Setiawan, 2022); (Rahmawati et al., 2024). Nonetheless, findings vary due to methodological differences and sample scopes. Most studies are quantitative in nature, often employing regression or panel data analysis, while qualitative or policy-oriented perspectives remain limited. Therefore, a systematic mapping of the HDI research landscape is necessary to provide an integrated understanding of its evolution and to identify research gaps.

Bibliometric analysis provides a quantitative method for assessing scholarly output by analyzing metadata such as publication counts, citations, keywords, and collaboration networks (Donthu et al., 2021). This approach helps uncover emerging research themes, leading authors and institutions, and intellectual structures within a field. In the context of HDI research, bibliometric analysis allows for tracking how scientific attention toward human development in Indonesia has evolved during 2020–2024, particularly in response to the socio-economic disruptions of the pandemic.

Scopus is selected as the main data source because of its comprehensive coverage of over 25,000 peer-reviewed journals across disciplines and its exportable metadata (Singh et al., 2021). It also includes affiliation and country data that enable the mapping of collaboration patterns. Scopus-based bibliometric studies are widely recognized for their reliability and methodological transparency (Lim & Kumar, 2024). Therefore, this study utilizes Scopus data on HDI research in Indonesia (2020–2024), analyzed using Bibliometrix (R-package) and VOSviewer, to visualize thematic trends and intellectual structures.

This study aims to (1) map the publication trends on HDI research in Indonesia during 2020–2024,

(2) identify key themes, prolific authors, institutions, and journals, and (3) propose future research directions. Theoretically, this research enriches the academic understanding of human development studies in Indonesia; practically, it provides valuable insights for policymakers and researchers to align future studies with national development priorities and human welfare objectives.

METHOD

This study employs a quantitative bibliometric approach with a descriptive–exploratory design, aimed at mapping and analyzing the development of research on the Human Development Index (HDI) in Indonesia during the period 2020–2024. Bibliometric analysis was selected because it provides a comprehensive and systematic overview of scientific production by examining publication metadata, including publication patterns, author collaboration, thematic evolution, and scientific impact (Donthu et al., 2021). By applying quantitative techniques to bibliographic data, this study identifies research contributions, thematic structures, and intellectual trends in HDI-related studies in Indonesia within the broader academic context.

The data were collected from the **Scopus database**, one of the world’s largest and most reputable academic indexing platforms covering peer-reviewed journals across multiple disciplines (Singh et al., 2021); (Purnomo et al., 2022). Search strategy based on the keywords “human development index” or “HDI” combined with “Indonesia” within the title, abstract, and keyword fields. The search query used was:

(TITLE-ABS-KEY (“Human Development Index” AND “Indonesia”) OR TITLE-ABS-KEY (“HDI” AND “Indonesia”))

A rigorous data cleaning and validation process was conducted to ensure data accuracy. Duplicate data were removed, and author names and institutions were standardized to prevent identity inconsistencies within the collaboration network. Manual verification of

Scopus metadata was conducted to ensure the relevance of each document to the HDI and the Indonesian context. The raw data obtained were selected only from journals, in English, and of article type. The validated dataset was then analyzed using core bibliometric indicators such as annual publication output, average (author, journal, and country) productivity, and keyword frequency mapping using Vosviewer.

RESULT AND DISCUSSION

Publications by Year

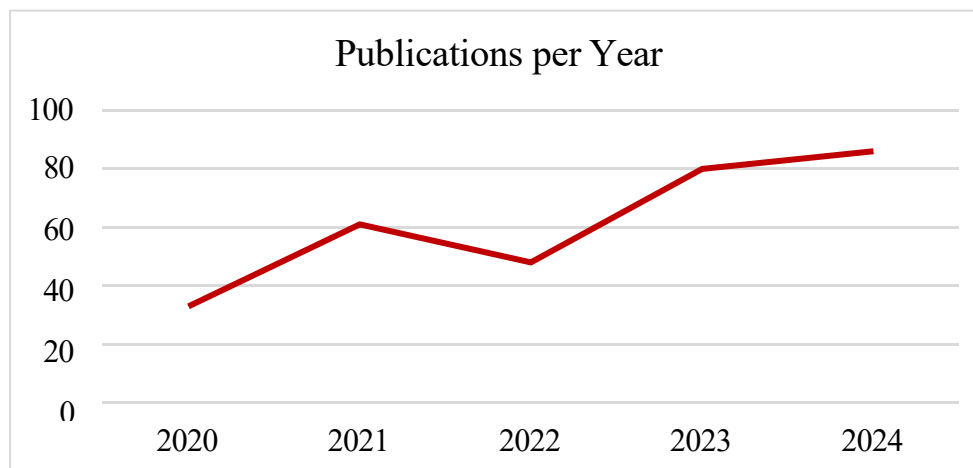


Figure 1. Annual Publications

Source: Scopus database

Based on data retrieved from the Scopus database, research related to the Human Development Index (HDI) in Indonesia has shown a clear upward trend between 2020 and 2024. In 2020, there were 33 documents published, increasing to 61 in 2021. Although there was a slight decline to 48 publications in 2022, the number rose sharply again to 80 in 2023 and reached 86 in 2024.

