The Relationship between Economic Growth and Income Inequality in India

Navya Gollapelli
Research Scholar, Department of Economics,
GSHSS, GITAM (Deemed to be University),
Hyderabad.
ngollape@student.gitam.edu,

Mandar Vijay Kulkarni
Associate Professor of Economics,
Department of Economics,
GSHSS, GITAM (Deemed to be University),
Hyderabad.
mkulkarn@gitam.edu,

Abstract

This paper analyzes the relationship between economic growth and income inequality. Economic inequality is the direct consequence of income inequality. Here, the comparison is between two variables:

(1) Economic growth, (2) Income inequality. Economic growth means a quantitative rise in national Income resulting from increased production of capital goods (or human capital). Income inequality refers to the unequal distribution of Income among a country's population. Various metrics measure income inequality, including the Gini index, the Theil index, the Palma ratio, and the generalized entropy indices. A value of 0 represents perfect equality, where everyone has equal Income, and 1 represents perfect inequality, where one person has all the Income. According to a recent report by the World Bank, India is the fourth most equal country in terms of income distribution, with a Gini score of 25.5. The classification is on consumption-based inequality, which marks a significant improvement from a decade ago, when it decreased from 28.8 with the economic growth of around 6.5% to 6.7% in 2011-12 to 25.5 with the economic growth of around 7% to 7.6% in 2022-23, which shows that there is an inverse relation between economic growth and income inequality. The author's objective is to determine whether the rise in economic growth leads to a decrease in income inequality. The proposed methodology for my research paper includes secondary data sources from the World Inequality Report, the World Bank, the Government of India, and the Journal of Emerging Technologies and Innovative Research (JETIR), from which I will analyze the relationship between economic growth and income inequality over the last five years. The significance of the proposed research lies in its potential to enhance economic growth, reduce income inequality, and identify more equitable measures of income distribution in India.

Keywords *: Economic growth, Income inequality, Economic inequality, Perfect equality.*

Introduction

Economic growth and income inequality are two crucial concepts, particularly for policymakers, economists, and researchers, in reducing the gap between the rich and the poor. The first significant contribution to understanding inequality in Economics was made by Max O. Lorenz (1905), who graphically explained the distribution of income (or wealth) within a population, showing the cumulative share of income earned by different segments of the population. Economic growth is a key driver of prosperity and improving living standards; however, sustaining economic growth has become increasingly challenging as the gap between the poor and the rich continues to widen. There is poverty reduction, but income inequality is rising, as is often the case. According to early literature, economists such as Nicholas Kaldor and Simon Kuznets argued in the mid-20th century that there is a trade-off between reducing inequality and promoting economic growth. In this context, Kaldor opined that savings are a prerequisite for rapid growth, and it is essential to concentrate income in the hands of a few people with a high marginal propensity to save. According to Thomas Piketty, Inequality signifies the income (or) wealth concentration at the top. In all societies, income inequality arises from the distribution of labour and capital. The more unequally distributed each of the components is, the greater the total inequality. The decisive factor is the statistical correlation between these two dimensions of inequality. The greater the correlation, the greater is the total inequality. This rising inequality can reduce economic growth, illustrating the inverse relationship between economic growth and income inequality (Piketty, 2014). The significance of this research lies in its potential to enhance economic growth, reduce income inequality, and identify more equitable measures of income distribution in India, a topic of great interest and importance in the field of economics.

Literature review

A. International Journal of Economics and Financial Issues -The relation between economic growth and income inequality, by Whiba. et al. (2014) explain that the main results show that economic growth and openness exacerbate disparities. It also suggests that inequality hurts economic growth, as observed in the case of Tunisia in the context of trade liberalization, as analyzed using econometric methods.

B. Elsevier's Journal of Macroeconomics: The effects of economic growth on income inequality in the US analyzes the relation between growth and income inequality in the US during the post-war years (1953-2008), (rubin.et.al,2015) showing that the top income groups are more sensitive to growth compared to the low income groups, through which the paper demonstrates that growth and income inequality are positively associated.

C. Literature review on income inequality and economic growth by (Mdingi.et.al,2023), various models in which income inequality is related to economic growth, which included (i)Level of economic development, (ii)Level of technological development, (iii)Socio-political unrest, (iv)The savings rate, (v)The political economy, (vi)The imperfection of credit markets, (vii)Institutions, (viii)The fertility rate.

D. Exploring the Link between Income Inequality, Poverty Reduction, and Economic Growth: An ASEAN Perspective (Amar et al., 2020) employed a dynamic panel data approach spanning 13 years, from 2004 to 2017, utilizing econometric methods. The SYS-GMM estimator was employed to examine the impact of economic growth on income inequality. It states that using the SYS-GMM estimator, income poverty decreases due to economic growth, and also, technological progress has improved the level of income.

