

# LUISS



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Chair of Economic Growth and Development

***India Revealed: Exploring the Interplay  
of Economic Growth and Income  
Inequality in The World's Fifth Largest  
Economy***

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## **Introduction**

The last decades of the 20th century and the beginning of the 21st century have witnessed unparalleled success in improving the standard of living for people in most parts of the world. This period of significant global transformation has led to both great prosperity and uneven growth. The global economy, marked by rapid technological advancements, shifting economic power, and increasing globalization, has experienced robust growth, particularly in emerging markets. These developments have significantly contributed to global growth rates and reduced poverty levels. According to the World Bank's annual reports, poverty has significantly declined in developing countries over recent decades, although this progress has been uneven. The number of people living in extreme poverty—defined as living on less than \$1.90 per day—fell from 1.92 billion in 1981 to 700 million in 2024. Despite this remarkable reduction in poverty, there has been a notable rise in global income inequality. While living standards have improved for many, significant disparities in income distribution persist within and between countries. Economic growth has indeed played a crucial role in reducing poverty, but it has often been accompanied by increasing income inequality. Given the strong correlation between inequality and poverty, it is unrealistic to expect substantial poverty reduction without addressing inequality. Therefore, understanding the interplay between economic growth and income inequality has become a primary focus and critical area of study for many scholars and policymakers. Analyzing this relationship is crucial for developing strategies that distribute the benefits of economic growth more broadly, thereby promoting a more equitable and sustainable economic future.

The purpose of this thesis is to explore the intricate relationship between economic growth and income inequality within the context of India, one of the world's fastest-growing major economies. This study provides a comprehensive analysis of how economic growth impacts income inequality and vice versa, aiming to determine whether inequality is harmful or beneficial for economic growth. By utilizing both theoretical frameworks and empirical data analysis, this thesis delves into the Indian case to gain a deeper understanding of the mechanisms through which economic growth can both mitigate and exacerbate social and economic inequalities within the country.

The first chapter sets the theoretical foundation by discussing income inequality and economic growth. It begins with an overview of global inequality trends, then delves into various theories that explain the relationship between economic growth and inequality, starting from the classical Kuznets' Theory and arriving at the impacts of globalization and technological advancement. The chapter also explores how income inequality can both positively and negatively affect economic growth through mechanisms such as physical and human capital accumulation.

The second chapter examines the Indian case in detail. It traces India's economic history from post-independence to the present, highlighting key reforms and transitions that have shaped its current economic landscape. The chapter discusses the sectoral changes within the Indian economy, emphasizing the shift from agriculture to services, and explores regional disparities that contribute to uneven economic development across different states.

The third and final chapter provides a comparative analysis of India and China, another rapidly developing economy. This chapter investigates the growing disparities within both countries, analyzing the reasons behind rising inequality and identifying the different outcomes of their respective growth trajectories. The chapter distinguishes between good and bad inequalities and assesses their implications for sustainable economic development.

# Chapter 1: Income Inequality and Economic Growth

Income inequality and economic growth are two fundamental concepts in the field of economic development. Defining the complex relationship between them and understanding how they mutually affect each other remains a central focus of study among economists. While economic growth is often seen as a pathway to national prosperity, aiming to improve overall wealth and standard of living, income inequality deals with how this wealth is distributed among different groups within a society. The interplay between these two factors is critical: it can influence a nation's social cohesion, political stability, and future economic potential.

The core question at the heart of this discussion is whether income inequality stimulates or impedes economic growth and how growth, in turn, might deepen income disparities. Theoretically, the relationship between inequality and economic growth can display both positive and negative aspects. On one hand, considerable income gaps may encourage individuals to work harder, pursue further education, and embrace risk — all behaviors that potentially stimulate economic activity and growth. On the other hand, when financial resources are disproportionately distributed and borrowing constraints are present, inequality can act as a significant barrier to economic progress. Wealthier individuals may have easier access to lucrative opportunities, whereas those from poorer backgrounds might find it challenging to pursue higher education or invest in new ventures. Such disparities can limit the economic potential of a significant portion of the population, ultimately driving down overall growth. This intricate interplay indicates that the impacts of income inequality on economic growth are multifaceted and heavily dependent on various socio-economic factors such as access to education, availability of capital, and the regulatory environment.

To better understand the relationship between economic growth and income inequality, it is crucial to first define these terms clearly.

Economic Growth is defined as *an increase in the production of economic goods and services, compared from one period of time to another*. It is commonly measured by the Gross Domestic Product (GDP) in real terms, which represents the total monetary value of all final goods and services produced within a nation during a specific period, adjusted for

inflation. The measure provides key insights into the size and performance of an economy, indicating its health, its capacity to generate wealth, and its potential to improve living standards. However, despite its prevalent use, GDP is not the most accurate measure of economic well-being, as it does not account for several crucial aspects that contribute to the quality of life, such as the distribution of income among populations. While GDP is positively correlated with important well-being indicators like life expectancy, education, and general happiness, it offers an incomplete picture of what true well-being or quality of life entails. Nevertheless, GDP remains the primary measure for assessing economic growth. A positive GDP growth rate usually indicates a period of economic expansion, whereas a negative rate sustained over two consecutive quarters typically signals a recession. These dynamics are crucial as the history of economic growth is also a history of how disparities in nutrition, health, education, and many other dimensions have emerged globally. Therefore, grasping the intricacies of economic growth is essential for shaping overall living conditions and addressing the broad spectrum of human needs in society.

On the other hand, *Income Inequality refers to how unevenly income is distributed throughout a population.* The more uneven the distribution, the higher the level of income inequality. A common tool for measuring income inequality is the Gini Coefficient, which is based on the comparison of cumulative proportions of the population against cumulative proportions of income they receive, and it ranges between 0 in the case of perfect equality and 1 in the case of perfect inequality. This means that in a country with Gini equal to 0 everyone earns the same income, while in a country with Gini of 1 one person earns all the income and the rest of the population gets nothing. The Gini Coefficient is derived from the Lorenz Curve, a graphical representation of the cumulative percentage of total income received compared to the cumulative percentage of the population. This curve allows us to know the exact percentage of income earned by a specific part of the population and to derive the measure of inequality. The Gini is essentially the ratio of this area to the area below the line of perfect equality. The greater the deviation of the Lorenz Curve from the line of perfect equality, the higher the income inequality in the country being analyzed.

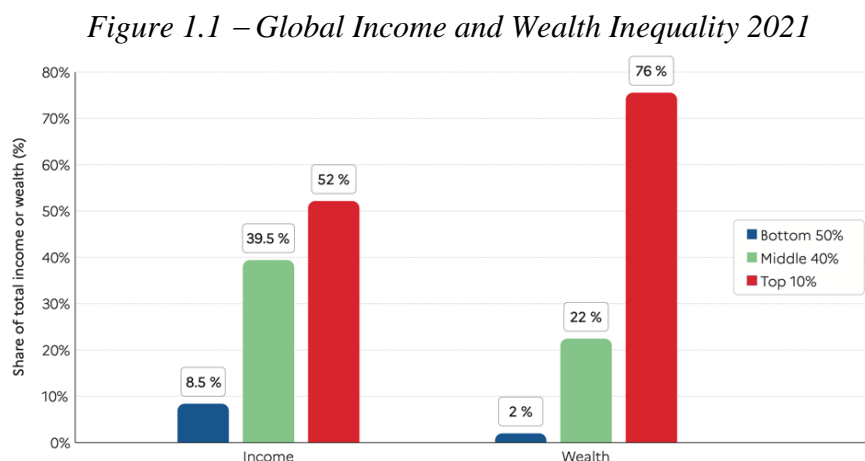
It is important to underline that, for how useful the Gini coefficient is, it is not an absolute measure of inequality. In fact, two countries with very different GDP per capita can have close (or even the same) level of Gini if income is distributed inside the two countries in a similar way.

The concept of inequality is quite difficult to define, because it involves a number of elements, mainly differences in the level of income, of consumption, in the access to health care, in the level of education and in the life expectancy. In particular, there is inequality if there are differences in the level of welfare derived from these factors. Furthermore, inequality is the result of the interconnection between economic inequality, which involves income and economic wealth, and social inequality, which refers to the unequal distribution or access to the resources available to a particular group or society. Indeed, while economic growth reflects the overall health and productivity of an economy, income inequality deals with the distribution of economic benefits among individuals or groups within a society. Economic growth can lead to increased wealth and potential improvements in quality of life; however, without equitable distribution, the benefits might be concentrated among a small segment of the population, feeding economic disparities.

In understanding both concepts, it becomes apparent that they are interconnected yet distinct areas of study. Economic growth can drive improvements in average living standards, but it does not inherently ensure that these improvements are shared equitably across different socio-economic groups. Thus, analyzing the dynamics between economic growth and income inequality is essential for formulating policies aimed at fostering not only a growing economy but also a fair and inclusive one.

## 1.1. Inequality Trends

The growing concern about income inequality stems from its sharp rise worldwide. In fact, in most countries within the Organization for Economic Cooperation and Development (OECD), the disparity between the rich and the poor has reached its highest level in the last 30 years. According to the World Inequality Report 2022, in 2021, the richest 10% people in the world were estimated to take more than a half of global income (52%), while the poorest 50% earned only the 8,5% of total income.



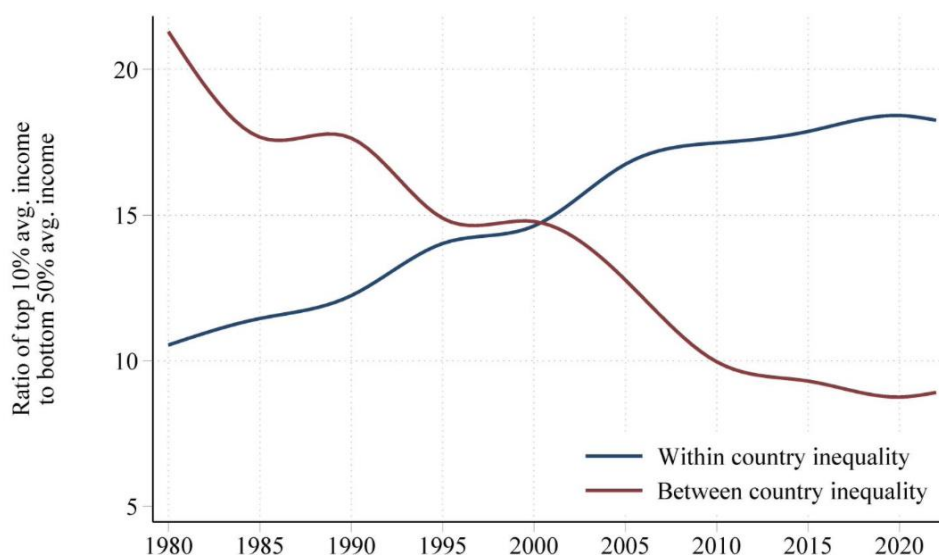
Source: World Inequality Report 2022. <https://wir2022.wid.world/methodology/>



However, understanding these trends requires differentiating between the inequality experienced by individuals within a single country and the inequality observed among countries on a global scale:

- **Across Country:** between-country inequality refers to differences in average incomes across various nations. Historically, the disparity between the richest and poorest countries has been a major component of global inequality. However, since 1980, this gap has significantly decreased from about 20 times to just 9 times, largely due to the strong economic growth of low-income, high-population countries like China and other emerging economies in Asia. These nations have made considerable economic progress, which has led to reductions in poverty and improvements in average income levels. As a result, the income gap between wealthier and poorer countries has narrowed significantly, contributing to a decrease in global income inequality, particularly when adjusting for population sizes.
- **Within Country:** conversely, inequality has significantly increased across both developed and developing nations from 1980 to 2022. This trend has been found in a wide array of regions, including the United States, Western Europe, Japan, India, Russia, China, Latin America, South Africa. Despite the economic progress and rapid growth seen in many emerging economies, this sharp rise in domestic inequalities suggests that the world remains particularly unequal today. Furthermore, the disparities within countries have now surpassed the substantial inequalities previously observed between countries.

*Figure 1.2 – Global Income Inequality, 1980-2022. Between vs. within country inequality*



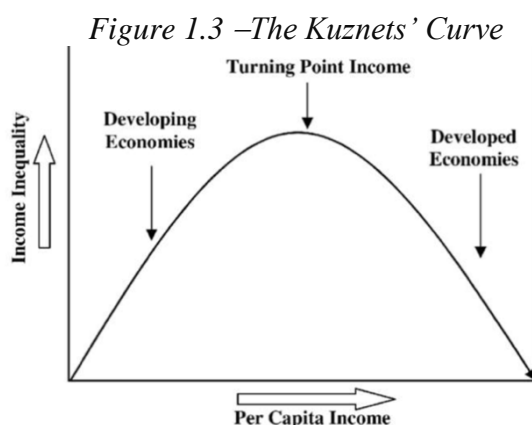
By analyzing trends in income inequality both between and within countries, it is possible to observe a dual aspect of the relationship between income inequality and economic growth. On one hand, strong economic growth in highly populated countries has contributed to decrease the gap in income inequality on a global scale. On the other hand, this growth has not uniformly reduced income disparities within these countries; in many cases, it has actually intensified them.

## 1.2. How Does Growth Affect Inequality?

Economic growth can have several effects on income inequality, depending on how the gains from increased economic activity are distributed across different segments of society. When economic growth occurs, it generally leads to higher overall wealth, but the impact on income inequality can be complex.