This pattern reflects a growing academic interest in the topic of human development within the Indonesian context. The post-2022 surge in publication output may indicate heightened awareness of the critical role of human capital in sustainable development, particularly in the aftermath of the COVID-19 recovery period. Moreover, government initiatives emphasizing human welfare, education, and inclusive growth appear to have inspired further scholarly attention to the HDI theme.

Overall, the trend demonstrates that human development has become an increasingly prominent theme in Indonesia's academic discourse. With an average annual growth rate of approximately 26%, it suggests that future research will likely continue to expand, highlighting the importance of social and human dimensions in Indonesia's development agenda.

Publications by Authors

Table 1. Publications by Authors

Authors	TP
Anggraini, T.S. , Sakti, A.D.	4
Budiantara, I.N. , Ihsan, K.T.N. , Julia, M. , Prawoto, N. , Sofilda, E.	3
Adawiyah, E. , Andarini, E. , Anggraini, R.	2

Source: Scopus database

The bibliometric analysis reveals that between 2020 and 2024, several authors have consistently contributed to the academic discourse on the Human Development Index (HDI) in Indonesia. According to Scopus data, T.S. Anggraini and A.D. Sakti emerged as the most productive authors, each publishing four documents during the observed period. Meanwhile, I.N. Budiantara, K.T.N. Ihsan, M. Julia, N. Prawoto, and E. Sofilda each produced three publications, while E. Adawiyah, E. Andarini, and R. Anggraini published two documents apiece.

The distribution of author productivity suggests that research on HDI in Indonesia is not centralized under a single research cluster or institution, but rather dispersed among individual scholars with diverse disciplinary backgrounds. This reflects the inherently interdisciplinary nature of human development studies, encompassing fields such as development economics, social sciences, education, and public policy.

The presence of several authors with more than three publications indicates the emergence of core authors who may play central roles in shaping the direction of HDI-related research. These scholars likely contribute to the formation of collaborative research networks and thematic consolidation within the field. Moreover, the growing participation of various authors highlights the increasing academic interest in human development issues within Indonesia's scholarly community.

This finding aligns with (Donthu et al., 2021), who emphasized that identifying the most productive authors in a bibliometric study helps reveal the intellectual leadership and thematic evolution of a research area. Hence, the consistent contributions from these leading scholars have strengthened Indonesia's visibility and influence in the global discourse on human development.

Publications by Affiliations

Table 2. Publications by Affiliations

Affiliation	TP
Universitas Gadjah Mada	26
Universitas Indonesia	25
Universitas Airlangga	18
Universitas Indonesia, RSUPN Dr. Cipto Mangunkusumo	16
Universitas Padjadjaran	15

Source: Scopus database

The bibliometric analysis reveals that the top five institutions contributing to Human Development Index (HDI) research in Indonesia between 2020 and 2024 are among the country's leading universities. Universitas Gadjah Mada ranks first with 26 documents, followed by Universitas Indonesia with 25, and Universitas Airlangga with 18 publications. Universitas Indonesia in collaboration with RSUPN Dr. Cipto Mangunkusumo produced 16 documents, while Universitas Padjadjaran completes the top five with 15 publications. These findings indicate that research on human development in Indonesia is primarily driven by top-tier academic institutions with strong research capacities in social sciences, economics, and public health. The dominance of these universities also reflects the existence of centers of excellence that play a pivotal role in shaping the scholarly landscape of human development studies in Indonesia.

Publications by Subject Area

Table 3. Publications by Subject Area

Subject Area	TP
Medicine	100
Social Sciences	70

Environmental Science	55
Economics, Econometrics and Finance	37
Business, Management and Accounting	34

Source: Scopus database

Based on the subject area analysis from the Scopus database, research on the Human Development Index (HDI) in Indonesia between 2020 and 2024 is most concentrated in Medicine, with 100 documents, followed by Social Sciences with 70 documents. Environmental Science ranks third with 55 documents, highlighting the growing recognition of environmental factors in human development studies. Meanwhile, Economics, Econometrics and Finance contributed 37 documents, and Business, Management and Accounting produced 34 documents. These findings indicate that research on human development in Indonesia is inherently multidisciplinary, integrating health, social, environmental, and economic dimensions as fundamental pillars for improving societal well-being.

Publications by Nations

Table 4. Publications by Nations

Country	TP
Indonesia	258
Malaysia	25
China	23
Australia	19
United States	16

Source: Scopus database

According to data from the Scopus database, publications related to the Human Development Index (HDI) in Indonesia between 2020 and 2024 are predominantly authored by researchers from Indonesia, contributing 258 documents. This reflects the nation's strong academic focus on human development studies. International collaborations are also evident, with contributions from Malaysia (25 documents), China (23 documents), Australia (19 documents), and the United States (16 documents). Indonesia's dominance highlights the country's significant research commitment to addressing national development challenges, while the participation of foreign institutions demonstrates growing cross-country collaboration in advancing sustainable human development discourse in Asia and beyond.

