



Factors of Indonesia Economic Growth (2017-2022)

Fadli Agus Triansyah¹, Ashari Gunawan¹, Resti Ramadhaniyati¹

¹ *Department of Economic Education, Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, Indonesia*

Article Info

Article history:

Received: 21 December 2022;

Accepted: 08 March 2023;

Published: 29 March 2023.

Keywords:

Bibliometrics; Economic Growth; Indonesia.

Abstract

Economic growth is measured by changes in a country's Gross Domestic Product (GDP), which can be unraveled into the population and economic elements. This research is conducted to find trends and identify publications on economic growth in Indonesia in the 2017–2022 period. The data collection techniques by downloading files from the Scopus database to see publication trends with the highest number of documents, ranking classifications of institutions or universities, journals, and documents, and using shared keywords. The method used is bibliometric analysis. A total of 168 documents collected from the Publish or Perish (PoP) application using the Scopus database were combined into one file in RIS format and entered into the VOSviewer application to obtain network visualization and overlay visualization. The study results show that the trend of publications related to economic growth in Indonesia for the last six years has decreased yearly. The highest number of documents is in the "International Journal of Energy Economics and Policy," with 20 documents, followed by the Haseeb (2019) article, totaling 120 citations. Based on the keywords that have been visualized, several keywords are factors of economic growth in Indonesia from 2017 to 2022, namely Energy Consumption, Investment, CO2 Emissions, Education, GDP, Inflation, FDI, Exchange Rate, Export, Government Expenditure, Income Inequality, Inequality, Human Capital, Human Development Index, and Sustainable Development.

Abstrak

Pertumbuhan ekonomi diukur dengan perubahan Produk Domestik Bruto (PDB) suatu negara yang dapat diuraikan ke dalam populasi dan elemen ekonomi. Penelitian ini bertujuan untuk mengetahui tren dan mengidentifikasi publikasi pertumbuhan ekonomi di negara Indonesia pada periode 2017-2022. Teknik pengumpulan data dengan cara mendownload file pada database scopus untuk melihat tren publikasi yang memiliki jumlah dokumen terbanyak, klasifikasi peringkat lembaga atau universitas, jurnal dan dokumen, serta penggunaan keyword bersama. Analisis data menggunakan analisis bibliometrik. Sebanyak 168 dokumen yang terkumpul dari aplikasi Publish or Perish (PoP) menggunakan database scopus yang disatukan dalam 1 file dengan format RIS, dan dimasukkan kedalam aplikasi VOSviewer. Hasil penelitian menunjukkan bahwa tren publikasi terkait pertumbuhan ekonomi di Indonesia selama enam (6) tahun terakhir mengalami penurunan setiap tahunnya. Adapun jumlah dokumen terbanyak yaitu pada lembaga "International Journal of Energy Economics and Policy" dengan jumlah 20 dokumen, kemudian pada artikel Haseeb (2019) dengan jumlah 120 kutipan. Selanjutnya, terdapat beberapa keyword yang menjadi faktor pertumbuhan ekonomi di Indonesia tahun 2017-2022 yaitu Energy Consumption, Investment, CO2 Emissions, Education, GDP, Inflation, FDI, Exchange Rate, Export, Government Expenditure, Income Inequality, Inequality, Human Capital, Human Development Index dan Sustainable Development.

How to Cite:

Triansyah, F. A., Gunawan, A., & Ramadhaniyati, R. (2023). Factors of Indonesia Economic Growth (2017-2022). *Jurnal Pendidikan Ekonomi & Bisnis (JPEB)*, 11(01), 51-65. <https://doi.org/10.21009/JPEB.011.1.5>

* Corresponding Author.

fadliagustriansyah@upi.edu. Fadli Agus Triansyah

INTRODUCTION

Economic growth is essential for a country because it shows its economic conditions are progressing to better conditions and lasting for a certain period (DIMA, 2021; Wei et al., 2022). In another context, economic growth is said to be an increase in economic goods and services produced from one time period to another. Economic growth is generally measured by an increase in the aggregate (overall) market value of additional goods and services produced using the estimated Gross Domestic Product (GDP) (Widarni & Bawono, 2021). Economic growth needs to be known by the government because the government can make a policy regarding revenue planning, spending, and future development. Likewise, for business actors, economic growth can be used to make plans related to product development and available resources (León-Gómez et al., 2021).

The rate of economic growth that depends on the previous production as a measure of economic growth can encourage the government through policies in the fields of macroeconomics, investment, trade, law, and legislation so that the government has an essential role in creating a conducive climate for optimal market work. In addition, the central bank, as a monetary policy maker, has an essential role in creating efficient conditions for the functioning of the market mechanism. Sectoral and regional approaches are also essential to do in order to increase high economic growth (Sappewali & Hasanuddin, 2022).

Indonesia's economic growth quoted from the Central Statistics Agency (BPS) in 2021 as measured by Gross Domestic Product (GDP) at current prices in the second quarter of 2022 reached IDR 4 919.9 trillion, and at constant 2010 prices reached IDR 2 923. 7 trillion.



Figure 1. Indonesia's Economic Growth Quarter 2017-2022 (q-to-q)

From Figure 1, then q-to-q (quarter-to-quarter), which means that the current quarter's GDP will be compared to the previous quarter of the same year, in this case, the Indonesian economy in the second quarter of 2022 compared with the last quarter grew by 3.72 percent. From the production side, the highest growth occurred in the Agriculture, Forestry, and Fishery Business Fields at 13.15%. From the expenditure side, the Government Consumption Expenditure Component (PK-P) experienced the highest growth of 32.00%. In the first quarter of 2022 from the previous quarter, it experienced a contraction of 0.95%. From the production side, the deepest growth contraction occurred in the Health Services Business Field and Social Activities by 16.54%. From the expenditure side, the Government Consumption Expenditures Component (PK-P) experienced the deepest growth contraction of 50.54% (BPS, 2022).