### 1.2.1. Kuznets' Theory

In the initial studies exploring the development of income inequality, Russian-American economist Simon Kuznets introduced a framework discussing the impact of economic growth on inequality. He theorized an inverted U-shaped relationship between income inequality and economic growth. According to this theory, as a country begins to develop economically, inequality initially increases but then decreases after reaching a certain level of development.



Source: [https://www.researchgate.net/publication/293012964\\_Income\\_Inequality\\_Ideology\\_and\\_Indifference\\_of\\_our\\_Times](https://www.researchgate.net/publication/293012964_Income_Inequality_Ideology_and_Indifference_of_our_Times)

This concept, known as Kuznets' Theory, illustrates the dynamics of an economy transitioning through industrialization. In the early stages of economic development, those with existing capital benefit from new investment opportunities, further increasing their wealth. Meanwhile, the migration of rural labor to urban areas, attracted by industrial jobs,

results in an abundant supply of cheap labor, keeping wages for the working class low and thus expanding the income gap and exacerbating inequality. While this theory seemed to explain the economic experiences of the US and most OECD countries up to the 1970s—suggesting a virtuous cycle where lower inequality boosts growth, which then reduces inequality—it only accounts for a limited portion of the variations in inequality seen across different countries and over time. Additionally, it has been observed that some nations with rapid increases in per capita income did not experience corresponding rises in inequality, challenging the universal applicability of Kuznets' hypothesis.

### **1.2.2. The Role of Globalization**

In the 21st century, globalization has become a dominant force transforming the economic, political, and socio-cultural environments worldwide. Characterized by the unrestricted exchange of goods, ideas, and cultural practices across international borders, globalization has significantly impacted the path of economic development and the distribution of income and wealth. This intricate relationship demonstrates that although globalization can drive growth and technological progress, it also presents considerable challenges for economic equality. Globalization has significantly enabled developing nations to integrate into a worldwide network, offering them unprecedented access to technological advancements and market opportunities that were once primarily the domain of the developed world. This increased access has stimulated considerable economic growth in these countries, effectively reducing the economic gaps between them and more developed nations. However, alongside these benefits, a more complex and somewhat contradictory trend has emerged. While globalization has helped lower-income countries close the economic gap with wealthier nations, reducing international inequality, it has also led to rising income disparities within many of these same countries. This increase in domestic inequality suggests that the benefits of globalization are not evenly distributed within nations. The discussion surrounding the distributional impacts of globalization typically falls into two contrasting perspectives:

1. **Positive Viewpoint:** Proponents<sup>1</sup> of this view argue that globalization results in an increase in overall income that benefits everyone. Hence, even low-income groups come out as winners from globalization in absolute terms. This perspective draws

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<sup>1</sup> Aslam, A., Eugster, J., Ho, G., Jaumotte, F., Piazza, R., (2018)  
<https://www.imf.org/en/Blogs/Articles/2018/04/09/globalization-helps-spread-knowledge-and-technology-across-borders>

on the Kuznets hypothesis from development economics, which suggests that although inequality may initially increase during the early stages of industrial development, it tends to decrease as a country completes its transition to industrialization.

2. Negative Viewpoint: The opposing view holds that while globalization might boost overall income levels, the distribution of these gains is not shared equally across a nation's population, resulting in clear winners and losers. It is argued that this can exacerbate both welfare and social concerns and may limit economic growth by not fully exploiting the opportunities that globalization presents. Additionally, the long-term sustainability of globalization might be compromised if widespread support is eroded due to increasing income inequalities.

The primary goal is to comprehend how globalization impacts income distribution within countries, especially among the poorest population segments. To achieve this understanding, it is crucial to identify the key mechanisms through which increased trade and financial globalization influence a country's income distribution.

### *The Heckscher Ohlin Model and The Stolper-Samuelson Theorem*

The statement that trade contributes to rising wage inequalities is based on the principles of the Heckscher-Ohlin Model, which suggest that nations tend to export the goods they can produce most efficiently and abundantly, based on their specific endowments of production factors. Therefore, when a country engages in the international market as a consequence of globalization, it exports goods and services in which it has a comparative advantage. According to this model, each country specializes in producing and exporting goods that intensively use the resources it possesses in abundance. For instance, developing countries which have a surplus of unskilled labor but a shortage of skilled labor, they will likely specialize in and export goods that require more unskilled labor, such as textiles or agricultural products. On the other hand, developed countries which have an abundance of skilled labor might specialize in and export more skill-intensive products, such as computer software, while importing goods that require less skilled labor. Under these specialization conditions, trade can lead to distinct trends in wage inequality. In poor countries, where unskilled labor is plentiful and cheap, and skilled labor is scarce and costly, a trade expansion can increase the demand for unskilled labor, which might reduce

wage disparities. In contrast, in rich countries, where skilled labor is relatively cheaper and unskilled labor is more expensive, a boom in trade can increase the demand for skilled labor, potentially widening the wage gap.

This concept was further developed by Stolper and Samuelson, who introduced the role played by factor prices. The Stolper-Samuelson theorem, which directly follows from the Heckscher-Ohlin model, suggests that international trade impacts the compensation of different production factors. Specifically, in a context where high-skilled and low-skilled labor are distinct factors, international trade can significantly shift the income distribution between these groups. Thus, as international trade intensifies, the prices of imported goods decrease, leading to lower wages in sectors that compete with imports. Conversely, as the prices of exported goods increase, wages in the export sectors tend to rise. This suggests that in developing economies, wages of unskilled workers are likely to rise, potentially leading to a more equitable distribution of income and a decrease in the Gini coefficient. Instead, in developed economies, the cost of skilled labor is expected to increase relative to unskilled labor, potentially raising the Gini coefficient as income distribution becomes more unequal.

However, the implications of the Heckscher-Ohlin and Stolper-Samuelson models, according to which global trade should primarily benefit the lower-income groups, particularly unskilled workers, due to increased demand for their labor, have generally not been verified by several broad economic studies. In real-world cases from countries like China and India, it is shown that the industrial sector can grow due to exports without significantly raising wages for these workers. This often happens when wages are influenced by external factors and set higher than those in sectors like agriculture. As a result, the main beneficiaries of trade expansion end up being manufacturing workers and capital owners, deepening income inequality by excluding other groups. Moreover, the wealthiest globally have increased their earnings from investments in developing nations, which are rich either in low-cost labor or in natural resources. Since the main motivation behind globalization is the pursuit of higher profits, it is not surprising, even if it contradicts theoretical predictions, that capital's income share has increased at the expense of labor.

### **1.2.3. Technological Advancement**

Over the last few centuries, from the Industrial Revolution in the 18th century to the present day, profound technological advancements have reshaped societies worldwide by boosting productivity and fostering new industries. Technology has become a transformative force in people's lives today more than ever before. The rapid spread of information and communication technologies over recent decades has required countries to modify their economic structures to accommodate these new tools. The direct link with this technological advance has been a growing demand for skilled workers, who are proficient in modern technologies, leading to an increase in their earnings. This transformation is not confined only to developed countries. Thanks to globalization, innovations are well spread between countries, allowing developing countries to experience similar changes. While technology acts as an exogenous force driving these shifts, globalization intensifies competition among companies, which in turn is a primary force for innovation. Hence, trade openness has not only accelerated the rate of technological progress but also enhanced the remuneration of factors associated with it, positioning technology as both a result and a driver of globalization. However, while these developments have accelerated economic growth, they have also contributed to increasing income and wealth inequality. A significant consequence of this technological evolution is observed in the realm of wage disparities. There is a widely held view that technological change has shifted the relative demand for labor, giving rise to the theory of Skill-Biased Technical Change (SBTC). This concept highlights the non-neutrality of technological advancements, which favor skilled rather than unskilled labor. The advent of new technologies in the second half of the last century not only boosted the productivity of specialized labor but also altered labor demand: low skilled workers, who performed mainly routine tasks, were either replaced by machines or displaced by higher-skilled workers. Furthermore, alongside the rise of the skill premium, there has been a general increase in real wages. This sharpens the disparity between the remuneration of those who have pursued university studies and the much more modest wages of workers with only a few years of education.

## *General-Purpose Technologies*

Technological progress, particularly in the form of General-Purpose Technologies (GPTs), plays a significant role in shaping income inequality. These technologies profoundly affect wage dynamics across different educational and skill levels, reflecting an intricate interplay that can both widen and narrow income gaps over time. GPTs are fundamental technological innovations affecting vast sections of the economy and typically manifest as a temporary phenomenon during the transition from old to new technologies, resembling a Kuznets' curve where inequality first rises and then falls as the technology becomes widespread. Initially, GPTs disrupt the labor market by significantly boosting the productivity of skilled labor. This disruption often leads to greater wage inequality, as those who are proficient in leveraging these new technologies benefit disproportionately. In the early stages of a GPT's introduction, there is a high demand for specialized labor, particularly in roles centered around innovation and the application of these technologies. This mechanism results in an increased skill premium—the wage differential between skilled and unskilled workers. However, as these technologies mature and become more integrated into various sectors, the initial increase in wage inequality typically starts to diminish. The widespread adoption of the technology begins to benefit a broader section of the workforce, including those who might not have initially gained from it. Furthermore, advancements in education and greater accessibility to training enable more workers to exploit new technologies, thus helping to reduce the wage gap between different groups.

Internationally, the effects of GPTs and other technical changes on wage inequality are not uniform and are significantly influenced by each country's specific economic and institutional contexts. In developed countries, empirical evidence indicates that these technologies initially exacerbate wage disparities but might lead to a more balanced wage distribution as the technologies mature and educational systems evolve. In contrast, in developing countries, the dynamics can differ considerably due to varying levels of technology access and educational opportunities, as well as distinct economic structures. Overall, while technological advancements drive economic growth and can lead to temporary increases in wage inequality, the long-term effects mainly depend on the adaptation of the education and training systems, which might mitigate the widening income gaps they can initially create.

### **1.3. How Does Income Inequality affect Economic Growth?**

Over the past several decades, numerous studies have tried to explore the dynamics under which income inequality influences economic growth, particularly by examining whether inequality is good or negative for growth. Theories and research findings have gone to both directions, making the topic one of the most debated in economic discourse.

#### **1.3.1. Positive Effects**

Historically, some theories, particularly those influenced by Keynesian economics, have suggested that income inequality might actually promote economic growth. This viewpoint is based on a number of key processes by which inequality is thought to positively influence economic dynamics. One primary channel through which high income inequality is thought to boost growth is by providing incentives for individuals to work harder, invest more, and take greater risks. This theory argues that significant income disparities create strong incentives for individuals to improve their skills and productivity. For instance, if the financial rewards for education and high-skilled jobs are substantially higher, people may be more inclined to pursue advanced education or entrepreneurial activities expecting greater returns on their investments. Secondly, classical and neoclassical models of growth argue that higher income inequality leads to greater aggregate savings, as the rich tend to save more. This idea is based on the observation that wealthier individuals tend to save at higher rates, and thus, redistributing income to these richer individuals could lead to increased overall savings and investments, ultimately boosting economic growth. Furthermore, modern economic theories point out that in situations with large initial investment costs or indivisibilities, higher levels of inequality can facilitate greater aggregate investment. This is because wealthier individuals or entities are can more easily cover these initial costs.

#### *Physical Capital Accumulation*

The main channel through which income inequality might have a positive effect on economic growth is through the lens of saving rates. One significant theoretical framework that explores this dynamic is the Solow growth model, an exogenous model that considers how factors like savings rates, population growth, and technological progress affect an economy's output over time. In the Solow model, the role of savings is particularly crucial.



The model suggests that higher savings rates result in increased investment, which in turn increases the capital stock. As the capital stock expands, the full-employment national income and product also rise. Initially, this boost in savings and investment can accelerate the growth rate of national income and product. However, the Solow model explains that this acceleration is temporary. Over time, the economy will reach a new steady state where the growth rate levels off and is no longer affected by changes in savings rates. Additionally, the model presents the idea that when savings increase disproportionately with income—referred to as savings being a convex function of income—various levels of income inequality can lead to different economic steady states. In these scenarios, higher levels of inequality might be linked to greater aggregate output. This implies that economies with more significant income disparities could not only achieve higher levels of output but may also reach what is known as a Pareto optimal state. In a Pareto optimal state, any change to make one individual better off would require making another worse off, suggesting that the existing allocation of resources is as efficient as possible under the current conditions. From the Solow growth model's viewpoint, countries with higher savings rates achieve higher levels of per capita income in their steady state. When a nation increases its savings rate, it experiences a phase of transitional growth until it stabilizes at this new level.

The link between income inequality and higher savings rates stems from the fact that savings typically increase with income. This means the wealthier an individual is, the more likely they are to save a higher proportion of their income. Therefore, in societies where income is more unequally distributed—with a larger share of total income earned by the wealthier segments—the total national savings are generally higher. This is primarily because richer individuals, who have a lower propensity to consume, contribute disproportionately to these savings. As a matter of fact, wealthy individuals usually have a higher portion of their income coming from capital, which has a higher saving rate compared to labor income, so they tend to save more than less wealthy people. Consequently, this saving behavior leads to increased investment in productive assets, boosting economic output and contributing to a stronger economy. Therefore, under this dynamic, the greater the income inequality, the higher the total savings will be, which in turn leads to a higher per capita income.