E. Economic growth and income inequality in India: A Time series analysis (Kalita,2019) has explored the relationship between economic growth and income inequality in India over the period 1970-2013 by applying time series techniques, including the Johansen test, VECM, and Granger causality test. The Johansen cointegration test analysis revealed a long-term relationship between economic growth and income inequality. According to the Granger causality test, income inequality in India does not appear to be detrimental to economic growth; instead, it seems to enhance it. It shows that at a higher level of income inequality, growth slows down, creating problems of socio-economic and political instability.

F. Inequality, Employment, and Public Policy by Dev (2018): Discusses both inequality of outcomes and inequality of opportunities. The article discusses redistribution measures, macroeconomic policies, sectoral policies, and their impact on employment and social policies. The article suggests that investment in social infrastructure, health, education, affirmative action, and the provision of public services can lead to the creation of an egalitarian society.

G. Assessing the impact of income inequality on economic growth: For a cross-section of Indian states, Rohan Joshi states that income inequality has a positive and significant effect on the growth levels of Indian states. Suggests that if more wealth is in the hands of a few wealthy individuals, then, due to the rich having a higher Marginal propensity to save (MPS) (Keynes, 1936), overall savings and the level of investment increase, leading to a rise in economic growth.

H. Economic growth and Regional inequality in India by Gaurav Nayyar,2008) has taken a panel data study of 16 Indian states from 1978-79 to 2002-03, using econometric methodology. The study reveals that the long-term growth rate and initial income levels exhibit a negative relationship, once differences in steady states are taken into account.

Research Gap

There are a few recent articles on the relationship between economic growth and income inequality in India. As mentioned above, several metrics are used to calculate income inequality. I have used the Gini coefficient, which is available only up to 2022. In the various articles, the discussion on inequality was from multiple perspectives, rather than a single perspective on income inequality. Some studies indicate that economic growth and income inequality vary across low-, middle-, and high-income countries. The article explores the relationship between economic growth and income inequality, drawing on various articles from India and abroad.

Research objectives and methodology

The research objective is to find the relationship between two variables: (i) economic growth and (ii) income inequality, in India. The reasons for income inequality may be due to various factors, including a lack of skills (Klukowski,2024) and inadequate education. Economic growth can occur only when there is a quantitative change in a country's income, as determined through a systematic literature review on the relationship between economic growth and income inequality in India. Here, Gross Domestic Product (GDP) and the Gini index are used to compare the relationship between economic growth and income inequality.

Analysis and discussion

This article finds the relationship between economic growth and income inequality. As economic growth is a quantitative change, GDP serves as a measurement of change in economic growth, while the Gini index is used as a measurement of income inequality. Here is a comparison of GDP and the Gini index from 2018 to 2022, illustrating that when GDP reached 6.5, the Gini index stood at 34.5. The

Gini index typically decreases as GDP increases, indicating a decline in income inequality. In 2020, the GDP was -5.8, whereas the Gini index was 33.8

In 2021, the GDP increased to 9.7, and the Gini index decreased to 32.8 from 33.8, indicating a decrease in income inequality. The above data represent a negative relationship between economic growth and income inequality.

Year	***GDP***	***Gini Index***
2018	***6.5***	***34.5***
2019	***3.9***	***33.8***
2020	***-5.8***	***33.8***
2021	***9.7***	***32.8***
2022	***7.6***	***25.5***

Sources : www.ceicdata.com, data.worldbank.org

Due to the COVID-19 pandemic, the GDP declined from 3.9% in 2019 to -5.8% in 2020, and the Gini index remained constant at 33.8% for both years. When the GDP increased from -5.8 to 9.7, the Gini index decreased to 32.8. The Gini index in India decreased from 28.8 in 2011 to 25.5 in 2022. Hence, there exists an inverse relationship between economic growth and income inequality.

Conclusion

The article finds that the relationship between economic growth and income inequality can be both negative and positive, depending on the perspective. However, in India, a negative relationship exists between economic growth and income inequality. The Gini index for India is available only up to 2022, as it is challenging to measure income inequality in India due to the significant portion of the population that relies on the informal sector (Shok,2024), including street vendors, domestic workers, and migrant workers.

Additionally, some studies suggest that investing in health, education, and social infrastructure, combined with affirmative action, can contribute to a more equitable society. As economic growth is a quantitative phenomenon, which can be measured by Gross Domestic Product (GDP), decreasing income inequality and having a higher marginal propensity to save (MPS) are crucial, as they stimulate investment and foster economic growth.

Scope for further study

It is challenging to identify income inequality in countries like India, where the majority of the population relies on the informal sector, and real wages, particularly for rural workers, have stagnated or declined for some years, despite the country's GDP growth. (Bakshi et al,2019)

In addition, there is a significant deterioration in job quality, characterized by a decline in secure employment, an increase in casual work, and a weakening of the contractual framework within employment conditions. (Das et al,2025)

Experts emphasize the need for improved tools, such as income tax data, to accurately measure actual levels of inequality, as official narratives often fail to capture an accurate picture of inequality.

