

## **THE RELATIONSHIP BETWEEN INCOME INEQUALITY AND ECONOMIC GROWTH: A META-ANALYSIS**

**Andi Harmoko Arifin**

Universitas Terbuka, Indonesia

Corresponding email: andiharmoko@ecampus.ac.id

### **ABSTRAK**

Ketimpangan pendapatan merupakan isu penting dalam ekonomi dan kebijakan publik. Beberapa penelitian menunjukkan bahwa ketimpangan pendapatan dapat menghambat pertumbuhan ekonomi, sementara yang lain menunjukkan bahwa ketimpangan dapat mendorong pertumbuhan. Meta-analisis ini bertujuan untuk meninjau secara sistematis hubungan antara ketimpangan pendapatan dan pertumbuhan ekonomi. Penelitian ini menganalisis 13 penelitian yang terbit tahun 2022-2024. Teknik pengumpulan data dalam penelitian ini melalui observasi langsung melalui database jurnal. Analisis data dalam penelitian ini adalah analisis kuantitatif dengan bantuan aplikasi CMA. Hasil penelitian ini menyimpulkan terdapat hubungan yang signifikan antara ketimpangan pendapatan dan pertumbuhan ekonomi dengan nilai ( $rRE= 0.712$ ) Kategori effect size sedang. Hubungan ini lebih kuat di negara-negara berpenghasilan rendah dan menengah dibandingkan dengan negara-negara berpenghasilan tinggi. Temuan ini menunjukkan bahwa ketimpangan pendapatan dapat menghambat pertumbuhan ekonomi di negara-negara berkembang.

Kata Kunci: Ketimpangan Pendapatan, Pertumbuhan Ekonomi, Meta-Analisis

### **Abstract**

Income inequality is an important issue in the economy and public policy. Some studies suggest that income inequality can hinder economic growth, while others suggest that inequality can drive growth. This meta-analysis aims to systematically review the relationship between income inequality and economic growth. This study analyzed 13 studies published in 2022-2024. The data collection technique in this study is through direct observation through a journal database. The data analysis in this study is a quantitative analysis with the help of the CMA application. The results of this study concluded that there was a significant relationship between income inequality and economic growth with a value ( $rRE= 0.712$ ) in the medium effect size category. This relationship is stronger in low- and middle-income countries compared to high-income countries. These findings suggest that income inequality can hinder economic growth in developing countries.

**Keywords:** Income Inequality, Economic Growth, Meta-Analysis

### **INTRODUCTION**

Introductio Economic growth is one of the important indicators in measuring the progress of a country. Through high economic growth, the country is able to produce more goods and services which ultimately improves people's living standards(Khan et al., 2022). Increased per capita income, which is often linked to economic growth, allows individuals to access a better and more diverse range of products and services, from education to healthcare. This can indirectly reduce poverty levels and improve the quality of life. In addition, sustainable economic growth also encourages increased investment in various sectors(Lupi, 2020). Such investments not only strengthen infrastructure and production capacity, but also create new jobs which in turn lowers the unemployment rate. With the increase in employment opportunities, more people can be involved in productive economic activities. This is

vital in strengthening people's purchasing power and encouraging further economic growth through a positive cycle between consumption and investment (Miar et al., 2024).

Furthermore, economic growth is often accompanied by innovation and increased efficiency in the use of resources. These technological innovations and efficiency improvements not only increase productivity but also encourage the development of new sectors of the economy. This transformation is essential for adaptation in the face of global challenges such as climate change and international competition (Ozili, Lay, et al., 2023). Thus, inclusive and sustainable economic growth can be a catalyst for broader social and economic progress, leading society towards a higher and more sustainable standard of living.

High income inequality can hinder a country's economic growth because it leads to uneven distribution of resources. When most of the

national income is concentrated in the hands of a few, consumption and investment from the lower class are limited (Shen & Zhao, 2023). This means that aggregate demand in the economy is likely to decline because the purchasing power of the majority of the population is not strong enough to support economic growth. In addition, high inequality often results in a lack of access to quality education and health, hindering the development of human capital that is an important key to long-term productivity and innovation (Uddin & Rahman, 2022).