### 1.3.2. Negative Effects

Besides evidence suggesting that more equal income distribution supports growth, empirical research<sup>2</sup> also offers insights into how inequality negatively impacts economic growth. Specifically, four primary channels have been identified that explain the mechanisms through which inequality undermines long-term growth. These include:

1. *Socio-Political Instability*: a main transmission channel by which income inequality impacts economic growth is through great socio-political instability and the increased risk of violent conflict. This instability can lead to uncertain property rights, which in turn reduces investment and growth. Moreover, activities that threaten stability, such as crime and social unrest, constitute a wasteful use of resources and diminish the overall productivity of an economy. Various theoretical models<sup>3</sup> have illustrated how significant inequality can increase crime, unrest, and political instability, all of which negatively affect economic growth.
2. *Credit-Market Imperfections*: financial market imperfections often result in investment opportunities being closely linked to an individual's income or wealth level. In such a scenario, poor individuals may find themselves unable to make worthwhile investments. This issue is particularly evident in the financing of educational investments, where lower-income households might be forced to leave full-time education due to unaffordable costs, despite the potential high returns on such investment for both the individual and society. Consequently, this under-investment in education leads to lower overall economic output than would be possible in a perfectly functioning financial market. This cycle is central to what is known as the "human capital accumulation" theory.
3. *Macroeconomic Volatility*: Macroeconomic volatility, which includes fluctuations in crucial economic indicators like GDP growth and inflation rates, creates uncertainty that can adversely affect both business investments and consumer spending. Growing evidence suggests that this volatility serves as a pathway through which income

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<sup>2</sup> 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>

<sup>3</sup> Kelly, M. (2000). Inequality and Crime. *The Review of Economics and Statistics*, 82(4), 530–539. <http://www.jstor.org/stable/2646649>

inequality affects economic growth. Higher income inequality is often linked to increased economic volatility, as evidenced by the variability in annual GDP growth rates. It has been demonstrated that greater volatility generally depresses the average growth rate over time, mainly by deterring investments in physical and human capital. A prevailing theory argues a direct connection between inequality and economic fluctuations, noting that in dynamic economies, only a portion of the population typically has access to high-yield investment opportunities. This unequal access creates a divide between investors and savers, intensifying economic volatility. This division implies that investments are not fully utilized, resulting in unexploited production possibilities and a long-run growth rate that is lower than potential. Therefore, the link between inequality and volatility originates from the disparity in investment opportunities, which exacerbates economic fluctuations and undermines sustained growth.

4. *Endogenous Fertility*: it has been argued that high inequality can indirectly slow economic growth by increasing the fertility rate within a population. This argument suggests that in conditions of poverty, families may opt for having more children as a form of old-age support, prioritizing the quantity of children over the quality of their development, such as educational investments. Conversely, families living above a certain income point tend to have fewer children and invest more in their education. High levels of inequality exacerbate this trend by increasing the number of families living below the economic threshold, thereby elevating the overall fertility rate, and consequently reducing economic growth. This endogenous fertility model underscores the connection between greater inequality and higher fertility rates, which can lead to reduced investments in education per child and slower economic advancement.

### *Human Capital Accumulation*

While income inequality may boost the accumulation of physical capital, it has the opposite effect on human capital accumulation. Human capital refers to the knowledge, skills, and abilities of workers, and it plays a crucial role in the growth and development of an economy. Generally, economies that invest in developing their human capital experience growth, which helps lift more people out of poverty and improve overall living conditions. However, significant income disparities can impede the accumulation of human capital.

Unlike physical capital, which can be transferred and accumulated externally, human capital is inherently linked to individuals. This means it cannot be transferred, and its accumulation is subject to physiological constraints that yield diminishing returns at higher levels of investment. Initially, the marginal product of investing in human capital is very high, but as more is invested in an individual, the returns gradually decrease. In contrast, the returns on physical capital do not diminish in the same way because an individual's investment in physical capital is tiny compared to the national level, making its marginal productivity relatively stable. From the Industrial Revolution through to contemporary economic growth, there has been a shift from physical capital accumulation to human capital accumulation as the primary driver of economic growth. This transition is marked by two distinct phases in the development process:

- *Phase I:* At the early stages of industrialization, the return on human capital is lower than that on physical capital, making capital accumulation the primary driver of development.
- *Phase II:* As the economy matures, the returns on human capital increase, making it a significant driver of development alongside physical capital.

In the first phase of development, physical capital was the predominant driver due to its scarcity and higher returns compared to human capital. During this period, there was little incentive to invest in human capital. Wage levels were so low that those without capital could not save, leading the poor to spend all their earnings on immediate needs without investing neither in physical nor human capital. This lack of investment impeded their ability to save or transfer wealth to future generations, effectively trapping them in a cycle of poverty. Conversely, the wealthy, who owned all the capital, were able to make intergenerational transfers and continue accumulating more capital. This accumulation of physical capital gradually led to higher wages and increased potential returns to human capital, while simultaneously decreasing the returns to physical capital. Once the returns to human capital reached a sufficiently high level, it began to encourage investments in human capital, pushing the economy into the second phase, where development is promoted by a combination of both human and physical capital accumulation.

In the second phase of development, the focus shifts towards increasing inclusivity of human capital investments across various socio-economic groups. Initially, as the capital-labor ratio increases and wages begin to rise, some investment in human capital becomes justifiable, though still out of reach for those without capital to make intergenerational transfers. As the economy continues to mature, wage levels eventually reach a point where investing in human capital becomes accessible to everyone, though it remains less than ideal for the poor due to credit constraints and limited familial financial support. Despite these challenges, individuals from poorer backgrounds begin to invest in human capital and these investments gradually start to break down some of the more severe barriers established by prior economic conditions. In the final stage of this phase, credit constraints are no longer a major impediment, allowing optimal investment in human capital across all levels of society. This period is marked by a fair distribution of educational opportunities, allowing people from diverse backgrounds to fully realize their potential and contribute more effectively to economic growth.

Through Phase II, the continuous accumulation of physical capital by the rich not only supports their future generation but also improves wages across the economy, leading to lower income disparities. As a consequence, these wages enable even the poorest segments of population to start investing in human capital, fostering stronger and more inclusive economic growth. Thus, redistributing income from the wealthier to the poorer can enhance human capital accumulation. This is because the poor are likely to use additional funds to invest in human capital, while the rich may decrease their investment in physical capital, as the return on investment in human capital by the poor exceeds the return on the last dollar invested in physical capital by the rich. Therefore, promoting greater equality serves as a significant force for growth.

## Chapter 2: The Indian Case

In discussing the relationship between income inequality and economic growth, India presents a compelling case study, highlighting both significant economic progress and persisting disparities. As a matter of fact, India represents an extraordinary example of a country which has sustained incredible development in the last decades. Since the early 1990s, India has transformed from a heavily regulated economy to being the fifth largest in the world by 2021, according to the International Monetary Fund (IMF). The journey started with the economic liberalization of the 1990s, which eliminated the restrictive license raj system<sup>4</sup>. This major change sparked a significant boom in entrepreneurship, increased foreign investment, and facilitated India's integration into the global market, leading to a sustained period of growth. Notably, the service sector, especially IT and business outsourcing, has expanded significantly and has become a central element of India's economic resurgence. However, this sector represents a double-edged sword: although it makes a substantial contribution to the GDP and generates jobs, it also highlights and can even exacerbate income disparities. Moreover, India's young population, where over half are under 30, presents both enormous potential and great challenges. This demographic could drive further economic growth and bring innovation, but it might even underscore the urgent need for improved education and job opportunities to prevent widening social gaps and an economic slowdown.

*Table 2.1 – World Largest Economies, 2022*

Country	Nominal GDP (2022)	GDP growth rate (2022)	Population (2022)	GDP per capita (2022)
1. United States	\$ 25,439,700.00	1.9%	333,287.56	\$ 76,329.6
2. China	\$ 17,963,171.48	3.0%	1,412,175.00	\$ 12,720.2
3. Japan	\$ 4,256,410.76	1.0%	125,124.99	\$ 34,017.3
4. Germany	\$ 4,082,469.49	1.8%	83,797.99	\$ 48,718.0
<b>5. India</b>	<b>\$3,416,645.83</b>	<b>7.2%</b>	<b>1,417,173.17</b>	<b>\$ 2,410.9</b>
6. United Kingdom	\$ 3,089,072.72	4.3%	66,971.40	\$ 46,125.3
7. France	\$ 2,779,092.24	2.5%	67,971.31	\$40,886.3
8. Russia	\$ 2,240,422.43	-2.1%	144,236.93	\$ 15,270.7
9. Canada	\$ 2,161,483.37	3.8%	38,929.90	\$ 55,522.4
10. Italy	\$ 2,049,737.17	3.7%	58,940.43	\$ 34,776.4

Source: created with World Bank Data <https://data.worldbank.org>

<sup>4</sup> The License Raj or Permit Raj was a pejorative for the system of strict government control and regulation of the Indian economy from the 1950s to the early 1990s. Under this system, businesses in India were required to obtain licenses from the government in order to operate, and these licenses were often difficult to obtain.

Based on the evidence provided, it is evident that India's economic narrative is marked by rapid growth and considerable potential, despite facing various challenges. With a GDP of \$3.42 trillion, India ranks among the world's top five economies, distinguished not only by its size but also by its impressive growth rate of 7.2%—the highest globally. This robust expansion gives signals of a positive trajectory that isn't showing signs of slowing down. In fact, India is expected to continue climbing the ranks of the world's largest economies, possibly surpassing Japan and Germany by 2030<sup>5</sup>, and the United States by 2048<sup>6</sup> to become the second largest globally.

However, the narrative of India's economy extends beyond just impressive growth rates and future projections. The country's population, exceeding 1.4 billion, ranks it as the first most populous nation globally. This vast number of people presents a two-sided coin: on one hand, there's a large workforce to fuel continued economic growth; on the other, there's a greater need for extensive job creation, improved infrastructure, and enhanced social services to improve living standards. Another fundamental measure to take into consideration is that of GDP per capita, which is a global measurement used to gauge the prosperity of nations based on economic growth, computed by dividing the GDP of a nation by its population. In the above table, the GDP per capita of India stands at \$2,410.9, an improvement from previous years yet still modest compared to more developed nations. The combination of a high GDP growth rate with a modest GDP per capita suggests that while India has generated significant wealth, there still is a lower average standard of living among the population, which might be caused by the persistent income disparities and concentrated wealth in specific sectors or regions of the country. These disparities underline critical areas for policy intervention. There is a clear need to enhance income distribution mechanisms and to improve healthcare and educational facilities to support an equitable rise in living standards of the growing population. Moreover, as India's workforce is predominantly young, strategic investments in education and digital infrastructure are crucial. These measures will not only prepare the workforce to meet future economic demands but also ensure that the demographic dividend does not turn into a demographic liability.

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<sup>5</sup> India set to be world's 3rd largest economy by 2030: Report, <https://www.fortuneindia.com/macro/india-set-to-be-worlds-3rd-largest-economy-by-2030-report/109567>

<sup>6</sup> Indian economy by 2050: In pursuit to achieve the \$30 trillion mark, [https://www.ey.com/en\\_in/tax/economy-watch/indian-economy-by-twenty-fifty-in-pursuit-to-achieve-the-thirty-trillion-dollar-mark](https://www.ey.com/en_in/tax/economy-watch/indian-economy-by-twenty-fifty-in-pursuit-to-achieve-the-thirty-trillion-dollar-mark)

## 2.1. The Historical Path

India's economic history from 1947 to 2023 has been marked by considerable transformations and challenges, evolving from its initial post-colonial struggles to become a significant force in the global economy. The story begins in 1947, a crucial date for India's history as it was the year in which it won independence from British colonial rule. At this time, the country was left with a very underdeveloped economy. British policies had heavily favored agricultural production for export while avoiding local industrial growth, leaving India with a weak industrial sector and a struggling handicraft industry.

After gaining independence in 1947, India entered a period of significant transition that lasted until the 1980s. During these initial post-independence years, the country faced numerous challenges including political and economic instability, food shortages, a scarcity of raw materials, and high inflation. In response, Prime Minister Jawaharlal Nehru implemented a socialist-inspired economic model focused on achieving self-sufficiency. This approach prioritized the development of heavy industries through government-led initiatives that included a series of five-year plans. This strategy involved mobilizing substantial resources to establish large state-owned enterprises in sectors like steel, chemicals, machinery, locomotives, and power. Nehru believed that focusing on industrial growth offered the most significant potential for increasing production, despite the existing opportunities for agricultural growth. His government invested mainly in public enterprises in order to bring much of the nation's resources under public ownership. Nehru chose to focus on industries that produced basic and heavy goods rather than consumer goods, to cut down on imports and promote self-reliance. He famously said, "*To import from abroad is to be slaves of foreign countries.*"<sup>7</sup> Meanwhile, the production of consumer items like clothing and furniture was left to smaller, privately-owned cottage industries, which could create numerous jobs due to their labor-intensive nature. Therefore, the result was a mixed economic model, in which a strong public sector allows the state to control the economy and to plan industrial investments, while the private sector is strictly license regulated, with the aim of putting a threshold on both the level of production and on exports. Despite initiatives aimed at modernizing the economy, like the Green Revolution<sup>8</sup> which boosted

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<sup>7</sup> Arvind Panagariya, *India: An Emerging Giant* (New York: Oxford University Press, 2008), 25.

<sup>8</sup> The Green Revolution in the 1960s transformed Indian agriculture into a modern industrial system through the adoption of technologies like high-yielding variety seeds, mechanized tools, and improved irrigation practices. It significantly boosted agricultural productivity in the developing world.



agricultural production, India's industrial growth was lackluster due to significant state control across key sectors. This control led to inefficiencies, resulting in significant GDP growth fluctuations plagued by bureaucratic and infrastructural issues. Additionally, even with the nationalization of industries and strict production and export controls, economic outcomes were disappointing. Minimal growth in per capita income and challenges like global oil crises and political instability further aggravated the economy.