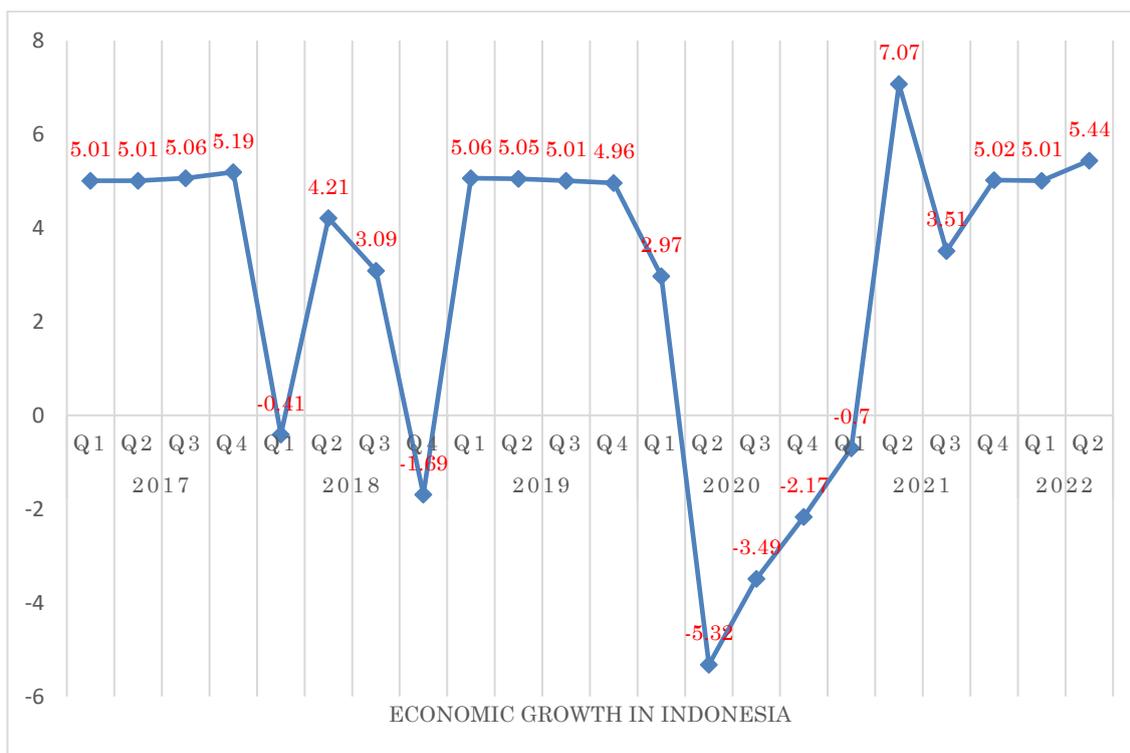


Figure 2. Indonesia's Economic Growth Quarter 2017-2022 (y-on-y)

Economic growth on a y-on-y (year-on-year) basis means that we will compare macroeconomic indicators, namely Gross Domestic Product (GDP) in the current quarter of this year, compared to the same quarter in the previous year. The Indonesian economy in quarter II-2022 compared to quarter II-2021 grew by 5.44% (y-on-y). From the production side, the Transportation and Warehousing Business Field experienced the highest growth of 21.27%. Meanwhile, from the expenditure side, the Goods and Services Export Component experienced the highest growth of 19.74%. Meanwhile, the Indonesian economy in the first quarter of 2022, compared to the first quarter of 2021, grew by 5.01% (y-on-y). From the production side, the Transportation and Warehousing Business Field experienced the highest growth of 15.79%.

Meanwhile, from the expenditure side, the Goods and Services Export Component experienced the highest growth of 16.22%. The strengthening of the Indonesian economy spatially in the second quarter of 2022 can be seen in all regions. The local group on Java Island is the main contributor with a role of 56.55% of the National economy, with economic performance that has grown by 5.66% (y-on-y) compared to quarter II-2021 (BPS, 2022). Given the importance of economic growth, several factors affect economic growth, namely capital, labor, land, and technology (Batrancea et al., 2022). Furthermore, other factors affect economic growth or national income, namely net exports, which are the number of exports minus the number of imports in a country. Net exports consist not only of goods but also services (Fernandes et al., 2021). Net exports will directly increase national income. An increase in national income will lead to an increase in Gross Domestic Product. The results of research in Indonesia (1991-2000) show that investment and Gross Domestic Product have a positive effect on employment, while the effect of investment is smaller than the effect of Gross Domestic Product. Investment and Gross Domestic Product are closely related to employment (Effendi, 2003).

In recent years, there has been a decline in the popularity of research related to discussing economic growth, and this is because, at that time, there were many policies that made it easier for countries to get in touch and the presence of the corona virus that spread throughout the world made countries focus on handling this problem, especially in the health sector (Ashraf & Goodell, 2022; Bischi et al., 2022; Espeche et al., 2022).

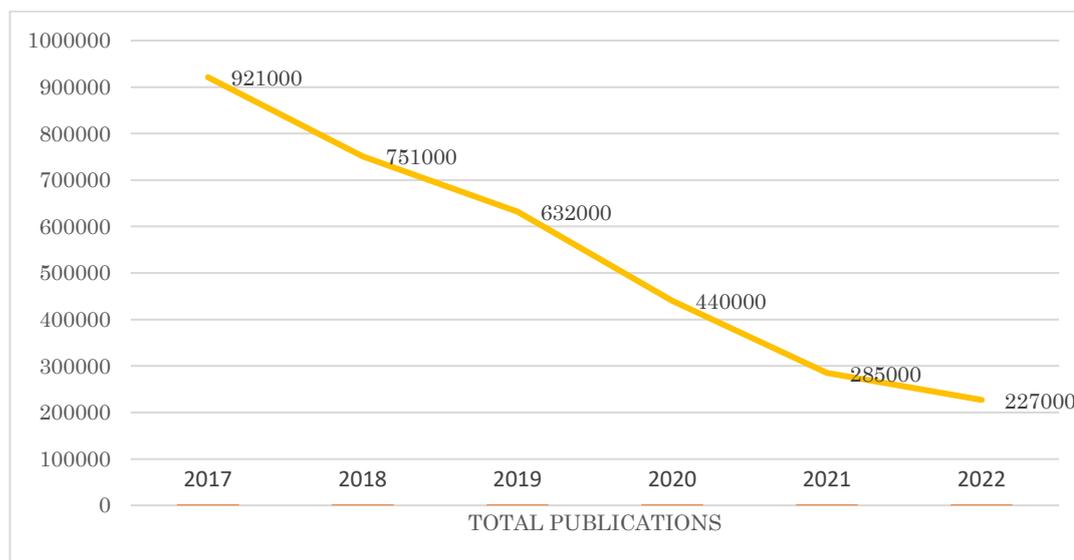


Figure 3. Graph of the Number of Economic Growth Publications (2017-2022)

Based on the picture above, the number of publications related to economic growth has decreased significantly yearly. From 2017 to 2018, there was a decrease of 170,000, or around 18.45% of publications. From 2018 to 2019, there was a decrease of 119,000, or around 15.84%. From 2019 to 2020, there was a decrease of 192,000, or around 30.37%. From 2020 to 2021 saw a decrease of 155,000 or around 35.22%, then from 2021 to 2022, there was a decrease of 58,000 or around 20.35%. If we look at it from 2017 to 2022, there has been a very high decline, namely as many as 694,000 or around 75.35% of publications. The number of declines in publications that have occurred will undoubtedly narrow down the factors of economic growth for a country in a certain period (Wang et al., 2022).

