

The Relationship between Economic Growth and Unemployment in India

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Abstract

Economic growth and employment are two key indicators of a nation's macroeconomic success. Traditional economic theory, supported by Okun's Law, suggests that as GDP increases, unemployment should decrease due to greater business activity and labour demand. However, despite India's consistent high growth over the past decade, youth unemployment remains significantly elevated, raising concerns about the inclusivity of this growth.

This paper explores the relationship between economic growth and employment in India, focusing on the contrasting experiences of youth and experienced workers. Using data from the Periodic Labour Force Survey (PLFS), World Development Indicators (WDI), and Reserve Bank of India (RBI) statistics, the study analyses employment trends across sectors, genders, and regions from 2020 to 2023. Results reveal that while GDP growth has reduced overall unemployment, the benefits have been uneven, with young people—particularly women and rural youth—facing higher joblessness and underemployment.

To provide an international benchmark, the paper compares India's trends with those of Germany, where strong institutional frameworks, vocational training systems, and youth employment policies have maintained stable youth employment despite slower growth. The study concludes by proposing policy interventions that India could adopt, including a Youth Guarantee scheme and a dual vocational education model, to ensure that future growth is both inclusive and sustainable.

Keywords: *Economic growth; Youth unemployment; Jobless growth; Labour market inclusivity; Vocational training*

1. Introduction

Economic Growth and Employment are two major indicators when looking at the success of a macro economy. Traditional economic theories portrayed in the classical and Keynesian model suggest that as GDP increases unemployment decreases due to extended business activity and causing more demand for labour. This theory is embedded on Okun's Law which suggests an inverse relationship between economic growth and unemployment, however with the case of India despite the high rates of growth throughout the past years youth unemployment still remains to be considerably high.

In contrast to the expectations of neoclassical models, India's experience suggests that growth has not always been inclusive or evenly distributed across demographic groups and sectors. While some segments of the population, particularly older or more experienced workers, have benefited from expanding industrial and service sectors, young people often face structural barriers to entry in the labour market, including skills mismatches, technological change,

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and limited access to quality education or vocational training. This divergence raises critical questions about the nature and inclusivity of India's growth.

The concept of jobless growth has emerged to describe economies that exhibit strong GDP expansion but limited employment generation. Several studies have attributed this phenomenon to the increasing capital intensity of production, automation, and the expansion of sectors that are less labour-absorptive. Moreover, youth unemployment in India is compounded by underemployment and informal labour practices, where many young workers are engaged in precarious or low-paying jobs that fail to match their qualifications or aspirations.

Building on this background, the present study aims to empirically examine the hypothesis that economic growth in India leads to higher employment among the experienced population while contributing to rising youth unemployment. Using quantitative econometric methods, the study analyses the correlation between GDP growth and employment rates across different age cohorts, distinguishing between youth (aged 15–24) and experienced workers (aged 25 and above).

Through this analysis, the study seeks to contribute to a deeper understanding of whether India's economic progress translates into equitable employment outcomes. By exploring the structural and demographic dimensions of employment growth, it provides insights into the challenges of labour market inclusivity and offers policy recommendations taken by developed countries to ensure that future growth is both sustainable and broad-based.

Section II of this paper reviews existing literature on the link between growth and employment, while Section III outlines the data sources and methodology, Section IV presents the empirical results, Section V discusses their implications, and Section VI concludes with recommendations and directions for future research.

2. Literature Review

Abdullah & Mansoor, 2023 - Employment crisis and decent work deficits for youth in India [1]²

This study examines youth employment and job quality in India, showing that despite robust GDP growth, young workers are not seeing proportional gains in employment. Its main advantage lies in highlighting the persistent mismatch between economic growth and youth employment opportunities, offering detailed insights into the challenges faced by young job seekers. However, it does not analyse sector-specific trends or compare outcomes for experienced workers, limiting understanding of how different industries contribute to employment. My study differs by explicitly evaluating sectoral employment patterns and contrasting youth with experienced workers, providing a more nuanced picture of labour market inclusivity.