The 1980s marked the beginning of slow economic liberalization, from a socialist planned economy to a market-driven economy. This transformation initially progressed slowly but was characterized by a series of international events. The year 1991 was especially crucial; the collapse of the Soviet Union—a key trading partner for India—and the effects of the Gulf War on oil prices together precipitated a severe balance-of-payments crisis. This crisis led Manmohan Singh, the finance minister at the time, to seek help from the International Monetary Fund (IMF). The IMF provided financial aid but required India to adopt more flexible economic policies, which included stabilizing the economy and implementing structural reforms. These changes transformed India's economic landscape. They removed the system of licensing known as the "license raj," opened the markets to foreign investors, and started the process of privatizing government-owned businesses. As a result, India's GDP growth rates increased, averaging about 6% throughout the 1990s, and its foreign exchange reserves grew significantly, signaling a more stable economy and increasing confidence among investors. Moving away from its socialist roots, India embraced policies of liberalization, privatization, and globalization, which propelled the country into a period of rapid economic growth and development. This period not only saw a boost in GDP and income per capita but also a notable surge in economic activities, especially in the private sector. The service sector, particularly IT and outsourcing, expanded rapidly and became a crucial component of India's economic growth. These reforms set the foundation for the country's emergence as a significant global player in the decades that followed.

*Figure 2.2 – Sources of Economic Growth Total Economy, 1960-2005.  
(Annual Percentage Rate of Change)*

Period	Output	Employment	Output per Worker	Contribution of:			
				Physical Capital	Land	Education	Factor Productivity
1960–04	4.7	2.0	2.6	1.2	-0.1	0.3	1.2
1960–80	3.4	2.2	1.3	1.0	-0.2	0.2	0.2
1980–04	5.8	1.9	3.8	1.4	0.0	0.4	2.0
1960–73	3.3	2.0	1.3	1.1	-0.2	0.1	0.2
1973–83	4.2	2.4	1.8	0.9	-0.2	0.3	0.6
1983–93	5.0	2.1	2.9	0.9	-0.1	0.3	1.7
1993–99	7.0	1.2	5.8	2.4	-0.1	0.4	2.8
1999–04	6.0	2.4	3.6	1.2	0.1	0.4	2.0

As the evidence of the above table shows, from 1960 to 2004 India's economic landscape experienced has seen a significant increase in productivity and the substantial contributions from physical capital and education in the later years highlight the effects of India's economic reforms and opening up to global markets. The data from 1993-1999 is particularly important, coinciding with major liberalization measures that not only boosted investment in physical capital but also emphasized education and skill development. The table effectively encapsulates the trajectory of India's economic growth, characterized by increasing reliance on technology, human capital, and productivity improvements, rather than just increases in employment or land use. The shift in growth dynamics particularly after the economic reforms of the 1990s underscores the pivotal role of policy changes in shaping the economic destiny of the nation.

India has made significant strides since the economic reforms of the early 1990s, notably reducing poverty rate<sup>9</sup> from 50% to 13% by 2021 and expanding its share in global trade from 0.4% to 1.77% by 2021. Since 2010, India has ascended from being the ninth largest to the fifth-largest economy in the world by nominal GDP in 2019, overtaking the UK, France, Italy, and Brazil. These achievements reflect an improvement in living standards and greater integration into the global economy. Despite these gains, India's economy remains starkly divided between a small, globally integrated formal sector and a vast, low-productivity informal sector that includes agriculture and urban activities and employs the majority of the labor force. High-skill industries like IT and pharmaceuticals have grown, but they are predominantly urban and employ skilled workers, highlighting a gap in employment opportunities for the unskilled labor force. Restrictive labor laws and inadequate infrastructure hinder more inclusive industrial growth, especially in manufacturing. Additionally, public services are poorly managed, with government institutions like schools and clinics suffering from underfunding, impacting primarily the poor. The middle class has largely circumvented these deficiencies by opting for private services, reducing political pressure for systemic reforms. Therefore, while India has achieved considerable economic growth and made significant advances in sectors that are globally competitive, it still needs to tackle these systemic issues to facilitate a broader and more equitable economy that offers pathways to the middle class for its vast impoverished population.

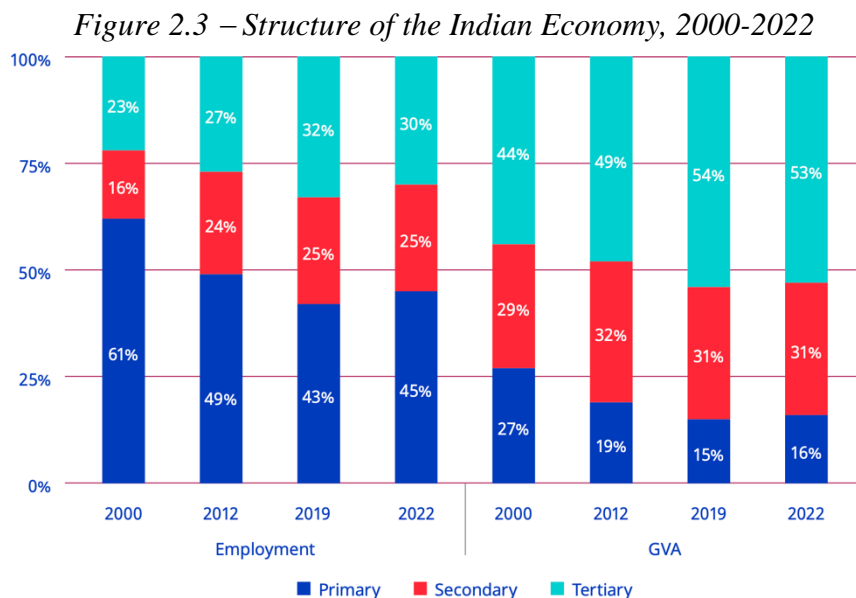
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<sup>9</sup> Measured at the international poverty line of \$2.15 a day, adjusted for purchasing power parity based on 2017 prices

### 2.1.1. Sectoral Change of Indian Economy

India’s economy has been characterized by its dynamic and diverse sectors, leading to several transformations over the years. The Indian economy is broadly segmented into three major sectors: agriculture, manufacturing, and services. Each sector contributes distinctively to the GDP and employs a different proportion of the workforce, reflecting the country's economic evolution from a primarily agrarian society to a thriving center for manufacturing and a global leader in information technology and services.

- *Agriculture*: historically the backbone of India's economy, agriculture employs the largest share of the country's workforce. Despite its significant employment contribution, the sector's share in GDP has been declining, signaling a shift towards other sectors. This sector is characterized by small-scale farmers and is affected by monsoonal variability, which impacts productivity and economic stability.
- *Manufacturing*: this sector has been central to India's economic strategies aimed at industrialization and modernization. It includes a range of industries from textiles and garments to heavy industries like steel and automotive. The government's initiatives, such as 'Make in India'—an initiative aimed at encouraging companies to develop, manufacture, and assemble products in India—have been designed to boost manufacturing, attract foreign investment, and create millions of jobs, aiming to transform India into a global manufacturing powerhouse.
- *Services*: the fastest-growing sector of the economy, services, encompasses a wide range of industries including IT, telecommunications, finance, and hospitality. This sector has not only put India on the global map but also significantly contributes to GDP and employs a sizable portion of the workforce. The growth in this sector is fueled by skilled professionals and is instrumental in driving innovation and economic expansion.



From the table, it is clear the structural transformation of the Indian economy between 2000 and 2022, emphasizing a significant shift from an agriculture-centric to a services-led growth model. This transition reflects a broader global trend where economies evolve from primary production to more sophisticated, knowledge-based services. Even if in 2022 most of the Indian workforce is still employed in the agricultural sector, most GDP of the country is generated by the services sector. In fact, by looking at the data of the gross value added (GVA), agriculture weights just a mere 16% contribution. Moreover, the data show that in the last two decades the manufacturing sector has been quite stable, and that the decline in the number of workers in agriculture mainly shifted to the service sector.

These changes in sectoral GVA and employment contributions signify a strategic move up the value chain, demonstrating a growing dominance of the tertiary sector, which shows its role as a driver for innovation, large-scale employment, and significant economic output. However, the advancements in this sector played a key role in increasing income inequality in the country by widening the gap between the skilled and unskilled workers in terms of both demand and wage differences. Particularly, the stagnation of the employment growth in the secondary sector represents the incapability of the labor market to create enough jobs when opening the economy. Due to this stasis, the surplus labor in agriculture has not been effectively absorbed into higher-value sectors. Instead, these excess unskilled workers have moved into low-paying jobs within the service sector, increasing inequality both within the sector and across the broader economy, as it drives down wages for those already employed in these lower-wage roles.

### **2.1.2. Regional Disparities**

India's economic growth has not been uniformly distributed across its 28 states. Regional disparities highlight the uneven distribution of income, standard of living, industrial and agricultural development, and access to essential services like healthcare and education. These disparities are stark, with states like Punjab, Gujarat, Maharashtra, and Tamil Nadu achieving rapid economic development, while others like Bihar, Odisha, and Jharkhand remain significantly behind. The roots of these imbalances trace back to the British colonial era, where development was concentrated in regions with high manufacturing and trading potential, such as Calcutta, Bombay, and Madras, leaving other areas neglected. Today, these historical imbalances are reflected in the wide differences in per capita income, literacy rates, and human development indices among different states.

Geographical factors significantly contributed to widening these inter-state disparities. Difficult terrains, such as hilly landscapes, rivers, and dense forests, created natural barriers to development. For instance, Himalayan states like Himachal Pradesh, Uttarakhand, and the North-Eastern states have remained mostly backward due to their inaccessibility and the inherent difficulties posed by their geography. Moreover, economic overheads, including power, transport, communication facilities, technology, and insurance, play a crucial role in regional development too. Regions that lack these essential infrastructures, such as the North-Eastern region, Himachal Pradesh, and Bihar, have remained underdeveloped. In contrast, areas with adequate economic overheads have attracted more developmental projects, leading to accelerated growth. The consequences of these regional disparities are diverse and profound. Uneven regional development often leads to agitations and demands for separate states. For instance, the movement for a separate Vidarbha State in Maharashtra and the Bodoland movement in Assam are examples of how regional imbalances can lead to political unrest. The creation of Telangana in 2014, following decades of agitation for a separate state, highlights the impact of intra-state regional imbalances. Regional disparity drives migration from backward areas to developed regions in search of better livelihoods. This migration is typically from rural to urban areas, as cities offer more job opportunities and a higher quality of life compared to rural areas. This shift can strain urban resources and infrastructure, leading to overcrowding and increased competition for jobs.

*Figure 2.4 – Indian States by GSDP per Capita Growth, 2012-2022*

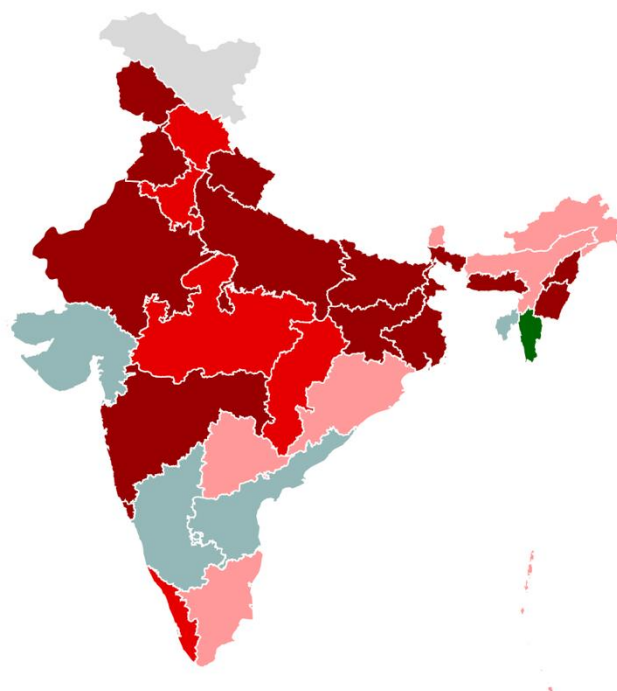
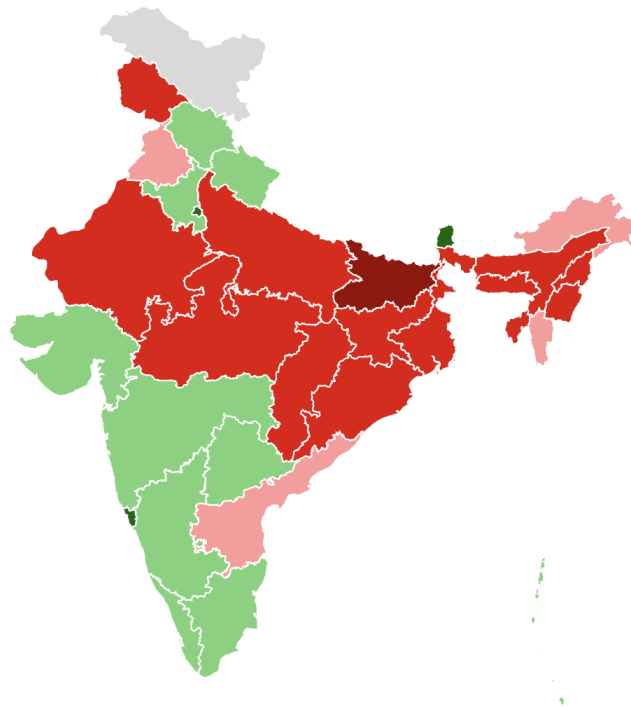
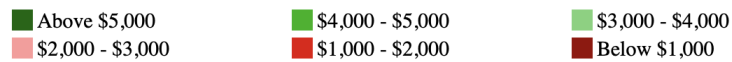


Figure 2.5 – Indian States by GSDP (Nominal) per Capita, 2021/2022



Source: Statistics Time, <https://statisticstimes.com/economy/india/comparing-indian-states-and-countries-by-gdp.php>

The two charts provided illustrate significant insights into the regional disparities in India's economic landscape. The first chart depicting the Gross State Domestic Product (GSDP) per capita growth rates of Indian states from 2012 to 2022 highlights significant regional disparities in economic performance across the country. It categorizes states into various growth brackets, ranging from below 4% to above 9%. Mizoram is the only state achieving an impressive growth rate above 9%, indicated by the dark green color. This starkly contrasts with many central and northern states, such as Bihar, Jharkhand, and Odisha, which are marked in dark red, indicating growth rates below 4%. The chart generally shows that states with challenging geographies, such as those in the Northeast, generally have lower growth rates. While the states with better infrastructure, like those in the South, generally exhibit higher growth rates.