Economic growth is important because it has an impact on people's welfare, political and social stability, as well as technological development and innovation (Surya et al., 2021; H. Zhang, 2021; Zhou et al., 2020). High economic growth can increase people's income and prosperity, thereby increasing the quality of life and standard of human life (Alhassan & Adam, 2021). However, many have not researched how and what are the determinants of economic growth, especially in Indonesia (Haseeb, 2019). Such as the research conducted by Sinaga (2019) to examine the dynamic relationship between NG and economic growth with a strengthened understanding of critical associations to support economic planning and policy, the results confirm that capital, labor and NG utilization are strong determinants of economic growth in Indonesia. Meanwhile, the research conducted by Susanti & Sholeh (2020) was only limited to looking for the influence of Economic Variables and International Trade on economic growth, the results of which indicated that interest rates, exchange rates and imports affected economic growth. At the same time, inflation and exports did not affect economic growth. Therefore, it is necessary to find out more specific and in-depth determinants of economic growth so that this becomes a novelty in this study.

This study aims to identify publications related to economic growth in Indonesia in the last five years (2017-2022) and describe the characteristics of this research. Bibliometric analysis is used in this study to explore the characteristics of publications on economic growth, explain the determinants of Indonesia's economic growth, and analyze research trends in this field.

Bibliometrics is a suitable method for looking into research studies of economic growth, as it can reveal the evolution and measure the inner relationships of various items with broad intersections and a combination of statistics, philology, and information science as well as a statistical method in analyzing publications (He et al., 2017; Phoong et al., 2022; Wang et al., 2021; Zhang et al., 2019; Zyoud et al., 2017). Bibliometrics is the foundation for determining the most popular and significant publications in a particular field and has become a mature way to analyze the evolution of journals or subjects (Shang et al., 2015; Zyoud et al., 2022). Bibliometrics is a research method that has complete information by combining science, mathematics, and statistics

in analyzing knowledge quantitatively (Zhang et al., 2019). It can be interpreted that bibliometrics is a statistical method that contains information related to publications used to analyze publications in specific fields.

In recent years, bibliometrics has developed and become familiar with analyzing and mapping published concepts and knowledge in many fields (Rana & Pragati, 2022), group decision-making (Wang et al., 2021), digitalization and business models (Caputo et al., 2021) as well as several journals such as *Economic Research-Ekonomika Istrazivanja* (Wang et al., 2020) and *Technological and Economic Development of Economy* (Yu et al., 2019). Therefore, it is necessary to conduct research related to macroeconomics, especially bibliometric research on economic growth in Indonesia.

Many data sources can be used for research using bibliometric techniques besides the Scopus database; the data sources used come from the web of science, and other data sources can be added (Xiong & Zhao, 2020). However, in this study, the metadata used is based on the Scopus database. Scopus is one of the indexation services and database providers or journal data centers under the auspices of Elsevier, an international scientific publication publishing organization or company based in Amsterdam, the Netherlands, and founded in 1880. Scopus has indexed more than 22,000 article titles in the journal of more than 5000 publishers. Approximately 20,000 indexed articles are peer-reviewed. In addition to presenting scientific papers, Scopus also presents patent data on various research in the world and provides services to assess whether a journal has a significant impact (Ya'u & Saad, 2021).

In this study, researchers took and analyzed information from the Scopus database and used descriptive and evaluative bibliographic analysis. Thus, the purpose of this study is to identify publications related to economic growth and the various factors that influence it and to visualize them. Then the visualization results can become the basis for the publication trend of factors influencing economic growth in the last five years.

METHOD

This study aims to identify publications related to economic growth and the various factors influencing it and visualize them. Then the visualization results can become the basis for the publication trend of factors influencing economic growth in the last five years. The database used in this study was obtained from the Scopus database on November 1, 2022. The Scopus database was chosen because of its reputation as “the single premier abstracting and indexing database ever created” (Polat et al., 2022; Tyagi, 2022). Moreover, the Scopus database is a leading citation and abstract search literature (Chadegani et al., 2013; Maia et al., 2019).

Additionally, the selected results are drawn from document sets such as document type, source type, year of publication, author name, access type, subject area, affiliation, and language spoken. This research only focuses on publishing economic growth in Indonesia in the Scopus database, as previously highlighted. Based on the document's title, the following search keywords are used: Title (Indonesia and Economic Growth). The keywords were chosen because they give researchers quick access to published literature on economic growth in Indonesia on the Scopus database.

1. Research design

This study used bibliometric visualization and bibliometric analysis methods. As a quantitative method, the bibliometric analysis uses an evaluative and descriptive approach to represent research trends and the characteristics of a series of publications. The bibliometric visualization method shows a structural picture of a particular research area (Wang et al., 2021).

2. Research Subject

The samples in this study were 168 publications obtained from the Scopus database that matched the selected keywords. The keywords in this research are Indonesia and Economic Growth.

Of the 168 publications, most came from articles, proceedings, and some from book reviews.

3. Research Indicators

The selected publications are in the last five years (2017-2022) using the VOSviewer application with three views: network visualization, overlay visualization, and density visualization. The indicators are by paying attention to the number of publications, the number of citations, and the total link strength between the displayed objects.

4. Research Procedure

As per the previous discussion, this research attempts to understand the important factors in economic growth, an area that is poorly understood in the literature (Amarakoon et al., 2018). Researchers collected metadata based on the Scopus database in the last five years (2017-2022) related to economic growth in Indonesia. The Scopus database finds the data sources needed with PoP (Publish or Perish) applications. The data is collected in one file in RIS and CSV formats, and then we enter the file in the VOSviewer application. Then, the researcher uses the VOSviewer application to analyze and visualize and evaluate all information about publications related to economic growth in Indonesia, such as country bibliographic pairs, institutional bibliographic pairs, journal bibliographic pairs, and the co-occurrence of author keywords. Because the researcher only focuses on economic growth in one country, Indonesia, the country bibliography pairs are not used in this study. According to Davies et al. (2013), Dewi et al. (2021) and Zhang and Zhao (2022), there are some research stages in bibliometric analysis and study literature, which can be seen in Figure 4.