Paul Bino, 2020 - Estimating Employment Elasticity of Growth in a High-growth Indian State: The Case of Maharashtra [2]³

Marg and colleagues focus on employment elasticity in Maharashtra, demonstrating that even high-growth sectors fail to generate jobs proportionally. The advantage of this study is its empirical analysis of sectoral growth and job creation, which helps identify structural bottlenecks in specific industries. Its limitation, however, is that it is geographically confined and does not examine youth unemployment or cross-age comparisons, reducing its

² Abdullah, B. and Mansoor, K. (2023) 'Employment crisis and decent work deficits for youth in India', *Journal of Social and Economic Development*. doi: <https://doi.org/10.1007/s40847-023-00294-5>.

³ ProQuest.com (2020) *Estimating Employment Elasticity of Growth in a High-growth Indian State: The Case of Maharashtra* – ProQuest. [online] Available at: <https://www.proquest.com/openview/c7c1286f4fa9237df7af3a9183b0cc9b/1?pq-origsite=gscholar&cbl=46967> [Accessed 1 November 2025].

applicability to national trends. My study expands on this by covering all of India, incorporating both youth and experienced workers, and analysing which sectors effectively create jobs for different demographics.

Mundra, 2024 - Indian Youth Unemployment: Factors Driving Its Deepening [3]⁴

Mundra investigates determinants of youth unemployment using regression models, providing causal insights into the factors contributing to high youth joblessness. The study's strength is its methodological rigor in identifying key predictors of youth unemployment. Its weakness is the lack of sector-specific analysis and absence of comparisons between youth and older workers, which limits understanding of whether growth benefits certain age groups over others. My study addresses these gaps by combining sectoral analysis with age-group comparisons and including international benchmarking to contextualize India's youth employment challenges.

3. Methodology / Implementation

To identify the disparity between India's rapid economic growth and the disproportionate increase in youth employment, we utilized government-collected datasets to analyse the correlation between these two variables, along with other contributing factors such as education level and rural–urban differences.

We began by examining data from the Periodic Labour Force Survey [4]⁵ (PLFS) conducted by the Government of India for the period July 2020 to June 2021. The PLFS is a nationally representative dataset that collects detailed information on individuals' employment status, age, gender, educational background, and sector of work. Participation in the survey was voluntary, with respondents providing informed consent prior to answering, thereby ensuring ethical data collection practices. All participants were asked a standardized set of questions to maintain consistency and comparability across demographic groups.

From this dataset, we extracted relevant variables on youth, gender, sectoral distribution, and overall employment and unemployment levels. These variables were then analysed to identify patterns and disparities across demographic and sectoral lines. The PLFS data provided a reliable and comprehensive foundation for examining the relationship between economic growth and unemployment in India, owing to its methodological rigor and national representativeness.

Next, we examined data from the World Development Indicators [5]⁶ (WDI), the comprehensive statistical database maintained by the World Bank, to obtain comparative insights between India and Germany. This dataset offers internationally standardized indicators, allowing for robust cross-country comparisons of key labour market and macroeconomic variables. Specifically, we focused on sectoral employment—covering agriculture, industry, and services—alongside youth unemployment rates and GDP growth trends for the period 2020 to 2023. This timeframe was selected to capture the economic disruptions and recovery dynamics associated with the COVID-19 pandemic, thereby enabling an assessment of how each country's labour market adapted and responded to both the crisis and subsequent rebound.

⁴ Mundra, S. (2024) 'Indian Youth Unemployment: Factors Driving Its Deepening', *European Economic Letters (EEL)*, 14(3), pp. 1–19. [online] Available at: <https://eelet.org.uk/index.php/journal/article/view/1741> [Accessed 1 November 2025].

⁵ Microdata.gov.in (2020) *India – Unit Level Data of Periodic Labour Force Survey (PLFS) July 2020–June 2021*. [online] Available at: <https://microdata.gov.in/NADA/index.php/catalog/206/get-microdata> [Accessed 1 November 2025].

⁶ World Bank (2025) *World Development Indicators*. [online] The World Bank. Available at: <https://databank.worldbank.org/source/world-development-indicators> [Accessed 1 November 2025].