The second chart illustrates the Gross State Domestic Product (GSDP) per capita in nominal terms for Indian states (2021-2022), showing the significant economic disparities across the country. The GSDP per capita varies from below \$2,000 to above \$5,000, highlighting the wealth differences of the regions. States like Goa, Delhi, and Sikkim are

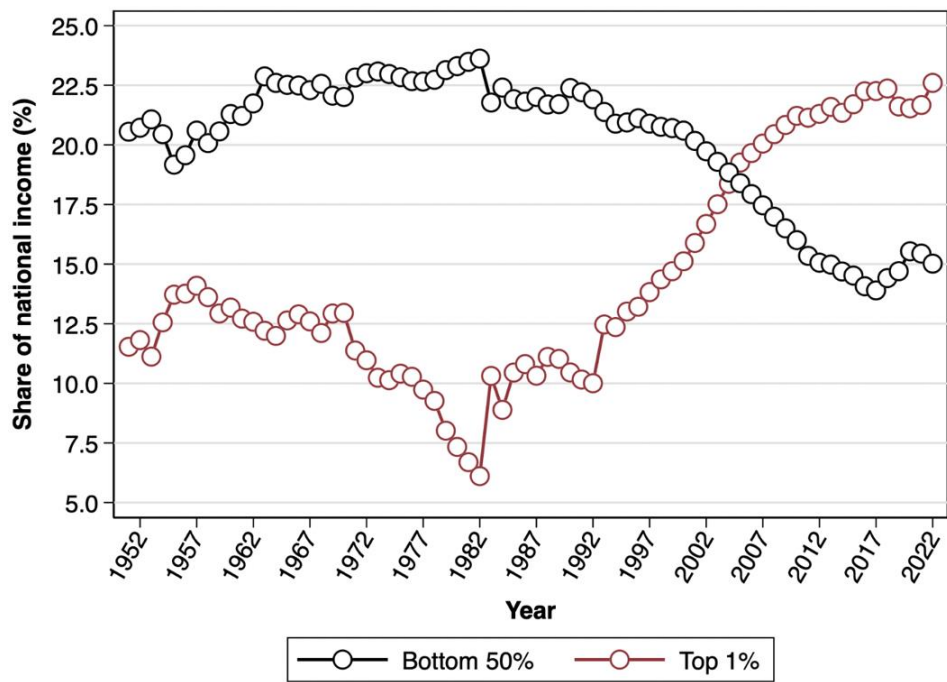
among the wealthiest, with a nominal GSDP per capita exceeding \$5,000, reflecting their higher economic status. On the other hand, many northern and eastern states, such as Bihar, Uttar Pradesh, and Madhya Pradesh, have nominal GSDP per capita between \$1,000 and \$2,000, highlighting their lower economic standing. These figures illustrate the pronounced wealth disparities, with economically prosperous states predominantly located in the western and southern parts of India.

Analyzing these charts together, it becomes clear that there are disparities both in current wealth and in economic growth. Some states, such as Goa and Delhi, are both wealthy and have experienced significant growth, maintaining their economic advantage. On the other hand, states like Bihar and Uttar Pradesh, which are already less wealthy, are also experiencing lower growth rates, potentially exacerbating existing inequalities. This dual analysis underscores the persistent regional disparities within India, where some states are advancing economically, while others lag, both in terms of wealth and growth.

## **2.2. The Rise in Inequality**

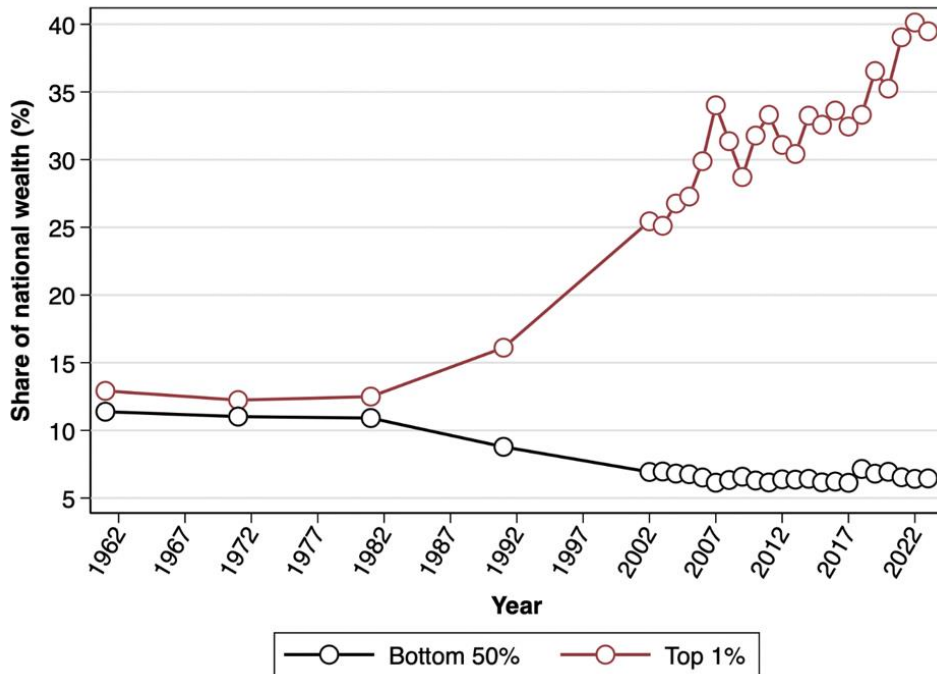
Despite impressive economic growth and industrial transformation that has led India to a prominent position among the world's largest economies by GDP, inequality within the country has also increased significantly after the introduction of the economic reforms of the 1990s, especially in the early 2000s. This rise in inequality varies depending on the dimension considered. While poverty levels have decreased, many individuals who have escaped poverty remain at high risk of falling back into it. Since India opened its markets to foreign investment in 1992, following its independence from Britain in 1947, the number of billionaires has surged. A significant and striking observation is that *"The Billionaire Raj headed by India's modern bourgeoisie is now more unequal than the British Raj headed by the colonialist forces"* according to the authors of the World Inequality Lab study. This conclusion is based on data showing how much of India's total income and wealth is held by the top 1% of the population. While income encompasses earnings from various sources such as salaries, interest, and investments, wealth (or net worth) represents the total value of assets owned by individuals or groups within a society or a country. Unfortunately, both income and wealth inequalities in India are at their highest levels and continue to show increasing trends.

Figure 2.6 – Bottom 50% vs. Top 1% National Income Shares, 1951-2022



Source: World Inequality Lab (2024)

Figure 2.7 – Bottom 50% vs. Top 1% Wealth Shares, 1961-2023



Source: World Inequality Lab (2024)

The two graphs provide a vivid illustration of the growing income and wealth inequality in India over the past several decades.



The first graph shows the share of national income held by the bottom 50% and the top 1% of the population. From the early 1950s until the early 1980s, the bottom 50% maintained a relatively stable share of around 22-23%, while the top 1% saw a decline from about 12% to 7-8%. However, starting in the early 1980s, a reversal occurred. The income shares of the bottom 50% began to decline, dropping to about 15% by the early 2000s and stabilizing around 14-15% in recent years. In contrast, the top 1% experienced a significant increase in their share of national income, rising to approximately 12-13% by the early 2000s and reaching around 22-23% in recent years. This indicates a dramatic rise in income inequality, particularly since the early 1980s.

The second graph highlights the distribution of national wealth between the same groups. From 1961 to the late 1980s, both the bottom 50% and the top 1% held relatively stable shares of national wealth, with the bottom 50% around 10% and the top 1% around 15%. However, from the early 1990s onwards, the wealth share of the top 1% began to rise sharply, particularly accelerating after 2000. By 2023, the top 1% controlled around 40% of national wealth. Meanwhile, the wealth share of the bottom 50% remained stagnant, showing little to no growth over the same period. This graph underscores an even more pronounced concentration of wealth than income, with the top 1% amassing a significantly larger portion of the country's wealth over time.

Together, these graphs paint a comprehensive picture of growing economic disparity in India. The data shows a significant shift in the distribution of both income and wealth towards the top 1%, highlighting the increasing concentration of economic power and resources among the richest individuals. This trend, beginning in the early 1980s for income and accelerating in the 1990s for wealth, reflects the impact of economic liberalization and globalization, which have disproportionately benefited the affluent. The stagnation of the bottom 50% in terms of both income and wealth share indicates that the benefits of economic growth have not been evenly distributed, raising critical questions about the inclusiveness of India's economic policies and the sustainability of such inequality.

### **2.2.1. Skilled Biased Growth**

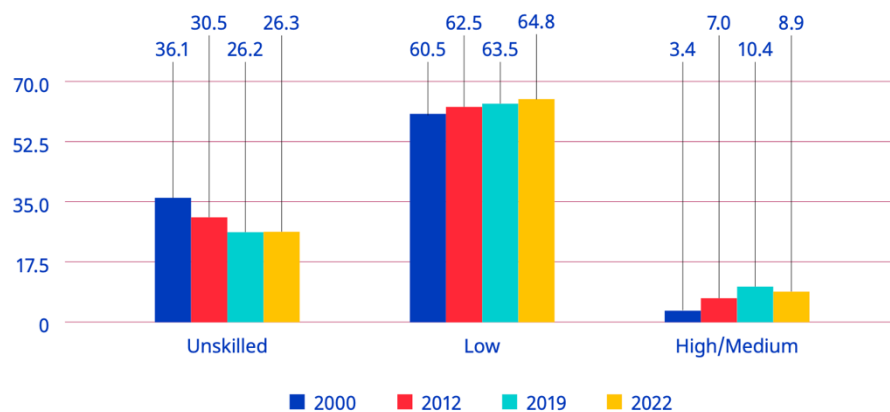
The liberalization and globalization marked a significant turning point in India, profoundly shaping its economic landscape. While globalization spurred positive growth and economic prosperity, reflected in high growth rates and the shift from agriculture to industry, urbanization, and the boom in trade, it also led to stark income inequalities, particularly between skilled and unskilled workers. In contemporary production systems, the increasing global competition, labor market flexibility, and technological advancements incorporated in new knowledge systems have significantly altered the demand for specific skills, placing a greater importance on basic, soft, and transferable skills. As the Indian economy opened up to global markets, sectors that require higher education and specialized skills, such as information technology and finance, experienced substantial growth, leading to a surge in demand for skilled workers. Consequently, skilled workers have seen significant wage increases, contributing to a widening wage gap between them and their unskilled counterparts. Conversely, unskilled workers, who form a large part of India's labor force, have not benefited equally from globalization. Many are employed in traditional sectors such as agriculture or in informal urban jobs that do not offer the same level of remuneration or job security.

Moreover, the influx of foreign direct investment (FDI) has often been concentrated in capital-intensive industries rather than labor-intensive ones, further limiting the opportunities for unskilled workers. This contradicts the economic theory based on the Heckscher-Ohlin and Stolper-Samuelson models. According to the Heckscher-Ohlin model, countries should specialize in producing and exporting goods that use their abundant resources most intensively—in India's case, labor-intensive goods. The Stolper-Samuelson theorem suggests that increased trade and investment should raise the real income of the country's abundant factor—in India, unskilled labor. However, the focus on capital-intensive industries has not significantly increased demand for unskilled labor, thus not leading to the expected rise in their wages and instead exacerbating income inequality.

In addition, compared to several developing and developed countries, India is behind in offering structured, officially recognized training programs that equip young people with specific skills for various trades and occupations. Thus, many young people in India do not have access to quality vocational education and training (VET) that prepares them for the

job market, leading to a skills mismatch where the workforce does not meet the demands of the economy.