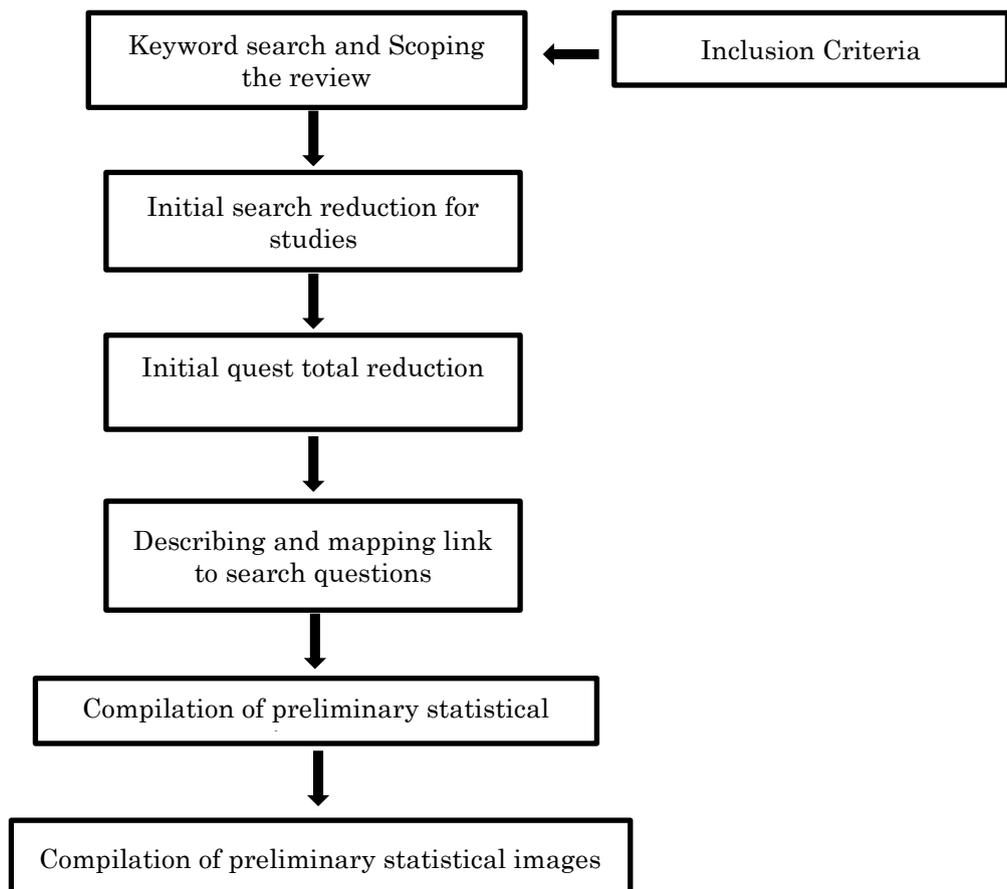


Figure 4. Stages of bibliometric analysis

The picture above shows that there are five stages in the bibliometric analysis, namely, 1) keyword investigation; the researcher determines the keywords “economic growth in Indonesia”; 2) reduction of the initial search: after we define the keywords in stage one, then we search for these

keywords with the Scopus database using the PoP application; 3) reduction of the initial search total; in this third stage the researcher determines the threshold according to the needs of the VOSviewer application to select related publications that have been obtained in the previous stage; 4) Complication of preliminary statistical images: at this stage the researcher groups the data as topic descriptions such as pairs of bibliography of institutions, journals, documents, and appearances with the author's keywords; 5) interpretation of the data in analytical narrative: at this last stage the researcher interprets the data from visualization that has been obtained with VOSviewer which can then be developed by researchers.

5. Data Analysis Techniques

Bibliometric analysis techniques are divided into two categories, namely performance analysis and mapping (Donthu et al., 2021). Performance analysis in the form of the number of publications each year, documents with the most citations, institutions with the most citations, journals with the most citations, and use of author keywords together; then mapping in the form of Network Visualization, Overlay Visualization, and Density Visualization.

RESULTS AND DISCUSSION

In presenting the results of the bibliometric analysis in this study, refer to Donthu et al., (2021) and Ellili (2022), starting from the number of documents and citations from countries, institutions, journals, authors, and the emergence of the keyword Together. Because this bibliometric analysis research was carried out in only one country, namely Indonesia, the researcher started according to needs starting from the number of citations and publications from institutions or universities, and documents followed by the results of the analysis of the emergence of shared keywords visualized with VOSviewer such as: Network Visualization, and Overlay Visualization.

Initially, 4,014 publications in the Scopus database related to economic growth. However, after researchers narrowed the keyword to economic growth in Indonesia, the publications in the Scopus database became 168 publications (see Table 1).

Table 1. Number and percentage of economic growth publications in Indonesia (2017 - 2022)

| No | Year | Number of Publications | Percentage |
|-------|------|------------------------|------------|
| 1 | 2022 | 12 | 7.14% |
| 2 | 2021 | 35 | 20.83% |
| 3 | 2020 | 33 | 19.74% |
| 4 | 2019 | 48 | 28.57% |
| 5 | 2018 | 28 | 16.66% |
| 6 | 2017 | 12 | 7.14% |
| Total | | 168 | 100% |

Table 1 shows that the highest number of publications per year was in 2019, 48 or 28.57%. There was an increase from 2018, when there were only 28 publications, then it decreased again to 30 in the following years. Of the 168 publications, most come from articles or journals, reviews, conference papers, and book chapters. Documents in the Scopus database are often used as references or often cited in other research, meaning that the more citations or citations from a document, the more research results from these documents have been used as references in other studies (Musa et al., 2022). For this reason, researchers use the number of publications and the number of documents in sorting institutions and journals.

Bibliography Based on Document Type

The number of documents can be identified based on the type of documents originating from various written sources. Types of publications about Indonesia's economic growth in 2017-2022 are presented in Table 2.

Table 2. Number and percentage of economic growth publications in Indonesia by type of document (2017 - 2022)

| No | Document type | Number of Publications | Percentage |
|-------|------------------|------------------------|------------|
| 1 | Article | 124 | 73.80% |
| 2 | Book Chapter | 4 | 2.38% |
| 3 | Conference Paper | 34 | 20.23% |
| 4 | Eratum | 1 | 0.59% |
| 5 | Review | 5 | 2.97% |
| Total | | 168 | 100% |

Based on the table above, the highest number of documents related to the publication of Indonesia's economic growth in 2017-2022 is the type of article publication, with a total of 124 publications or 73.80%. The second type of publication, namely conference papers, with 34 publications or 20.23%, has five reviews, four book chapters, and one publication operated. The dominance of the type of article publication is the most because many researchers want to study economic growth and its various factors.

Institute Bibliography Partner

Scopus-indexed documents related to economic growth in Indonesia are published by several institutions or universities. The ten institutions or universities with the highest number of publications, followed by the number of citations, are shown in Table 3.