To gain a deeper understanding of the state of employment and regional economic performance in India, we also utilized data from the Reserve Bank of India's [6]⁷(RBI) Handbook of Statistics on the Indian Economy. This dataset provides detailed information on the Net State Domestic Product (NSDP) for nine major Indian states spanning the period 1993 to 2024. The analysis focused on identifying long-term patterns of regional development while accounting for the economic disruptions caused by the COVID-19 pandemic. By examining both absolute growth and growth intensity across states with varying levels of development, this approach offered valuable insights into the uneven pace of economic progress and its implications for employment generation across India's diverse regional economies.

4. Results

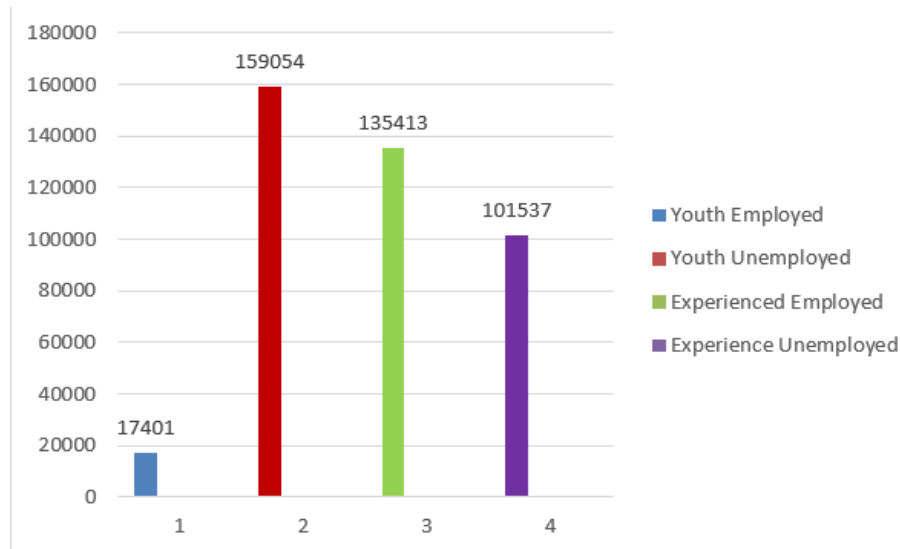


Figure 1

Figure 1 illustrates the employment and unemployment status among youth and experienced workers. The chart is included to compare the disparities in employment opportunities between these two groups. It clearly shows that the number of unemployed youths (159,054) is significantly higher than that of experienced unemployed individuals (101,537), indicating greater employment challenges faced by younger job seekers.

Indicator	2023	2022	2021	2020
Employment in agriculture (% of total employment) (modeled ILO estimate)	43.51	42.86	44.08	44.68
Employment in industry (% of total employment) (modeled ILO estimate)	25.03	26.12	24.47	23.70
Employment in services (% of total employment) (modeled ILO estimate)	31.46	31.02	31.45	31.62
Unemployment, youth total (% of total labor force ages 15–24) (modeled ILO estimate)	15.66	17.77	20.82	24.67

⁷ Reserve Bank of India (2019) *Handbook of Statistics on Indian Economy*. [online] RBI. Available at: <https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy> [Accessed 1 November 2025].

Indicator	2023	2022	2021	2020
Unemployment, youth total (% of total labor force ages 15–24) (national estimate)	15.47	17.86	20.68	24.54
GDP growth (annual %)	9.19	7.61	9.69	-5.78

Table 1

Figure 2 presents employment distribution across agriculture, industry, and services, along with youth unemployment rates and GDP growth from 2020 to 2023. This figure is included to highlight the structural changes in employment sectors and their correlation with economic performance.

- a. **Labour Market Overview (2020–2023):** India's labour market saw a sharp post-pandemic rebound. After GDP contracted –5.78% in 2020, the economy surged 9.69% in 2021, 7.61% in 2022, and 9.19% in 2023. Youth unemployment fell dramatically from 24.5% to 15.5%, suggesting that rapid economic revival opened doors for young entrants. Sectorally, agriculture's share of employment dipped slightly, industry rose, and services stayed stable, implying most gains were in lower-skilled or informal work. While these trends show short-term inclusivity, the modest shift in sectoral composition hints at lingering challenges in job quality and long-term stability.