*Figure 2.8 – Distribution of Youth Employment by Skill Level in India, 2000-2022*



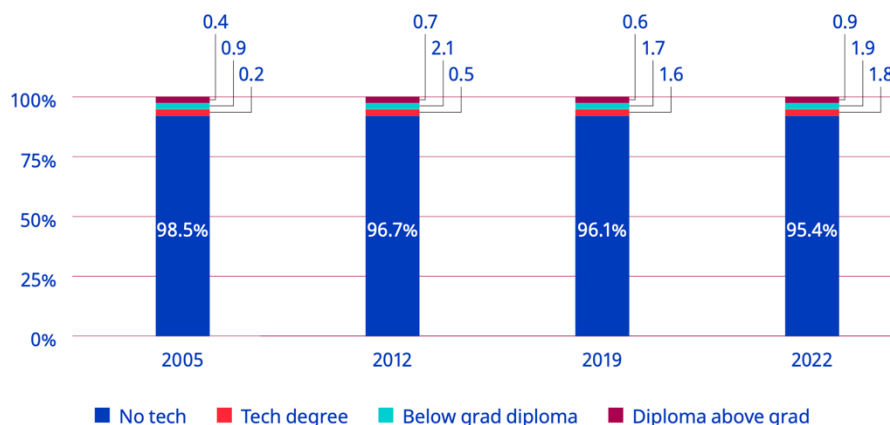
Source: India Employment Report 2024, [https://webapps.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new\\_delhi/documents/publication/wcms\\_921154.pdf](https://webapps.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_921154.pdf)

The chart provides a clear illustration of the changing employment landscape among Indian youths across different skill levels over two decades. The percentage of youth in unskilled jobs has experienced a notable decline from 36.1% in 2000 to 26.2% in 2019 and remaining relatively stable at 26.3% in 2022. Conversely, between 2000 and 2019 (pre-pandemic), there was a steady increase in youth employment in high/medium and low-skill jobs. However, this trend reversed between 2019 and 2022, with a decrease in high-skill jobs and a consistent rise in low-skill job categories. In fact, the percentage of low-skilled jobs, which already constituted the majority of youth employment at 60.5% in 2000, increased over the years, reaching the 64.8% in 2022. Instead, a great change is observed in the high/medium-skilled job category. Starting at a mere 3.4% in 2000, this category saw more than a doubling to 7.0% by 2012. It further increased to 10.4% in 2019, although it slightly decreased to 8.9% in 2022. Through this chart, it is evident the ongoing transformation in the Indian labor market, driven by globalization and technological advancements. The decrease in unskilled jobs and the rise in high/medium-skilled employment indicate progress towards a more skill-intensive employment, which is crucial for economic growth and development. However, the persistent dominance of low-skilled jobs underscores the need for accelerated upskilling initiatives and might indicate a shortage of sufficient high-skill, high-paying opportunities, prompting young people to increasingly take on low-paying, low-skill positions. The relatively low percentage of high/medium-skilled jobs emphasizes the importance of enhancing training systems to better prepare youths for the demands of a modern economy, in order to continue to spur growth.

### *Technological Advancement Impact*

The technological changes associated with industry are expected to be the major causes for a significant workforce restructuring. Global analyses by the World Economic Forum (2020) highlighted the impact of technology on workforce demand, estimating that by 2025, 85 million jobs could be displaced due to shifts in labor division between humans and machines, while 97 million new roles may emerge from this new labor division. Moreover, the Observer Research Foundation report (2020) predicts that in the coming years technical skills in demand by companies in India will include technology design, accounting and auditing, IT, digital privacy and security, and business analysis and strategy. Thus, the workforce must continuously update its knowledge. However, addressing the demand and supply gaps in technical skills remains a challenge. Only 22 percent of companies surveyed by the Observer Research Foundation indicated their willingness to train workers on the job, and just 6 percent were willing to collaborate with vocational education centers to meet their skills requirements. Therefore, technological advancement has impacted especially the growth of skilled labor in India, particularly through the expansion of technical education, which encompasses a wide array of degree, diploma, and certificate courses in fields such as agriculture, engineering, technology, medicine, crafts, and other professional and technical subjects. The emphasis on technical education is expected to enhance employability among youths, as these courses are designed to equip students with the skills and knowledge that are highly valued in the job market. Despite the overall increase in the proportion of youths pursuing technical education over time, the level of technical qualification among young people in India remains relatively low compared to the needs of the economy. This gap highlights the challenges that India faces in scaling up its technical education to match the rapid pace of technological advancements and economic growth.

*Figure 2.9 – Trends in Technical Education Among Indian Youths, 2005-2022*



Source: India Employment Report 2024, [https://webapps.ilo.org/wcmstp5/groups/public/---asia/---ro-bangkok/---sro-new\\_delhi/documents/publication/wcms\\_921154.pdf](https://webapps.ilo.org/wcmstp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_921154.pdf)

From 2005 to 2022, the proportion of youths with no technical education has slightly decreased from 98.5% in 2005 to 95.4% in 2022, indicating a gradual increase in technical education uptake. However, despite this increase, the overall share of youths with any form of technical education remains relatively low. The percentage of youths holding a technical degree rose modestly from 0.4% in 2005 to 0.9% in 2022. Similarly, those with a diploma or certificate below graduate level increased from 0.9% to 1.9%, and those with a diploma or certificate above graduate level saw a slight rise from 0.2% to 1.8% over the same period. This data highlights that while there have been improvements in technical education among Indian youths, the majority still lack formal technical qualifications, underscoring the need for continued emphasis on skill development and vocational training to meet the demands of a rapidly evolving job market. The low level of technical qualification among youths can be attributed to several factors. One key issue is the limited capacity and quality of technical education institutions. Many institutions struggle with inadequate infrastructure, outdated curricula, and a shortage of qualified faculty, which affects the overall quality of education provided. Furthermore, there is often a mismatch between the skills taught in educational institutions and those demanded by the industry, leading to a skills gap where graduates are not adequately prepared for the workforce.

Closely related to technical education is the essential role of ICT skills, which offer a significant advantage in the labor market given the economy's increasing digitalization. However, a comprehensive understanding of ICT skills must consider access to computers and internet connectivity, which are not equally provided everywhere. According to the findings from the 75th round of the National Sample Survey on education (July 2017–June 2018), there is a significant rural-urban gap in access to computers. While 23% of urban households possessed a computer, only 4% of rural households had one. On average, nearly 24% of all households had internet access in 2017–18: 15% among rural households and 42% among urban households. Moreover, in 2018, only around 35% of the youth population reported using the internet during the 30 days prior to the survey interview. This usage breaks down to 25% of youths in rural areas and nearly 58% among urban youths. The gap in access to technology and the internet creates a significant barrier to acquiring ICT skills, which are increasingly necessary for many modern job roles. This digital divide exacerbates existing inequalities in the labor market, as those with limited access to technology and the internet are less likely to develop the ICT skills that provide a competitive advantage.

Therefore, as of 2021, the Indian youth population exhibited generally low ICT skills. Approximately 40% could copy and move a file or folder or use the copy-and-paste tool to duplicate or move information within a document. Nearly 75% of youths were unable to send an email with an attached file, and over 90% cannot use arithmetic formulas in spreadsheets, create PowerPoint presentations, or write a computer program using specialized programming languages. The disparity between rural and urban areas in ICT skills is particularly pronounced. For instance, 61% of urban youths could copy or move a file and folder, compared to only 34% of rural youths. Additionally, 25% of urban youths could connect and install new devices (such as cameras, modems, or printers), whereas only 8% of rural youths had this capability. This indicated both that the ICT skills among the young people are generally low and that the highest ICT capabilities are predominantly from urban areas, widening the urban-rural divide.

Despite overall progress in educational attainment, with most youths now having a secondary or higher level of education, significant disparities persist. The number of technically educated youths more than doubled between 2005 and 2022, and the proportion of youths with technical education at the graduate or higher level also increased. However, this growth in education quantity has not necessarily been matched by quality. Access to computers, the internet, and digital skills has improved but remains inadequate. Formal skills training expansion has been slow, and inequalities in access to general and technical education, as well as digital skills, remain significant across location, gender, social groups, regions, and economic status. Consequently, youths from socio-economically deprived groups and less dynamic regions are less likely to benefit from emerging labor market opportunities, perpetuating poverty and limiting economic growth.

### **2.2.2. Inequality of Opportunity**

In order to examine the intricate relationship between income inequality and economic growth in the context of India, it is essential to consider the concept of inequality of opportunity. This refers to disparities that arise due to circumstances beyond an individual's control, such as parental education, social status, and regional background. Some findings<sup>10</sup> have demonstrated that inequality of opportunity has a pronounced

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<sup>10</sup> Panchanan Das (2021) explored this dynamic by analyzing household survey data from India over several decades, employing Theil's T index to measure overall inequality and inequality of opportunity. [https://iariw.org/wp-content/uploads/2021/07/das\\_paper.pdf](https://iariw.org/wp-content/uploads/2021/07/das_paper.pdf)

negative effect on economic growth. This is primarily because unequal opportunities lead to a misallocation of human capital, where individuals from disadvantaged backgrounds are unable to access quality education and employment opportunities. This misallocation results in lower productivity and slower economic growth. For instance, unequal access to education due to socio-economic circumstances limits human capital accumulation, which is crucial for fostering innovation and sustaining long-term economic growth. Moreover, in India, there are significant regional disparities in inequality of opportunity. States with higher levels of inequality of opportunity, such as Delhi, Jharkhand, and West Bengal, exhibit substantial variations in economic growth compared to states with more equitable access to opportunities. For instance, in 2022, both Delhi and Jharkhand showed a GDP growth rate of 5-6%, but their GDP per capita growth was only 3-4%.

### *Quality of Education*

India has made enormous progress in education, achieving a remarkable 99% rate of primary school access. However, the focus has now shifted to the quality of education, which refers to both the access and the actual learning of students. The 2018 Annual Status of Education Report (ASER) survey revealed a concerning reality: students in the fifth grade of the educational system (10-11 years) were performing at a level that is equivalent to what would be expected of students two years younger. This gap in learning has been further exacerbated by the impacts of the COVID-19 pandemic, which disrupted educational activities nationwide, widening the already significant disparities in learning outcomes. Poor quality education leads to poor learning outcomes, which in turn push children out of the education system, leaving them vulnerable to child labor, abuse, and violence. Many classrooms in India are still characterized by teacher-centered rote learning, corporal punishment, and discrimination. These environments fail to provide the engaging and supportive atmosphere necessary for effective learning and personal development. Learning assessments indicate that many children in school are not mastering the basics of literacy and numeracy, nor are they acquiring the additional knowledge and skills necessary for their all-round development. This failure to impart fundamental skills not only avoids individual growth but also affects the country's overall development potential. One of the primary factors contributing to the poor quality of education is the lack of well-trained and qualified teachers. According to a report by the National Sample Survey Organization (NSSO), nearly one-third of the teachers in India do

not have the necessary qualifications to teach. This significantly impacts the quality of education, as untrained teachers are less prepared to deliver effective instruction to students. Furthermore, many teachers lack sufficient training in modern teaching techniques, hindering their ability to provide students with an interactive and engaging learning experience. The quality of education in Indian schools is evaluated through methods such as standardized tests, assessments, and surveys, which provide valuable feedback for improvement. The National Achievement Survey (NAS) evaluates students' academic performance in grades 3, 5, and 8, covering subjects like mathematics, science, social science, and language. The 2017 NAS results highlighted several issues: better student performance in language subjects than in mathematics and science, declining performance in higher grades, a gender gap favoring girls in language subjects, lower performance in government schools compared to private schools, rural students lagging behind urban students, and widespread rote learning.

Moreover, India is experiencing a great rise in private schools, characterized by three primary trends: investments are predominantly directed towards secondary and tertiary education; private schools are considerably more expensive than their public counterparts; and they are predominantly located in urban areas. Despite India's commitment to universalize primary education, the nation still struggles, particularly in terms of educational quality and learning outcomes. This scenario highlights a polarized educational landscape where, on one hand, there is a significant portion of the population that remains illiterate, and on the other hand, there is widespread basic education. With the privatization of higher education, mainly high-income families are benefitted, since they can afford the substantial fees associated with private schooling. This trend exacerbates the geographical concentration of higher education facilities in urban areas, leaving vast sections of the rural population underserved. Consequently, this situation not only widens the gap in educational attainment but also reinforces existing socio-economic disparities, thereby limiting inclusive growth and equitable development across the country.

Therefore, a fundamental aspect is the implementation of public and private expenditures on human capital accumulation, since it can improve both the distribution of high levels of education and the quality of the learning itself, allowing people to have better future job opportunities and to earn higher wages.



## **Chapter 3: Comparative Analysis of India and China**

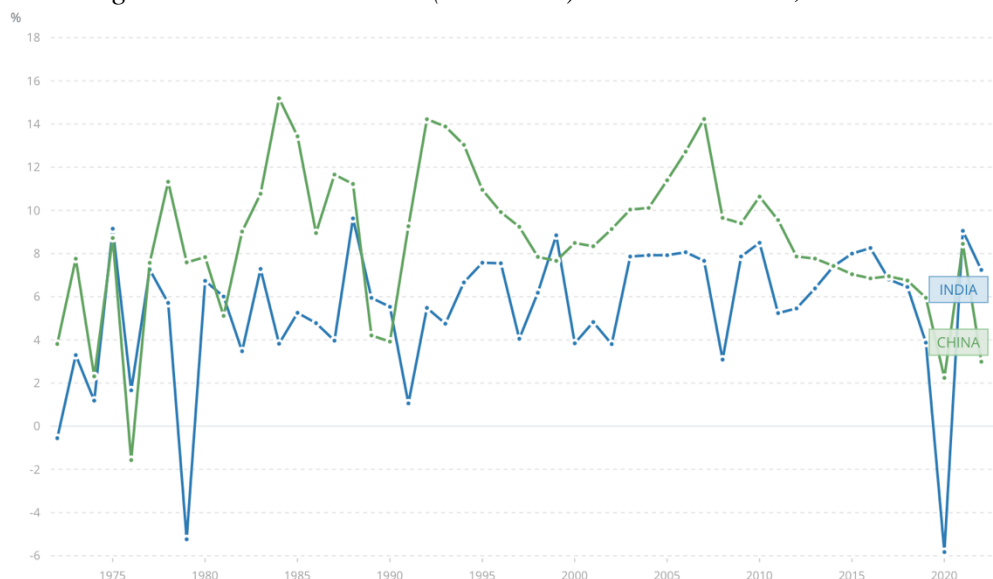
In the context of the relationship between economic growth and income inequality, China and India represent two key examples, especially given the global trend of rising inequality. While rising inequalities are evident globally, they are more prominent in emerging economies, particularly in densely populated Asian giants like India and China. The Asian region experienced substantial growth after the 1990s, despite setbacks like the Asian financial crisis and the global financial crisis, leading to notable reductions in poverty rates in both India and China. However, this period also saw a rise in inequality across many Asian countries, contrasting sharply with their previous records. Since 1990, Asia has seen vast increases in inequality regarding income and consumption, opportunities, and outcomes. This trend is particularly evident in India and China, the two most populous nations in the world.