Table 3. Number and percentage of economic growth publications in Indonesia by type of document (2017 - 2022)

| No | Publisher | Number of Publications | Number of Citations |
|----|---|------------------------|---------------------|
| 1 | International Journal of Energy Economics and Policy | 20 | 194 |
| 2 | Proceedings of the International Conference on Industrial Engineering and Operations Management | 8 | 18 |
| 3 | International Journal of Scientific and Technology Research | 8 | 13 |
| 4 | Regional Science Inquiry | 6 | 25 |
| 5 | E3S Web of Conferences | 5 | 4 |
| 6 | Buletin Ekonomi Moneter dan Perbankan | 4 | 20 |
| 7 | Journal of Asian Finance, Economics and Business | 4 | 8 |
| 8 | International Journal of Economic Research | 4 | 7 |
| 9 | IOP Conference Series: Earth and Environmental Science | 4 | 3 |

The data above shows the trend of journals with the highest documents. The International Journal of Energy Economics and Policy is at the top with 20 documents and 194 citations, followed by the Proceedings of the International Conference on Industrial Engineering and Operations Management in second place with eight documents and 18 citations. Two of the top 10 journals above are indexed by Scopus Quartile 2: the International Journal of Energy Economics and Policy and the Bulletin of Indonesian Economic Studies. Three Scopus Quartile 3 indexed journals: Regional Science Inquiry, Bulletin of Monetary Economics and Banking, and Journal of Asian Finance, Economics, and Business. Two journals are indexed by Scopus Quartile 4: the International Journal of Scientific and Technology Research and the International Journal of Economic Research. The other three journals are Scopus-indexed international conferences. This means that the research results on economic growth follow the focus and scope of the journals above, so they are helpful for researchers who want to publish research documents related to economic growth.

Document Bibliography Pair

Scopus indexed documents on economic growth in Indonesia are published in national and international journals. Documents with more than 10 citations are presented in Table 4.

Table 4. Publications with the highest number of citations related to economic growth in Indonesia

| No | Author Name | Title | Publisher | Number of Citations |
|----|--------------|--|--|---------------------|
| 1 | M. Haseeb | Environmental analysis of the effect of population growth rate on supply chain performance and economic growth of Indonesia | Ekoloji | 120 |
| 2 | M. Salman | The impact of institutional quality on economic growth and carbon emissions: Evidence from Indonesia, South Korea and Thailand | Journal of Cleaner Production | 114 |
| 3 | O. Sinaga | The dynamic relationship between natural gas and economic growth: Evidence from Indonesia | International Journal of Energy Economics and Policy | 57 |
| 4 | R. Kurniawan | Economic Growth and Sustainable Development in Indonesia: An Assessment | Bulletin of Indonesian Economic Studies | 40 |
| 5 | A. Bashir | The causality between human capital, energy consumption, CO emissions, and economic growth: Empirical evidence from Indonesia | International Journal of Energy Economics and Policy | 28 |

Based on Table 4, a publication entitled Environmental analysis of the effect of population growth rate on supply chain performance and economic growth of Indonesia occupies the top position written by Haseeb (2019) with 120 citations. The second order of publication is entitled The impact of institutional quality on economic growth and carbon emissions: Evidence from Indonesia, South Korea, and Thailand, written by Salman (2019) with 114 citations. Third place in publication with the title The dynamic relationship between natural gas and economic growth: Evidence from Indonesia written by Sinaga (2019) with 57 citations. Fourth place for publication entitled Economic Growth and Sustainable Development in Indonesia: An Assessment, written by Kurniawan &

Managi (2018) with 40 citations. The fifth order is a publication entitled The causality between human capital, energy consumption, CO emissions, and economic growth: Empirical evidence from Indonesia written by Bashir (2019) with a total of 28 citations. The documents above can be used as a reference for further research on Indonesia’s economic growth theme.

The data obtained from the PoP software is combined with the RIS format in one file, then the file is entered into the VOSviewer software to obtain bibliometric analysis results. The researcher uses a threshold in determining the use of shared keywords, namely, at most minuscule four shared keywords, meaning that one keyword is used in at least four documents that appear in the visualization on VOSviewer (see Figure 5).

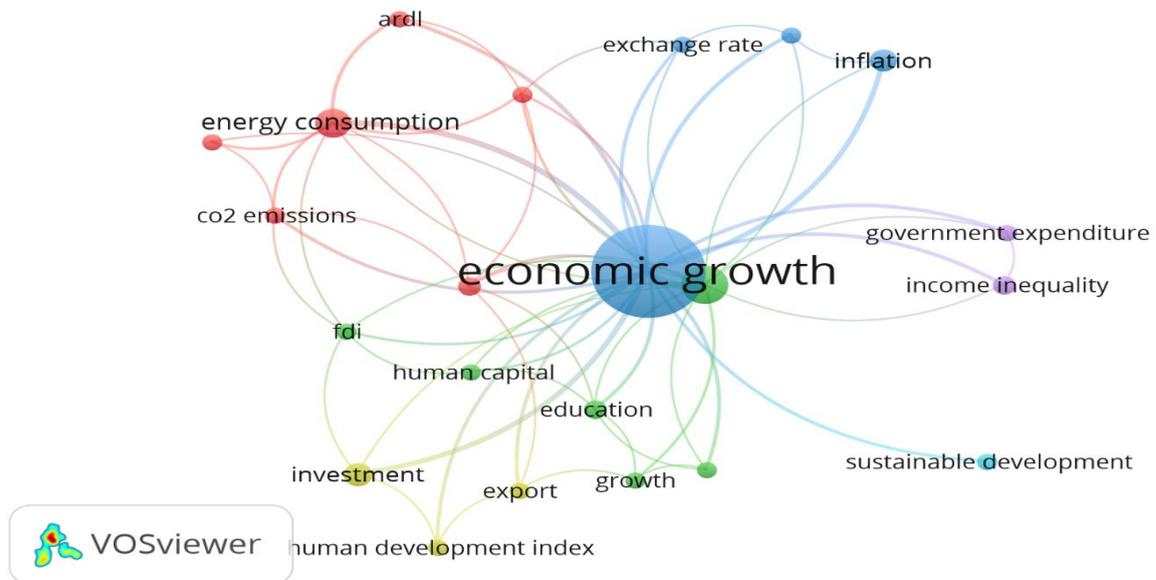


Figure 5. Network visualization of the emergence of shared keywords

The image above shows a network visualization of shared keywords (minimum 4). The keyword “economic growth” is the most commonly found, namely 123 shared uses; this can be seen by the size of the circle in the keyword “economic growth” the more significant the circle, the keyword has been widely used by researchers related to economic growth in Indonesia. For more details regarding the use of shared keywords can be seen in Table 5.