Not only that, income inequality may also encourage economic growth, especially through investment mechanisms. Individuals in the upper strata have more capacity to invest their wealth on a large scale, which can trigger infrastructure and technology development. However, these positive effects are often limited and insufficient to offset the negative effects of prolonged inequality. To maximize the potential for economic growth (Ofori et al., 2023), it is important for governments to implement policies that ensure a fairer distribution of income and create equal opportunities for all levels of society, resulting in an inclusive and sustainable growth cycle.

The academic debate about the relationship between income inequality and economic growth has been going on for a long time and has given rise to two main views (Miar et al., 2024). Some economists argue that high inequality hinders economic growth because it reduces aggregate consumption and causes social instability that ultimately reduces investor confidence and economic efficiency. This theory is supported by research that shows that countries with lower inequality tend to have more stable and inclusive economic growth. This argument also underscores the importance of investing in health and education as a means to lower inequality and spur long-term growth (Kwilinski et al., 2023).

On the other hand, there is a view that income inequality, to some extent, can drive economic growth. This view departs from the assumption that inequality creates incentives for people to innovate and try harder, spurring productivity and capital accumulation (Shen & Zhao, 2023). Proponents of this theory often cite the example of countries that experienced rapid economic growth at the beginning of their development despite having high levels of inequality (Hussain et al., 2023; Chen et al., 2023). However, criticism of this view suggests that the benefits of inequality only occur in certain scenarios and are often unsustainable without policy interventions that ensure income redistribution and fairer opportunities. Therefore, it is necessary to conduct a meta-analysis.

Meta-analysis plays an important role in research on the relationship between income

inequality and economic growth because it allows researchers to combine the results of various studies, increasing the statistical strength and reliability of conclusions. Using a meta-analysis approach, researchers can identify patterns, consistency, and variations in data that may not be visible through a single study. This is invaluable in addressing controversy and methodological variation between studies, allowing for a more objective analysis of how strongly and under what conditions income inequality affects economic growth. Therefore, meta-analysis can provide more comprehensive insights and deeper nuances into the complex dynamics between income inequality and economic growth, assisting policymakers in designing more effective and targeted interventions. So, this study aims to systematically review the relationship between income inequality and economic growth.

## RESEARCH METHODS

This type of research is a meta-analysis research. This meta-analysis, which aims to understand the relationship between income inequality and economic growth, involves collecting data from a variety of published and unpublished empirical studies, covering a wide range of time periods and geographical contexts. Strict inclusion criteria are applied to ensure consistency and relevance of the data. Data processing was performed using a mixed-effects model, allowing for analysis of variation between studies while considering potential heterogeneity. In addition, sensitivity analysis and testing for bias publications are conducted to verify the strength and reliability of the findings. Data analysis is a quantitative analysis with the help of the Comprehensive Meta-analysis (CMA) application. Furthermore, the effect size criteria in this study can be seen in Table 1.

**Tabel 1.** Effect Size Criteria

Classification	Interval
No Effect	$0.00 < ES \leq 0.19$
Small Effect	$0.19 < ES \leq 0.49$
Medium Effect	$0.49 < ES \leq 0.79$
Large Effect	$0.79 < ES \leq 1.29$
Very Large Effect	$ES > 1.29$

Sources :Badawi et al., (2023)

## RESULTS AND DISCUSSIONS

From the results of data search through journal databases, 13 relevant studies related to the relationship between income inequality and economic growth were obtained. Data that have met the criteria are calculated based on the characteristics of the journal code, publication year, country and effect size criteria which can be seen in Table 2.

**Table 2.** Nilai Effect Size 13 Penelitian

Journals Code	Years	Country	Effect Size (Hedge's)	effect Size Critterria
Y1	2022	India	1.19	Large
Y2	2022	India	0.98	Large
Y3	2022	Indonesia	1.14	Large
Y4	2024	China	0.82	Large
Y5	2023	Indonesia	0.61	Medium
Y6	2024	Indonesia	0.47	Medium
Y7	2023	Indonesia	1.80	Very Large
Y8	2023	Pakistan	2.14	Very Large
Y9	2024	USA	2.42	Very Large
Y10	2024	UK	1.82	Very Large
Y11	2023	China	1.92	Very Large
Y12	2023	Indonesia	0.59	Medium
Y13	2024	Singapore	0.75	Medium

Based on Table 2, the analysis of 13 studies obtained four studies with large effect size values, four studies with medium effect size values and five studies with very large effect size values. The next step is to test the heterogeneity of 13 studies analyzed with a fixed and random effect model which can be seen in Table 3.