The comparison between China and India has gained significant interest over the past two decades due to their notable similarities and differences. Both countries, with their large populations and ancient civilizations, have transitioned from rural agrarian societies to modern nation-states striving for industrialization. Despite these commonalities, their modernization paths have diverged significantly. China and India, both emerging from colonial rule and starting from similar points of economic underdevelopment, chose different economic models and development strategies.

After gaining independence in 1947, India pursued a mixed planned economy within a constitutional democracy. This approach contrasts sharply with China's path after the communist revolution in 1949, which aimed for a radically egalitarian society under an authoritarian regime. China's economic transformation began in 1978 under Deng Xiaoping, shifting from a centrally planned economy to a socialist market economy. This transformation involved incorporating market mechanisms while retaining significant state control, particularly in strategic sectors like banking, energy, and telecommunications. This has enabled China to focus on export-led growth, leveraging its large labor force to become a global manufacturing hub. In contrast, India has operated as a mixed economy with significant government intervention and a robust private sector. Major economic reforms began in 1991 in response to a severe balance of payments crisis, introducing liberalization measures such as reducing import tariffs, deregulating markets, and encouraging foreign direct investment. Unlike China's manufacturing-centric growth,

India has seen substantial growth in its service sector, particularly in information technology and business process outsourcing, which have become major contributors to GDP and employment. The primary differences between India and China lie in their approaches to state control, growth strategies, and labor market dynamics. These variations have resulted in distinct economic paths for the two nations, which allowed them to achieve significant growth, even if through different means.

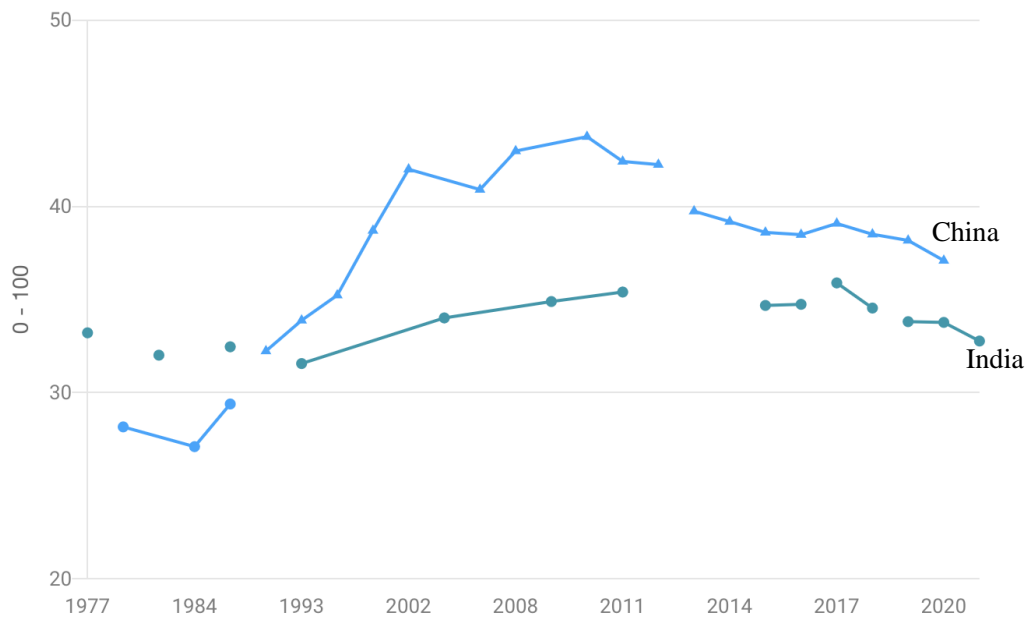
*Figure 3.1 – GDP Growth (annual %) China and India, 1972-2022*



Source: The World Bank Data,  
<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2022&locations=IN-CN&start=1972>

From the above graph, showing the GDP growth trends of China and India from 1972 to 2022, it is clear to notice how both countries have reached high rates of growth over the years. China's growth was volatile and modest before 1978 due to its centrally planned economy. However, after Deng Xiaoping's reforms in 1978, China experienced unprecedented growth, often reaching peaks of 13-14%, driven by industrialization and export-led strategies. This rapid growth moderated to between 6% and 10% from 2000 onwards as China transitioned to a consumption-driven model. India, on the other hand, saw stable but modest growth of around 4-5% from the 1980s until 1991, due to its mixed economy and protectionist policies. The 1991 economic reforms spurred growth, averaging 7-8.5% in the 2000s, driven by liberalization and privatization. Both China and India experienced significant dips during global economic shocks like the 2008 financial crisis and the COVID-19 pandemic. Overall, China's growth rates have generally been higher and more stable due to aggressive market reforms, while India's growth, though significant post-liberalization, has been more volatile.

Figure 3.2 – Gini Index China and India, 1977-2021



Source: World Bank (2024), Poverty and Inequality Platform. <https://pip.worldbank.org/poverty-calculator?src=CHN>

However, the great growth, experienced by the two countries, has been accompanied by consistent inequality. *Figure 3.2* shows the Gini index from 1977 to 2021 for China and India, which reveals key trends in income inequality in both countries. For China, the Gini index shows a marked increase from the early 1980s, peaking around 2008. This rise corresponds with China's rapid economic growth and industrialization period, which, while reducing overall poverty, significantly increased income disparities. After 2008, the Gini index shows a gradual decline, indicating efforts to address inequality, although the level remains relatively high. India's Gini index also shows an increase from the late 1980s to the early 2000s, reflecting growing income inequality during its period of economic liberalization and growth. However, the increase is less pronounced compared to China. Post-2010, India's Gini index shows a slight decline, suggesting some improvement in income distribution, although the change is not as significant. Both countries experienced rising income inequality during periods of rapid economic growth and development. While there have been efforts to mitigate this inequality in recent years, significant disparities remain. Therefore, while both India and China have achieved remarkable economic growth, this growth has been accompanied by rising income inequality, particularly in China, which exhibits higher inequality compared to India. The data underscores the challenges both countries face in ensuring that the economic benefits of growth are more equitably shared among their populations.

### 3.1. Growing Disparities

Despite being the second and fifth largest economies in the world by GDP, China and India have seen significant increases in inequality within their countries, both in terms of income and wealth. While recent data indicate a slight decline in the Gini coefficient for both China and India, suggesting a marginal improvement in income distribution, the overall picture remains one of significant inequality.

Figure 3.3 – Income and Wealth Inequality in China

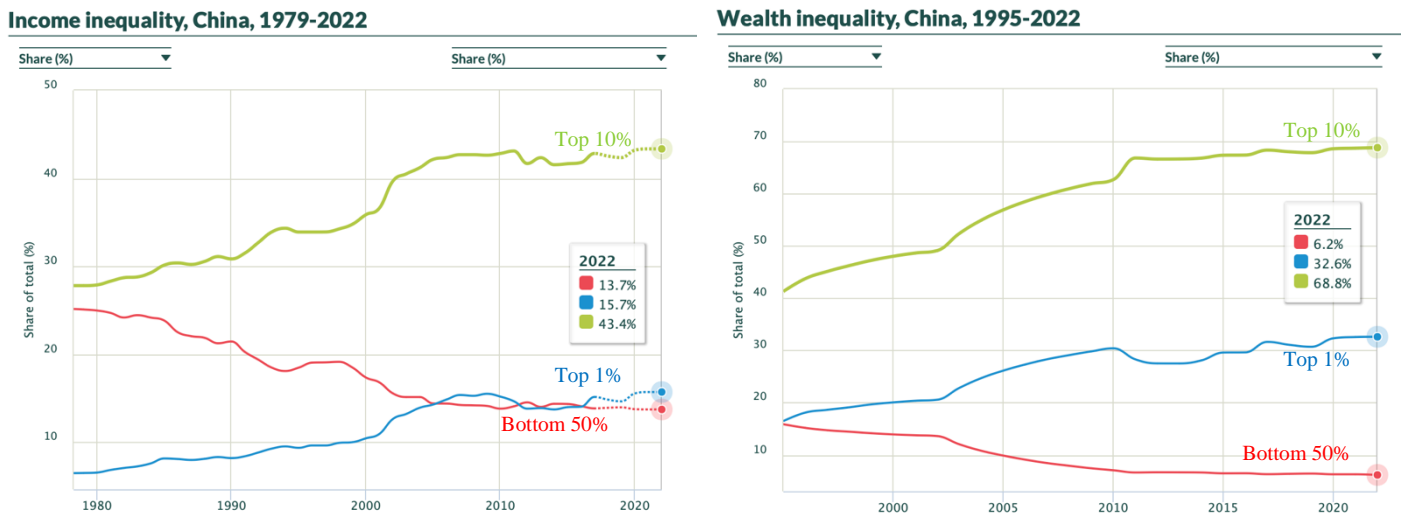
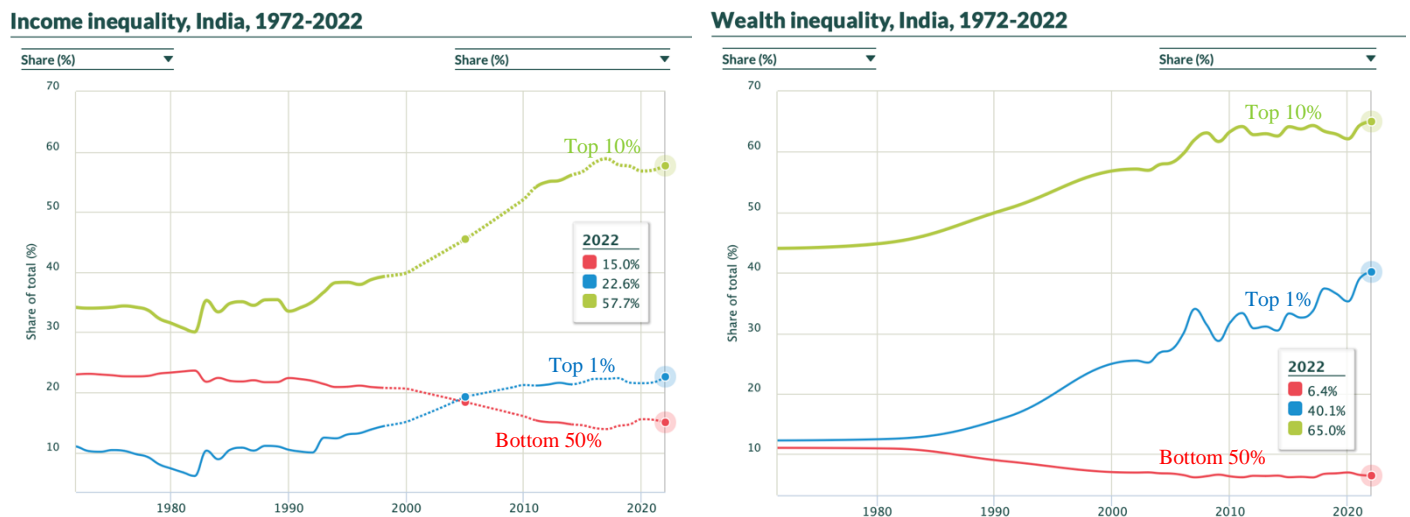


Figure 3.4 – Income and Wealth Inequality in India



Source: World Inequality Database, <https://wid.world/country/china/> and <https://wid.world/country/india/>

From these graphs, it is evident that both India and China have experienced substantial increases in income and wealth inequality. The top 10% of the population in both countries now hold a significantly larger share of income and wealth than they did several decades ago. The periods of increasing inequality correspond to significant economic reforms and

liberalization. In China, the shift to a market economy starting in the late 1970s led to rapid economic growth but also increased inequality. In India, economic liberalization in the early 1990s had similar effects. The wealth held by the top 1% and top 10% in both nations has dramatically increased, suggesting a growing concentration of economic resources among the wealthiest segments of society. The declining share of income and wealth held by the bottom 50% indicates that the benefits of economic growth have not been evenly distributed, with significant portions of the population not seeing proportional gains. The trends in inequality in China and India are analogous, and the underlying reasons for these disparities are also common. Both countries exhibit shared themes in their inequality trajectories. Technological advancements have disproportionately benefited the skilled workforce, widening the income gap between skilled and unskilled workers. Additionally, rapid urbanization has exacerbated the economic divide, with urban areas experiencing significant wealth accumulation compared to rural regions.

### **3.1.1. Underlying Reasons for Rising Inequality**

The primary reason for the significant income inequality in both China and India can be attributed to uneven growth across various dimensions. In India, growth has been particularly uneven across states, while in China, the disparity is evident among provinces. This geographical inequality is further exacerbated by the differing growth rates between economic sectors. In both countries, the primary sector (agriculture) has consistently lagged behind the secondary (industrial) and tertiary (services) sectors. As a result, rural incomes have grown more slowly than urban incomes, intensifying the rural-urban divide. At the household level, income growth has been similarly uneven. Incomes at the top of the distribution have increased much faster than those at the bottom, leading to a widening income gap.