To truly understand and address rising inequality, governments must move beyond consumption-based Gini indices. Relying solely on Income and wealth can mislead the picture of the Gini index. Hence, a comprehensive approach using income tax is essential for accurately capturing inequality and crafting effective policies.

Better metrics and better politics, which account for access to public goods, welfare provisioning by acknowledging the structural roots of exclusion, and revitalizing public spending, encourage possibilities for embracing progressive taxation (Das et al., 2025). If better metrics are used as mentioned above, it becomes very easy to capture accurate data on income inequality. Hence, it is easy to narrow the gap between the rich and the poor.

References

Chang, S., Clance, M., Gupta, R., & Gozgor, G. (2021). A Reconsideration Of Kuznets Curve Across Countries: Evidence From The Co-summability Approach. The Journal of Developing Areas, 55(2), 17–29.

Wang, Y., Yang, S., Liu, C., & Li, S. (2018). How Would Economic Development Influence Carbon Productivity? A Case from Hubei in China. International Journal of Environmental Research and Public Health, 15(8), 1730.

Abdurhman, K., & Asfaw, D. (2023). Nexus between inflation, income inequality, and economic growth in Ethiopia. PLoS One, 18(11), e0294454.

(2016). Eurofound Yearbook 2015: Living and Working in Europe. https://core.ac.uk/download/83527362.pdf

Hicks, D., & Katz, J. S. (2011). Equity and Excellence in Research Funding. Minerva. https://doi.org/10.1007/s11024-011-9170-6

Barriers to the labour market revealed as key causes of growing poverty - Andes Times. http://ec2-18-117-168-251.us-east-2.compute.amazonaws.com/barriers-to-the-labour-market-revealed-as-key-cause-of-growing-poverty/2117/

Shahida, S. (2024). Drivers of trade openness, exchange rates, and production efficiency: Firm and country-level study. https://core.ac.uk/download/664339718.pdf

Thanakhom, S. (2025). Economic Growth and Energy Consumption in Thailand: Evidence from the Energy Kuznets Curve Using Provincial-Level Data. Energies, 18(15), 3980.

Henderson, R. (2025). Investigating the Impact of the Current ADHD Diagnostic Process on Women in Canada. https://core.ac.uk/download/661079346.pdf

(2016). Japan, Malawi, South Africa: Nsanama School in MALAWI receives K71 million from Japan to build Classroom Blocks. MENA Report, (), n/a.

Nwankwo, S., Chaharbaghi, K., & Boyd, D. (2009). Sustainable development in sub-Saharan Africa. International Journal of Development Issues, 8(2), 119–133.

Shahbaz, M., Abosedra, S., Kumar, M., & Abbas, Q. (2020). Environmental Consequences of the Transportation Sector for the USA: The Validation of the Transportation Kuznets Curve. https://core.ac.uk/download/335440653.pdf

Corbet, S. (2014). The European financial market stress index. https://core.ac.uk/download/84263322.pdf

The effects of economic growth on income inequality in the US - WRAP: Warwick Research Archive Portal. https://wrap.warwick.ac.uk/124997/

Rubin, A., & Segal, D. (2011). Wealth and Compensation Inequality in the US: Why Economic Growth is Likely to Lead to Further Income Inequality. Social Science Research Network. https://doi.org/10.2139/ssrn.1951485

Chang, S., Clance, M., Gupta, R., & Gozgor, G. (2021). A Reconsideration Of Kuznets Curve Across Countries: Evidence From The Co-summability Approach. The Journal of Developing Areas, 55(2), 17–29.

Abhijit Sen - A great economist with a rural, agriculture focus by S. Mahendra Dev - Indira Gandhi Institute of Development Research. http://www.igidr.ac.in/abhijit-sen-great-economist-rural-agriculture-focus-s-mahendra-dev/

Dev, S. M. (2018). Inequality, Employment, and Public Policy. RePEc: Research Papers in Economics. https://EconPapers.repec.org/RePEc:ind:igiwpp:2018-003

COULIBALY, P. R., & DJEZOU, W. B. (2024). Economic Growth and Income Inequality in Sub-Saharan Africa: Does Environmental Policy Matter? Journal of Economics, Management, and Trade. https://doi.org/10.9734/jemt/2024/v30i111253

(2019). Investigating growth determinants in China's provinces: The role of spatial spillovers. https://doi.org/10.26174/thesis.lboro.9204578.v1

Wells supply water to 23 million households. However, where are they? – Water Program Portal. https://waterprogramportal.org/2024/05/30/wells-supply-water-to-23-million-households-but-where-are-they/

Weng, S., & Chen, J. (2023). How Does Industrial Upgrading Affect Carbon Productivity in China's Service Industry? Sustainability, 15(13), 10580