Table 5. Keywords that have the most common occurrences related to economic growth in Indonesia

| No | Keyword | Co-occurrence |
|----|------------------------|---------------|
| 1 | Economic Growth | 123 |
| 2 | Indonesia | 22 |
| 3 | Energy Consumption | 12 |
| 4 | Investment | 8 |
| 5 | Granger Causality | 4 |
| 6 | ARDL | 4 |
| 7 | CO2 Emissions | 4 |
| 8 | Education | 5 |
| 9 | GDP | 5 |
| 10 | Inflation | 7 |
| 11 | FDI | 4 |
| 12 | Granger Causality Test | 4 |

| | | |
|----|-------------------------|---|
| 13 | Exchange Rate | 4 |
| 14 | Export | 4 |
| 15 | Government Expenditure | 4 |
| 16 | Income Inequality | 5 |
| 17 | Inequality | 4 |
| 18 | Growth | 4 |
| 19 | Human Capital | 4 |
| 20 | Human Development Index | 4 |
| 21 | Gross Domestic Product | 4 |
| 22 | Sustainable Development | 4 |

From Table 5, it can be seen that Indonesia is in great demand by researchers; this can be seen by using keywords together as many as 22 articles. Energy Consumption follows this with 12 joint events; the fourth place is Investment with eight. Other keywords that are also included in the most common occurrences are Granger Causality, ARDL, CO2 Emissions, Education, GDP, Inflation, FDI, Granger Causality Test, Exchange Rate, Export, Government Expenditure, Income Inequality, Inequality, Growth, Human Capital, Human Development Index, Gross Domestic Product and Sustainable Development. The keyword "Investment" is the most widely used after the keyword economic growth and Indonesia, several indicators related and connected by Investment to economic growth in Indonesia, namely Foreign Direct Investment (FDI), Human Development Index, and exports.

The results of the network visualization in Figure 5 show that there are 6 clusters with 22 items regarding economic growth in Indonesia, namely.

1. Cluster 1 (in red) consists of 6 items (ARDL, CO2 Emissions, Energy Consumption, GDP, Granger Causality, Gross Domestic Product);
2. Cluster 2 (colored green) consists of 6 items (Education, FDI, Growth, Human Capital, Indonesia, Inequality);
3. Cluster 3 (dark blue) consists of 4 items (Economic Growth, Exchange Rate, Granger Causality Test, Inflation);
4. Cluster 4 (in yellow) consists of 3 items (Export, Human Development Index, and Investment);
5. Cluster 5 (purple) consists of 2 items (Government Expenditure, Income Inequality);
6. Cluster 6 (light blue) consists of 1 item, Sustainable Development.

From figure 6, there are three different colors. The yellow indicates these keywords were used together around 2020-2022; the green color shows the use of keywords together around 2019, and the blue color around 2017-2019. This indicates a change in terms within a certain period. The new theme keywords are the development of Granger Causality, FDI, ARDL, CO2 Emissions, and Sustainable Development. At the same time, the keywords that became the old theme were GDP, Energy Consumption, and Education. This means that there are changes related to economic growth factors in Indonesia.

From the results of the discussion above, research or the number of publications related to economic growth in Indonesia has experienced stagnant changes and tends to decrease every year. The highest number of documents is in the "International Journal of Energy Economics and Policy" with a total of 20 documents, then in the Haseeb (2019) article with the title "Environmental analysis of the effect of population growth rate on supply chain performance and economic growth of Indonesia" with a total of 120 citations. Energy Consumption is the most used Economic Growth keyword, together with 12 events. Based on the keywords that have been visualized, several keywords are factors of economic growth in Indonesia from 2017 to 2022, namely Energy Consumption, Investment, CO2 Emissions, Education, GDP, Inflation, FDI, Exchange Rate, Export, Government Expenditure, Income Inequality, Inequality, Human Capital, Human Development Index, and Sustainable Development. In the latest themes, such as Sustainable Development is a

new issue, this gap can be helpful for further research related to economic growth in Indonesia.

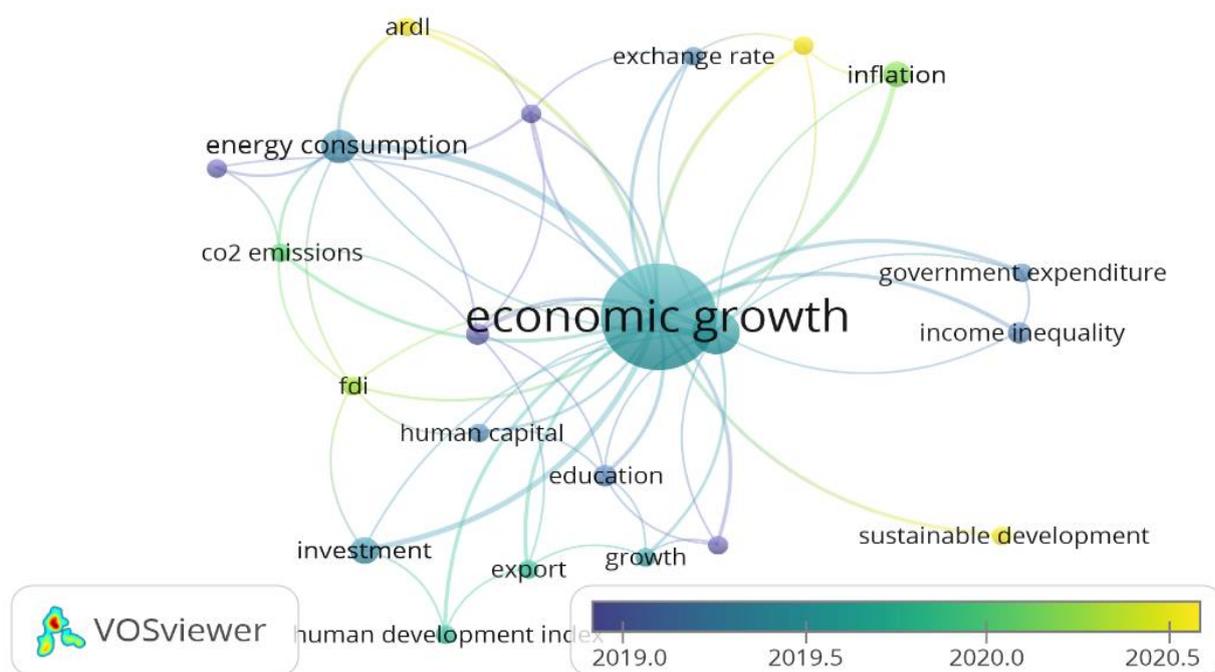


Figure 6. Overlay Visualization of the emergence of shared keywords based on the year of publication