The overall growth performances of China and India cover significant unevenness at the sub-national level. Despite higher and less volatile state and provincial-level growth rates in recent years, this variation has resulted in increasing regional disparities in both countries. In India, this disparity is particularly pronounced. States that were initially poorer have grown more slowly, leading to unconditional divergence in both absolute and relative terms. While India's poorer states continue to experience positive growth, the high growth rates post-reform have been concentrated in more affluent states, deepening the economic divide. In China, however, initially poorer provinces have managed to stay in

line with wealthier provinces in terms of aggregate growth rates, demonstrating a more balanced regional development compared to India. For instance, the Guangdong and Jiangsu provinces have witnessed rapid industrialization and urbanization, leading to substantial economic growth, while provinces like Guizhou and Yunnan, although still lagging, have shown significant improvement due to targeted development policies.

Another key aspect is that urban incomes and expenditures have grown faster than rural incomes, resulting in significant urban-rural disparities. In China, this trend is particularly pronounced, with the absolute gap between rural and urban incomes widening significantly. This indicates that urban areas are becoming increasingly wealthier compared to rural areas, even when accounting for differences in living costs. This trend is similarly observed in India, where urban areas have consistently experienced higher growth in incomes and expenditures compared to rural regions. Both countries began their reform periods with sizeable rural-urban gaps in living standards, and the subsequent growth process, characterized by faster increases in urban incomes, likely contributed to higher aggregate inequality. The growing urban-rural gap now attracts significant attention in both popular and governmental circles, partly because it is seen as reflecting urban biases in reform processes and public spending choices. Thus, it is crucial to note that rising inequality within both urban and rural areas has been a major component of the overall increase in inequality in both countries.

To understand the causes of this unequal growth distribution, it is essential to differentiate between good and bad inequalities—factors and dimensions of uneven growth that positively or negatively impact the living standards of poor people over time. The post-reform development trajectories of both India and China have been shaped by, and have produced, both types of inequalities.

### *Good Inequalities*

The concept of good inequalities provides an insightful perspective on how certain types of income disparities can drive economic growth by fostering market-based incentives for innovation, entrepreneurship, and increased productivity. In the context of China and India, the rise in inequality observed following market reforms can be seen as a reflection of newly unleashed economic incentives that were previously suppressed by regulatory distortions and interventions. One of the most illustrative examples of good inequalities in

China's growth story is the introduction of the Household Responsibility System (HRS) in the early 1980s. This reform allowed rural households to manage plots of land and retain surplus production, replacing the collective farming model where output was shared equally among members. The HRS significantly enhanced incentives for individual effort and productivity, thereby stimulating rural economic growth during the early stages of China's transition from a planned to a market economy. Initially, these reforms reduced inequality by raising rural incomes relative to urban areas. However, as some households benefited more than others due to differences in agricultural expertise, agricultural climate factors, and market access, intra-rural inequality increased. Urban wage dispersion in China during the reform period provides another example. Prior to reforms, urban China was characterized by fixed wage scales and government-allocated labor, resulting in low returns to education and minimal incentives for skill acquisition. The shift to a market-based system in the 1990s, marked by a vibrant non-state sector and a more open labor market, led to notable wage disparities across different skill levels and experience groups. As reforms expanded employment opportunities in the private sector and competitive labor markets emerged, returns to education increased, further contributing to wage inequality. This shift underscores the role of skill differentials in driving economic incentives and productivity gains. However, it also suggests that future increases in educational attainment will likely raise overall inequality, even as they help reduce poverty.

In India, the rising variance in wages reflects similar dynamics, particularly the increasing wage dispersion within educational attainment categories. This dispersion is partly attributable to more competitive product and labor markets, which provide stronger incentives for work effort and skill acquisition. The variation in growth performance across Indian states during the 1990s also highlights the role of incentives. States that significantly accelerated their growth did so by improving their investment climate to attract private investment. This responsiveness to market conditions contrasts with earlier periods dominated by public investment, which tended to be more evenly distributed geographically. The concept of agglomeration economies—the economic benefits that arise when businesses and individuals are located near one another in cities or industrial clusters—further illustrates how good inequalities can drive growth. In India, industrial diversity in metropolitan and mixed industrial regions created cost-reducing effects through agglomeration economies. Private industrial units favored these high-density

industrial areas, leading to increased industrial concentration. In contrast, state-owned industries were less influenced by these cost considerations, often driven by the goal of achieving greater regional balance. The shift towards private sector-led industrial investments, combined with the decrease in public investments contributed to higher levels of territorial inequality but also fostered economic growth through enhanced efficiency and productivity. Overall, the rise of good inequalities in China and India reflects a transition towards market-based incentives that encourage individual effort, skill acquisition, and entrepreneurship. While these inequalities have contributed to overall economic growth and productivity gains, they have also led to increased intra-group disparities and regional imbalances.

### *Bad Inequalities*

Bad inequalities stem from a combination of geographic poverty traps, social exclusion, unequal opportunities for enhancing human capital, lack of access to credit and insurance, corruption, and uneven political influence. These factors not only fuel rising inequality but also prevent significant segments of the population from transitioning out of traditional low-productivity activities. At the heart of these issues often lie credit market failures, which disproportionately constrain poor individuals from making the necessary investments in human and physical capital. This lack of investment perpetuates a cycle of poverty and limits economic mobility.

Geographic poverty traps are one critical dimension of bad inequalities. These traps occur when externalities, mobility impediments, and heavy reliance on local resources result in significant disparities between regions. For instance, a household in a well-endowed area may eventually escape poverty due to better access to resources and opportunities, while an identical household in a poorer area may face stagnation or decline. This phenomenon partly explains why initially poorer provinces or regions often experience slower subsequent growth. Some studies<sup>11</sup> provide empirical evidence from rural China, highlighting how geographic attributes, such as the density of rural roads and local agricultural development, significantly impact poverty alleviation prospects.

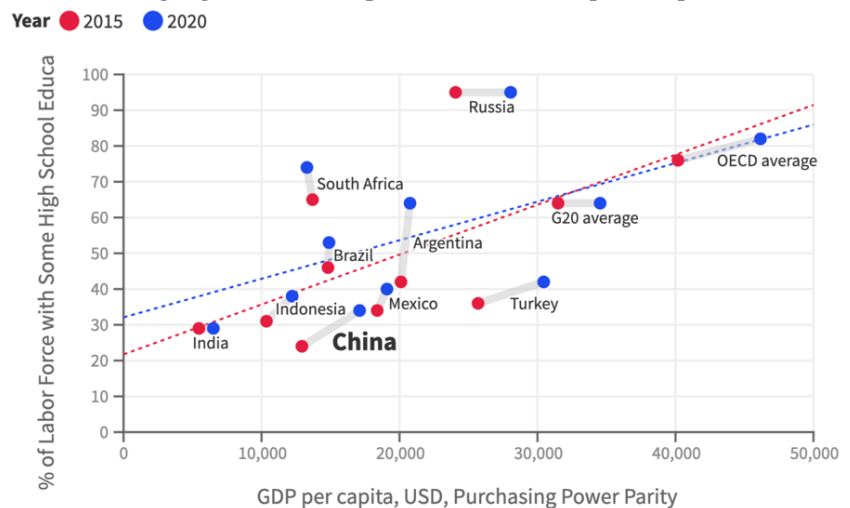
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<sup>11</sup> Jalan and Ravallion (2002). "Geography poverty traps? A micro model of consumption growth in rural China".



Another crucial dimension of bad inequalities involves disparities in human resource development. These are often exacerbated by credit market failures and inefficiencies in government service delivery. While rising returns to schooling and increasing wage dispersion can indicate positive market incentives for skill acquisition, those with limited schooling, few assets, or inadequate access to credit are less able to benefit from these opportunities. In China, the broad availability of basic education at the start of the reform period helped create a more equitable foundation. However, inequalities in educational attainment beyond primary school have since become significant obstacles, particularly as higher education levels are increasingly necessary for urban non-agricultural employment. In India, educational disparities are even more pronounced and have significantly impeded poverty-oriented growth, with initial levels of schooling playing a crucial role in determining the impact of economic growth on poverty reduction.

Figure 3.5 – Changing Relationship between GDPs per Capita and Education



Source: Center for Strategic & International Studies, <https://www.csis.org/analysis/how-inequality-undermining-chinas-prosperity>

The graph illustrates the relationship between GDPs per capita (adjusted for purchasing power parity) and the percentage of the labor force with some high school education for various countries in the years 2015 and 2020. Focusing on China and India, the graph reveals significant insights into the educational disparities that contribute to the broader discussion of income inequality within these two major economies. In 2015, approximately 24% of China's labor force had some high school education, while the GDP per capita was around \$13,000. By 2020, this percentage increased to about 34%, with GDP per capita rising to nearly \$17,000. In contrast, India had only about 29% of its labor force with some high school education in 2015, with a GDP per capita of roughly \$5,500. By 2020, this

percentage remained unchanged at around 29%, while GDP per capita rose to approximately \$6,500. Both China and India remain significantly below the G20 and OECD averages, underscoring severe educational deficiencies relative to their economic sizes. Despite being among the largest economies in the world, China and India fall significantly behind in the percentage of the labor force with high school education. This disparity has profound implications for income inequality in both countries. This educational gap contributes to and exacerbates income inequality, as large segments of the population are left without the skills needed to benefit from economic growth. Addressing these educational disparities through comprehensive policy interventions is essential for reducing inequality and promoting inclusive economic development in both countries.

Moreover, over the years there have been policy errors which have further combined these bad inequalities in both countries. These errors fall into three main categories: policies that impede market functioning, biases favoring specific regions or industries, and neglect of crucial public interventions. In India, restrictive labor regulations and preferences for small-scale industries have hindered firm growth and job creation, contributing to what is termed “jobless growth”. These policies have also failed to facilitate the movement of labor out of agriculture, leaving a significant portion of the workforce in low-productivity agricultural jobs. In China, the Hukou system, a household registration mechanism, restricts labor mobility by assigning each citizen to a specific place of permanent residence. This classification determines individuals' rights and access to social services such as education and housing within that locality. Consequently, rural residents often have limited access to public services and benefits compared to urban residents. The system poses substantial barriers for rural households wishing to migrate to cities, risking loss of land allocations and facing urban discrimination. These restrictions likely exacerbate inequality by limiting labor mobility and preventing the realization of agglomeration economies.

Therefore, improving market functioning, addressing policy biases, and ensuring equitable service delivery are essential steps toward achieving more inclusive and sustainable economic growth for both countries. By tackling the root causes of these inequalities, both China and India can work toward a more equitable distribution of resources and opportunities, fostering a more inclusive economic environment.

## Conclusion

The picture emerging from this thesis' analysis of the complex relationship between economic growth and income inequality in India is that while economic growth is essential for national prosperity and improving living standards, it does not automatically lead to equitable wealth distribution.

Since the 1990s, India's rapid economic growth has lifted millions of people out of poverty and positioned the country as a major global economy. However, this growth has been unevenly distributed, resulting in significant income inequality. The dissertation provides interesting findings on the applicability of some theories, such as the Kuznets' theory, and the overall impact of inequality on growth and vice versa. The evidence and analysis indicate that while some aspects of India's economic development align with Kuznets' theory—specifically, the increase in income inequality during the initial phases of economic reform—the expected decline in inequality has not occurred. Instead, income inequality has persisted and even increased, not following the U-shaped pattern entirely. Therefore, the analysis in the thesis is more against Kuznets' theory, as it highlights the persistence and even worsening of income inequality in the face of significant economic growth in India.

Moreover, although there are mechanisms—such as strong incentives for individuals to invest in their education and skills, and savings and capital accumulation—through which income inequality can positively influence economic growth, the overall impact of income inequality on economic growth in India tends to be negative. This is primarily due to adverse effects on human capital development, social stability, and economic volatility. Conversely, economic growth in India has not uniformly reduced income disparities; in many cases, it has intensified them. Globalization and technological advancements have disproportionately benefited certain segments of the population and regions, exacerbating income disparities. The benefits of growth have been unevenly distributed, favoring skilled over unskilled workers and urban over rural areas.

Another primary observation is that the government sector, through its economic policies and structural reforms, plays a vital role in shaping growth outcomes. The liberalization and globalization that fueled India's economic boom also widened the gap between the rich

and the poor, highlighting the urgent need for policies promoting inclusive growth. Central to these efforts is investing in education and vocational training to enhance human capital. Compared to many other countries, India lags significantly in both access to and quality of education, which perpetuates inequality by hindering people's ability to acquire higher skills and earn better wages. Addressing regional and urban-rural disparities through targeted development programs is also crucial, as these disparities remain a significant contributor to the country's overall inequality. Additionally, the comparative analysis with China reveals that different development models—China's market-oriented but state-controlled approach and India's mixed economy with significant government intervention—result in varying patterns of inequality. Although both nations have achieved significant growth and experienced rising inequality, China has exhibited slightly lower income inequality than India, which is partly due to China's smaller rural households and higher level of urbanization. The approaches and experiences of both countries provide valuable insights into managing inequality. For India, the challenge lies in balancing market-driven growth with state interventions to ensure the equitable distribution of resources and opportunities.

In conclusion, achieving sustainable and inclusive economic growth requires a holistic approach that integrates growth with equity. Policymakers must focus not only on driving economic expansion but also on implementing measures that reduce income inequality and ensure that the benefits of growth are widely shared. By doing so, the country can maximize the positive effects of economic growth while mitigating the negative ones that could simultaneously inhibit the beneficial impacts. Addressing these issues is not only a matter of economic efficiency but also of social justice, which is essential for maintaining social cohesion, political stability and paving the way for a prosperous nation.

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