**Table 3.** The Fixed and Random Effects

	Q	df	p
Omnibus test of model coefficients	70.065	1	< 0.001
Test of residual heterogeneity	48.118	12	< 0.001

Table 3 analysis of the Q value of 70,065 is greater when compared to the value of 48,118. These results explain that the 13 studies analyzed were heterogeneous with a value of ( $p < 0.001$ ). Therefore, to analyze 13 effective studies with a random effect model. Furthermore, calculate the summary effect size value to determine the relationship between income inequality and economic growth through a random effect model that can be seen in Table 4.

**Table 4.** Summary Effect Size

	Estimates	SE	z	p
Intercept	0.712	0.271	9.016	< 0.001

Based on Table 4, the summary effect size analysis of 13 studies concluded that there was a significant relationship between income inequality and economic growth with a value ( $rRE = 0.712$ ;  $P < 0.001$ ) with a medium effect size category. This finding explains that inequality has a great influence on a country's economic growth. Income inequality has been a pressing issue in many countries, with significant implications for economic growth. The relationship between income inequality and economic growth is complex and multifaceted, with both positive and negative effects (Hussaini, 2020). On one hand, income inequality can stimulate economic growth by creating incentives for individuals to work harder and innovate, as those who are more successful can reap greater rewards. This can lead to increased productivity and economic output, as individuals strive to improve their economic positions.

On the other hand, income inequality can also hinder economic growth by creating social and political unrest. When a significant portion of the population feels left behind and unable to improve their economic circumstances, it can lead to social unrest and political instability. This can result in decreased economic activity, as individuals become less confident in the stability and fairness of the economic system (Gupta, 2019; Ozili, Ademiju, et al., 2023). Furthermore, income inequality can also lead to decreased social mobility, as those who are already wealthy are more likely to maintain their positions and those who are less fortunate struggle to improve their circumstances. Research has shown that high levels of income inequality can negatively impact economic growth. A study by the International Monetary Fund (IMF) found that countries with higher levels of income inequality tend to have lower economic growth rates (Shen & Zhao, 2023). This is because income inequality can lead to decreased social mobility, which can result in decreased economic activity and lower economic growth. Additionally, high levels of income inequality can also lead to decreased trust in institutions and decreased social cohesion, which can further hinder economic growth (Chen et al., 2023).

In contrast, some research suggests that moderate levels of income inequality may actually be beneficial for economic growth. This is because income inequality can create incentives for individuals to work harder and innovate, as those who are more successful can reap greater rewards. Additionally, moderate levels of income inequality can also lead to increased social mobility, as those who are less fortunate have opportunities to improve their economic circumstances. Important to note that the relationship between income inequality and economic growth is not a simple one (Püsküllüoğlu, 2023). The impact of income inequality on

economic growth can vary depending on a range of factors, including the level of income inequality, the level of economic development, and the policies in place to address income inequality. For example, in countries with high levels of income inequality, policies aimed at reducing income inequality, such as progressive taxation and social welfare programs, may be more effective in promoting economic growth (Ofori et al., 2023).

The relationship between income inequality and economic growth is complex and multifaceted. While high levels of income inequality can negatively impact economic growth, moderate levels of income inequality may actually be beneficial. The key is to strike a balance between promoting economic growth and addressing income inequality (Nihal et al., 2023). Implementing policies that reduce income inequality while also promoting economic growth, countries can achieve more sustainable and equitable economic development.

## CONCLUSION

From the results of this study, it can be concluded that there is a significant relationship between income inequality and economic growth. This association was stronger in low- and middle-income countries compared to high-income countries with a value of (rRE= 0.712) in the medium-size effect size category. These findings suggest that income inequality can hinder economic growth in developing countries. These results have important implications for policymakers seeking to promote sustainable and equitable economic development. By implementing policies that reduce income inequality, such as progressive taxation and social welfare programs, countries can potentially boost economic growth and improve social cohesion. Furthermore, the results highlight the need for a nuanced understanding of the complex interplay between income inequality and economic growth, emphasizing the importance of considering both the level and distribution of income in economic policy decisions.