CONCLUSIONS AND SUGGESTION

The trend of publications in Scopus-indexed journals related to economic growth in Indonesia in the last five years (2017 – 2022) has decreased yearly. The most significant number of documents are in the “International Journal of Energy Economics and Policy” with a total of 20 documents, then in the Haseeb (2019) article with the title “Environmental analysis of the effect of population growth rate on supply chain performance and economic growth of Indonesia” with a total of 120 citations. Energy Consumption is the most used Economic Growth keyword, together with 12 events. Based on the keywords that have been visualized, several keywords are factors of economic growth in Indonesia from 2017 to 2022, namely Energy Consumption, Investment, CO2 Emissions, Education, GDP, Inflation, FDI, Exchange Rate, Export, Government Expenditure, Income Inequality, Inequality, Human Capital, Human Development Index, and Sustainable Development. In the latest themes, such as Sustainable Development is a new issue, this gap can be helpful for further research related to economic growth in Indonesia. Then for further research, to expand the keywords used on research topics, and in searching for or collecting data, we can use databases other than Scopus, such as Web of Science (WoS) and Dimensions.

REFERENCES

- Alhassan, M. D., & Adam, I. O. (2021). The effects of digital inclusion and ICT access on the quality of life: A global perspective. *Technology in Society*, 64, 101511. <https://doi.org/10.1016/j.techsoc.2020.101511>
- Amarakoon, U., Weerawardena, J., & Verreyne, M.-L. (2018). Learning capabilities, human resource management innovation and competitive advantage. *The International Journal of Human Resource Management*, 29(10), 1736–1766. <https://doi.org/10.1080/09585192.2016.1209228>
- Ashraf, B. N., & Goodell, J. W. (2022). COVID-19 social distancing measures and economic growth: Distinguishing short- and long-term effects. *Finance Research Letters*, 47, 102639.

<https://doi.org/10.1016/j.frl.2021.102639>

- Bashir, A. (2019). The causality between human capital, energy consumption, CO₂ emissions, and economic growth: Empirical evidence from Indonesia. *International Journal of Energy Economics and Policy*, 9(2), 98–104. <https://doi.org/10.32479/ijeep.7377>
- Batrancea, L., Rathnaswamy, M. K., & Batrancea, I. (2022). A Panel Data Analysis on Determinants of Economic Growth in Seven Non-BCBS Countries. *Journal of the Knowledge Economy*, 13(2), 1651–1665. <https://doi.org/10.1007/s13132-021-00785-y>
- Bischi, G. I., Grassetto, F., & Sanchez Carrera, E. J. (2022). On the economic growth equilibria during the Covid-19 pandemic. *Communications in Nonlinear Science and Numerical Simulation*, 112, 106573. <https://doi.org/10.1016/j.cnsns.2022.106573>
- Caputo, A., Pizzi, S., Pellegrini, M. M., & Dabić, M. (2021). Digitalization and business models: Where are we going? A science map of the field. *Journal of Business Research*, 123, 489–501. <https://doi.org/10.1016/j.jbusres.2020.09.053>
- Chadegani, A. A., Salehi, H., Yunus, M. M., Farhadi, H., Fooladi, M., Farhadi, M., & Ebrahim, N. A. (2013). A Comparison between Two Main Academic Literature Collections: Web of Science and Scopus Databases. *Asian Social Science*, 9(5). <https://doi.org/10.5539/ass.v9n5p18>
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative learning environments in education—A systematic literature review. *Thinking Skills and Creativity*, 8, 80–91. <https://doi.org/10.1016/j.tsc.2012.07.004>
- Dewi, P. S., Widodo, A., Rochintaniawati, D., & Prima, E. C. (2021). Web-Based Inquiry in Science Learning: Bibliometric Analysis. *Indonesian Journal of Science and Mathematics Education*, 4(2), 191–203. <https://doi.org/10.24042/ij sme.v4i2.9576>
- DIMA, A. (2021). The Importance of Innovation in Entrepreneurship for Economic Growth and Development. A Bibliometric Analysis. *Review of International Comparative Management*, 22(1), 120–131. <https://doi.org/10.24818/rmci.2021.1.120>
- 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, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
- Effendi, A. (2003). *Pengaruh Investasi, PDB dan Tenaga Kerja di Indonesia Periode 1991 2000*. UNHAS Makassar.
- Ellili, N. O. D. (2022). Bibliometric analysis on corporate governance topics published in the journal of Corporate Governance: The International Journal of Business in Society. *Corporate Governance: The International Journal of Business in Society*. <https://doi.org/10.1108/CG-03-2022-0135>
- Espeche, J. F. T., Sacristán-Navarro, M., Zúñiga-Vicente, J. Á., & Crespo, N. F. (2022). Innovation and internationalisation during times of economic growth, crisis, and recovery prior to Covid-19: A configurational approach comparing Spanish manufacturing family and non-family firms. *Journal of Family Business Strategy*, 100513. <https://doi.org/10.1016/j.jfbs.2022.100513>
- Fernandes, L. H. S., de Araújo, F. H. A., Silva, I. E. M., & Neto, J. S. P. (2021). Macroeconophysics indicator of economic efficiency. *Physica A: Statistical Mechanics and Its Applications*, 573(March). <https://doi.org/10.1016/j.physa.2021.125946>
- Haseeb, M. (2019). Environmental analysis of the effect of population growth rate on supply chain performance and economic growth of Indonesia. *Ekoloji*, 28(107), 417–426. https://api.elsevier.com/content/abstract/scopus_id/85063604241
- He, X., Wu, Y., Yu, D., & Merigó, J. M. (2017). Exploring the Ordered Weighted Averaging Operator Knowledge Domain: A Bibliometric Analysis. *International Journal of Intelligent Systems*, 32(11), 1151–1166. <https://doi.org/10.1002/int.21894>
- Kurniawan, R., & Managi, S. (2018). Economic Growth and Sustainable Development in Indonesia: An Assessment *. *Bulletin of Indonesian Economic Studies*, 54(3), 339–361. <https://doi.org/10.1080/00074918.2018.1450962>
- León-Gómez, A., Ruiz-Palomo, D., Fernández-Gámez, M. A., & García-Revilla, M. R. (2021). Sustainable tourism development and economic growth: Bibliometric review and analysis.