Distribution Phrases

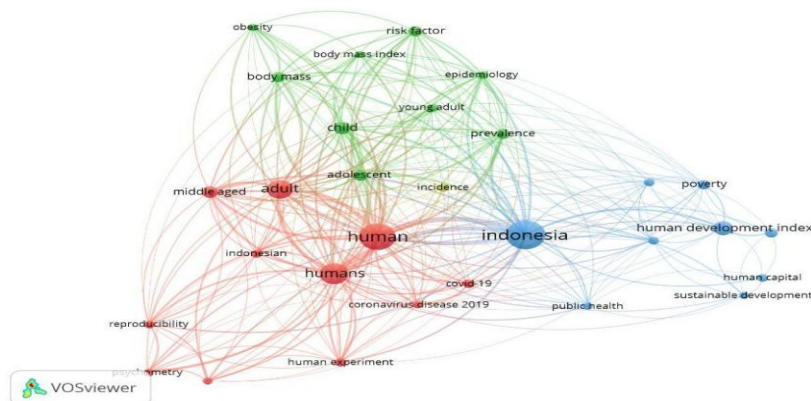


Figure 2. Keyword Co-Occurrence

Source: Author

The keyword co-occurrence visualization generated by VOSviewer reveals three major interconnected clusters in research related to the Human Development Index (HDI) in Indonesia from 2020 to 2024. The blue cluster centers around terms such as human development index, poverty, human capital, and sustainable development, reflecting research that focuses on human welfare and socioeconomic progress. The red cluster, featuring terms like human, adult, indonesian, and covid-19, highlights studies examining demographic factors and the impact of the pandemic on living standards. Meanwhile, the green cluster, represented by keywords such as child, young adult, obesity, body mass index, and epidemiology, emphasizes public health and nutritional status as key determinants of human development.

Overall, the interconnections between these clusters indicate that research on the Human Development Index in Indonesia adopts a multidimensional approach that integrates health, social, and economic dimensions. This pattern suggests that human development issues are not only analyzed through macroeconomic indicators but also from individual and public health perspectives. Cross-disciplinary collaboration is therefore essential to build a comprehensive understanding of the diverse factors influencing human development at both national and regional levels.

CONCLUSION

The bibliometric analysis concludes that research on the Human Development Index in Indonesia exhibits a strong multidisciplinary trend encompassing health, social, and economic domains. Universitas Gadjah Mada and Universitas Indonesia emerge as leading contributors, with Indonesia dominating global publication output. Keyword mapping highlights that public health, sustainable development, and social welfare are central themes in HDI studies. These findings emphasize the importance of cross-disciplinary collaboration to enhance comprehensive understanding and evidence-based policy development aimed at improving human development quality in Indonesia.

This study acknowledges several limitations. First, the data were sourced exclusively from the Scopus database, which may exclude relevant publications indexed in other databases such as Web of Science or Google Scholar. Second, the study period was limited to 2020–2024, which does not capture research developments on the Human Development Index (HDI) before or after this timeframe. Third, the VOSviewer keyword visualization reflects only co-occurrence frequencies rather than the conceptual depth or causality among topics. Future research is recommended to combine bibliometric analysis with qualitative or meta-analytic approaches to provide a more comprehensive understanding of the evolution and direction of HDI-related research in Indonesia.

REFERENCES

- Astari, S., & Chotib. (2024). Spatial Analysis of The Human Development Index in Indonesia Before and During The Covid-19 Pandemic. *IOP Conference Series: Earth and Environmental Science*, 1291(1). <https://doi.org/10.1088/1755-1315/1291/1/012002>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133(March), 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
- Lim, W. M., & Kumar, S. (2024). Guidelines for interpreting the results of bibliometric analysis: A sensemaking approach. *Global Business and Organizational Excellence*, 43(2), 17–26. <https://doi.org/10.1002/joe.22229>
- Purnomo, A., Afia, N., Prasetyo, Y. T., Rosyidah, E., Persada, S. F., Maulana, F. I., & Meiryani. (2022). Business Model on M-Business: A Systematic Review. *Procedia*

- Computer Science*, 215, 955–962. <https://doi.org/10.1016/j.procs.2022.12.098>
- Rahmawati, S., Kuncoro, M., Sading, Y., Lutfi, M., Jaya, A. H., & Fahlevi, M. (2024). The impact of poverty, malnutrition, and household income on human development in Central Sulawesi, Indonesia: A panel data analysis. *Journal of Infrastructure, Policy and Development*, 8(13), 7854. <https://doi.org/10.24294/jipd7854>
- Setiawan, T., Kuntari, I., & Puspitasari, I. (2022). *Human Development Index in Indonesia: Are We in Line with SDGs and How Much Have We Grown? July*, 470–480. <https://doi.org/10.5220/0010754500003112>
- Singh, V. K., Singh, P., & Karmakar, M. (2021). The Journal Coverage of Web of Science , Scopus and Dimensions : A Comparative Analysis. *Scientometrics*.
- Yusuf, M., & Setiawan, A. B. (2022). The Nexus Between Health and Economic Growth: Empirical Evidence from Indonesia. *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan*, 23(2), 192–210. <https://doi.org/10.23917/jep.v23i2.20018>