## REFERENCES

- Badawi et al., (2023). Integration of Blended Learning and Project-Based Learning (BPjBL) on Achievement of Students' learning goals: A Meta-analysis study. *Pegem Journal of Education and Instruction*, 13(4). <https://doi.org/10.47750/pegegog.13.04.32>
- Chen, H., Jin, L., Wang, M., Guo, L., & Wu, J. (2023). How will power outages affect the national economic growth: Evidence from 152 countries. *Energy Economics*, 126, 107055. <https://doi.org/10.1016/j.eneco.2023.107055>
- Dutta-Gupta, I. (n.d.). *Examining The Relationship Between Postsecondary Education And Economic Freedom And Justice*.
- Hussain, H. I., Kamarudin, F., Anwar, N. A. M., Ali, M., Turner, J. J., & Somasundram, S. A. (2023). Does income inequality influence the role of a sharing economy in promoting sustainable economic growth? Fresh evidence from emerging markets. *Journal of Innovation & Knowledge*, 8(2), 100348. <https://doi.org/10.1016/j.jik.2023.100348>
- Hussaini, N. (2020). Economic Growth and Higher Education in South Asian Countries: Evidence from Econometrics. *International Journal of Higher Education*, 9(2), 118. <https://doi.org/10.5430/ijhe.v9n2p118>
- Khan, H., Weili, L., Khan, D., & Zhang, J. (2022). The nexus between natural resources, renewable energy consumption, economic growth, and carbon dioxide emission in BRI countries. *Environmental Science and Pollution Research*, 30. <https://doi.org/10.1007/s11356-022-24193-0>
- Kwilinski, A., Lyulyov, O., & Pimonenko, T. (2023). Inclusive Economic Growth: Relationship between Energy and Governance Efficiency. *Energies*, 16(6), 2511. <https://doi.org/10.3390/en16062511>
- Lupi, R. M. (n.d.). *REM – Research in Economics and Mathematics*.
- Miar, M., Rizani, A., Pardede, R. L., & Basrowi, B. (2024). Analysis of the effects of capital expenditure and supply chain on economic growth and their implications on the community welfare of districts and cities in central Kalimantan province. *Uncertain Supply Chain Management*, 12(1), 489–504. <https://doi.org/10.5267/j.uscm.2023.9.003>
- Nihal, G., Mounia, C., Hussain, M., Humayun, S., Perveen, N., Yousaf, N. R., & Akhtar, S. (2023). Impact of Innovation on Economic Growth of G8 Countries- Analysis Over 1996-2020. *International Journal of Professional Business Review*, 8(5), e01413. <https://doi.org/10.26668/businessreview/2023.v8i5.1403>
- Ofori, I. K., Dossou, T. A. M., & Akadiri, S. S. (2023). Towards the quest to reduce income inequality in Africa: Is there a synergy between tourism development and governance? *Current Issues in Tourism*, 26(3), 429–449. <https://doi.org/10.1080/13683500.2021.2021157>

- Ozili, P. K., Ademiju, A., & Rachid, S. (2023). Impact of financial inclusion on economic growth: Review of existing literature and directions for future research. *International Journal of Social Economics*, 50(8), 1105–1122. <https://doi.org/10.1108/IJSE-05-2022-0339>
- Ozili, P. K., Lay, S. H., & Syed, A. A. (2023). Impact of financial inclusion on economic growth in secular and religious countries. *Journal of Financial Regulation and Compliance*, 31(4), 420–444. <https://doi.org/10.1108/JFRC-08-2022-0093>
- Püsküllüoğlu, E. I. (2023). *Investigation of Human Capital Index Value and Income Distribution in European and Central Asian Countries: The Case of Turkey*.
- Shen, C., & Zhao, X. (2023). How does income inequality affects economic growth at different income levels? *Economic Research-Ekonomska Istraživanja*, 36(1), 864–884. <https://doi.org/10.1080/1331677X.2022.2080742>
- Uddin, I., & Rahman, K. (2022). Impact of corruption, unemployment and inflation on economic growth evidence from developing countries. *Quality & Quantity*, 57. <https://doi.org/10.1007/s11135-022-01481-y>