Sustainability (Switzerland), 13(4), 1–20. <https://doi.org/10.3390/su13042270>

- Maia, S. C., de Benedicto, G. C., do Prado, J. W., Robb, D. A., de Almeida Bispo, O. N., & de Brito, M. J. (2019). Mapping the literature on credit unions: a bibliometric investigation grounded in Scopus and Web of Science. *Scientometrics*, 120(3), 929–960. <https://doi.org/10.1007/s11192-019-03165-1>
- Musa, I. H., Afolabi, L. O., Zamit, I., Musa, T. H., Musa, H. H., Tassang, A., Akintunde, T. Y., & Li, W. (2022). Artificial Intelligence and Machine Learning in Cancer Research: A Systematic and Thematic Analysis of the Top 100 Cited Articles Indexed in Scopus Database. *Cancer Control*, 29, 107327482210959. <https://doi.org/10.1177/10732748221095946>
- Phong, S. Y., Khek, S. L., & Phong, S. W. (2022). The Bibliometric Analysis on Finite Mixture Model. *SAGE Open*, 12(2), 215824402211010. <https://doi.org/10.1177/21582440221101039>
- Polat, Z. A., Alkan, M., Paulsson, J., Paasch, J. M., & Kalogianni, E. (2022). Global scientific production on LADM-based research: A bibliometric analysis from 2012 to 2020. *Land Use Policy*, 112, 105847. <https://doi.org/10.1016/j.landusepol.2021.105847>
- Rana, S., & Pragati. (2022). A Bibliometric and Visualization Analysis of Human Capital and Sustainability. *Vision: The Journal of Business Perspective*, 097226292211057. <https://doi.org/10.1177/09722629221105773>
- Salman, M. (2019). The impact of institutional quality on economic growth and carbon emissions: Evidence from Indonesia, South Korea and Thailand. *Journal of Cleaner Production*, 241. <https://doi.org/10.1016/j.jclepro.2019.118331>
- Sappewali, B., & Hasanuddin, B. (2022). *Determ minant of Economic Growth*. 4(2), 79–84.
- Shang, G., Saladin, B., Fry, T., & Donohue, J. (2015). Twenty-six years of operations management research (1985–2010): authorship patterns and research constituents in eleven top rated journals. *International Journal of Production Research*, 53(20), 6161–6197. <https://doi.org/10.1080/00207543.2015.1037935>
- Sinaga, O. (2019). The dynamic relationship between natural gas and economic growth: Evidence from Indonesia. *International Journal of Energy Economics and Policy*, 9(3), 388–394. <https://doi.org/10.32479/ijeep.7748>
- Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H., & Idris, M. (2021). Economic Growth, Increasing Productivity of SMEs, and Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 20. <https://doi.org/10.3390/joitmc7010020>
- Susanti, E., & Sholeh, M. (2020). Indonesia Economic Growth Determinant: The Impact of Macro Economic Variables and International Trade. *International Journal of Economics and Financial Issues*, 10(5), 70–76. <https://doi.org/10.32479/ijefi.10273>
- Tyagi, S. (2022). Unveiling research productivity of premier IIMs of India (2010–2021). *Library Hi Tech*. <https://doi.org/10.1108/LHT-05-2022-0262>
- Wang, W., Dong, X., Qu, J., Lin, Y., & Liu, L. (2021). Bibliometric Analysis of Microtia-Related Publications From 2006 to 2020. *Ear, Nose & Throat Journal*, 014556132110376. <https://doi.org/10.1177/01455613211037641>
- Wang, X., Xu, Z., Qin, Y., & Skare, M. (2022). Foreign direct investment and economic growth: a dynamic study of measurement approaches and results. *Economic Research-Ekonomiska Istraživanja*, 35(1), 1011–1034. <https://doi.org/10.1080/1331677X.2021.1952090>
- Wang, X., Xu, Z., & Škare, M. (2020). A bibliometric analysis of Economic Research-Ekonomiska Istraživanja (2007–2019). *Economic Research-Ekonomiska Istraživanja*, 33(1), 865–886. <https://doi.org/10.1080/1331677X.2020.1737558>
- Wei, X., Mohsin, M., & Zhang, Q. (2022). *Role of foreign direct investment and economic growth in renewable energy development*. <https://doi.org/10.1016/j.renene.2022.04.062>
- Widarni, E., & Bawono, S. (2021). Human Capital, Technology, and Economic Growth: A Case Study of Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(5), 29–35. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0029>
- Xiong, H., & Zhao, Z. (2020). The correlation between haze and economic growth: Bibliometric analysis based on wos database. *Applied Ecology and Environmental Research*, 18(1), 59–75.

https://doi.org/10.15666/aeer/1801_059075

- Ya'u, A., & Saad, N. (2021). Bibliometric analysis of published literature on taxation in malaysia, based on scopus database. *Journal of Business Management and Accounting*, 11(Number 1), 59–86. <https://doi.org/10.32890/jbma2021.11.1.4>
- Yu, D., Xu, Z., & Šaparauskas, J. (2019). The evolution of "technological and economic development of economy": a bibliometric analysis. *Technological and Economic Development of Economy*, 25(3), 369–385. <https://doi.org/10.3846/tede.2019.10193>
- Zhang, H. (2021). Technology Innovation, Economic Growth and Carbon Emissions in the Context of Carbon Neutrality: Evidence from BRICS. *Sustainability*, 13(20), 11138. <https://doi.org/10.3390/su132011138>
- Zhang, N., & Zhao, Y. (2022). Green supply chain management in the platform economy: a bibliometric analysis. *International Journal of Logistics Research and Applications*, 25(4–5), 639–655. <https://doi.org/10.1080/13675567.2021.1885635>
- Zhang, Q., Yue, Y., Shi, B., & Yuan, Z. (2019). A Bibliometric Analysis of Cleft Lip and Palate-Related Publication Trends From 2000 to 2017. *The Cleft Palate-Craniofacial Journal*, 56(5), 658–669. <https://doi.org/10.1177/1055665618807822>
- Zhou, B., Zeng, X., Jiang, L., & Xue, B. (2020). High-quality Economic Growth under the Influence of Technological Innovation Preference in China: A Numerical Simulation from the Government Financial Perspective. *Structural Change and Economic Dynamics*, 54, 163–172. <https://doi.org/10.1016/j.strueco.2020.04.010>
- Zyoud, S. H., Shakhshir, M., Koni, A., Shahwan, M., Jairoun, A. A., & Al-Jabi, S. W. (2022). Olfactory and Gustatory Dysfunction in COVID-19: A Global Bibliometric and Visualized Analysis. *Annals of Otolaryngology, Rhinology & Laryngology*, 000348942210827. <https://doi.org/10.1177/00034894221082735>
- Zyoud, S., Waring, W., Al-Jabi, S., & Sweileh, W. (2017). Global research production in glyphosate intoxication from 1978 to 2015: A bibliometric analysis. *Human & Experimental Toxicology*, 36(10), 997–1006. <https://doi.org/10.1177/0960327116678299>