Germany statistics

Indicator	2023	2022	2021	2020
Employment in agriculture (% of total employment) (modeled ILO estimate)	1.20	1.24	1.25	1.22
Employment in industry (% of total employment) (modeled ILO estimate)	26.50	26.87	27.50	27.37
Employment in services (% of total employment) (modeled ILO estimate)	72.30	71.89	71.25	71.41
Unemployment, youth total (% of total labor force ages 15–24) (modeled ILO estimate)	5.95	6.04	6.67	7.86
Unemployment, youth total (% of total labor force ages 15–24) (national estimate)	6.00	6.04	6.66	7.86
GDP growth (annual %)	-0.27	1.37	3.67	-4.10

Table 2

Figure 3 summarizes employment by sector, youth unemployment, and GDP growth from 2020 to 2023. This figure is included to show how the country's economy is transitioning toward a service-dominated structure and how these changes relate to youth employment patterns.

- b. Germany Economy Contrast:** In contrast, German economy maintained a stable labour market despite slowing GDP. Youth unemployment fell from 7.9% to 6% even during near-zero growth, showing the power of resilient labour policies, robust skills programs, and social safety nets. Services dominated employment at over 72%, while industry and agriculture played minor roles. This example illustrates that institutional strength can sustain youth employment, even when growth stalls, highlighting that policy frameworks matter as much as economic expansion.

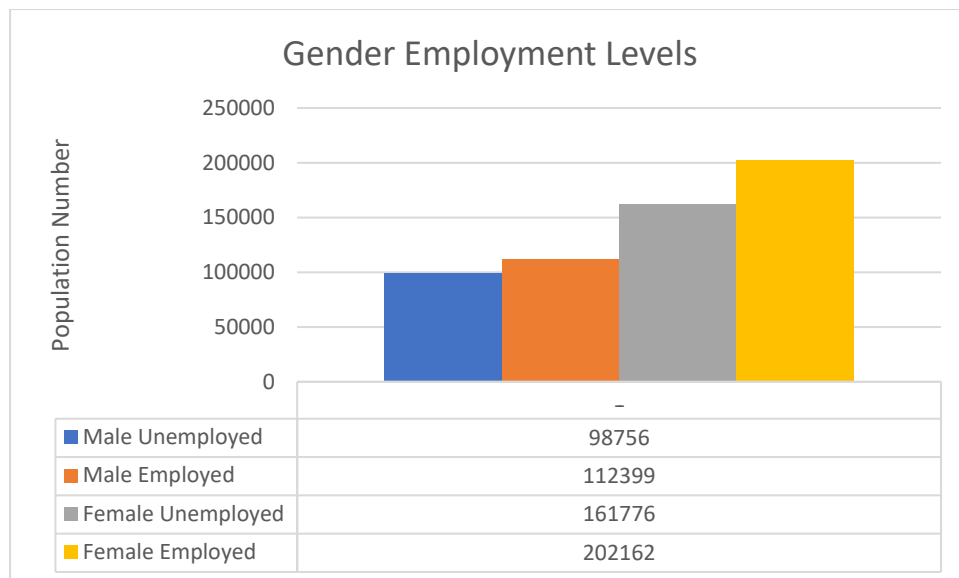


Figure 2

Gender Employment Levels showing the comparison between male and female employment and unemployment counts.

- c. Gender Employment:** Labour force participation for women is growing, but employment barriers persist. Approximately 200,000 women are employed versus 110,000 men, yet female unemployment (160,000) exceeds male (100,000). This suggests that while more women are entering the workforce, structural challenges, such as social expectations, workplace biases, or limited access to certain industries, still restrict job absorption. Men show more balanced employment/unemployment levels, pointing to steadier opportunities. Overall, female participation is increasing, but achieving parity requires deliberate policy and workplace interventions.



Figure 3

Overall Employment Levels showing the total number of employed and unemployed individuals across all genders.

- d. **Overall Employment Levels:** The employment gap remains stark. Roughly 260,000 individuals are unemployed versus 150,000 employed, reflecting a shortage of opportunities and potential skills mismatch in the labour market. This imbalance signals the need for targeted job creation policies, vocational training, and sectoral diversification to absorb growing labour supply. Without intervention, this gap risks leaving large segments of the population underutilized, affecting both economic growth and social stability.

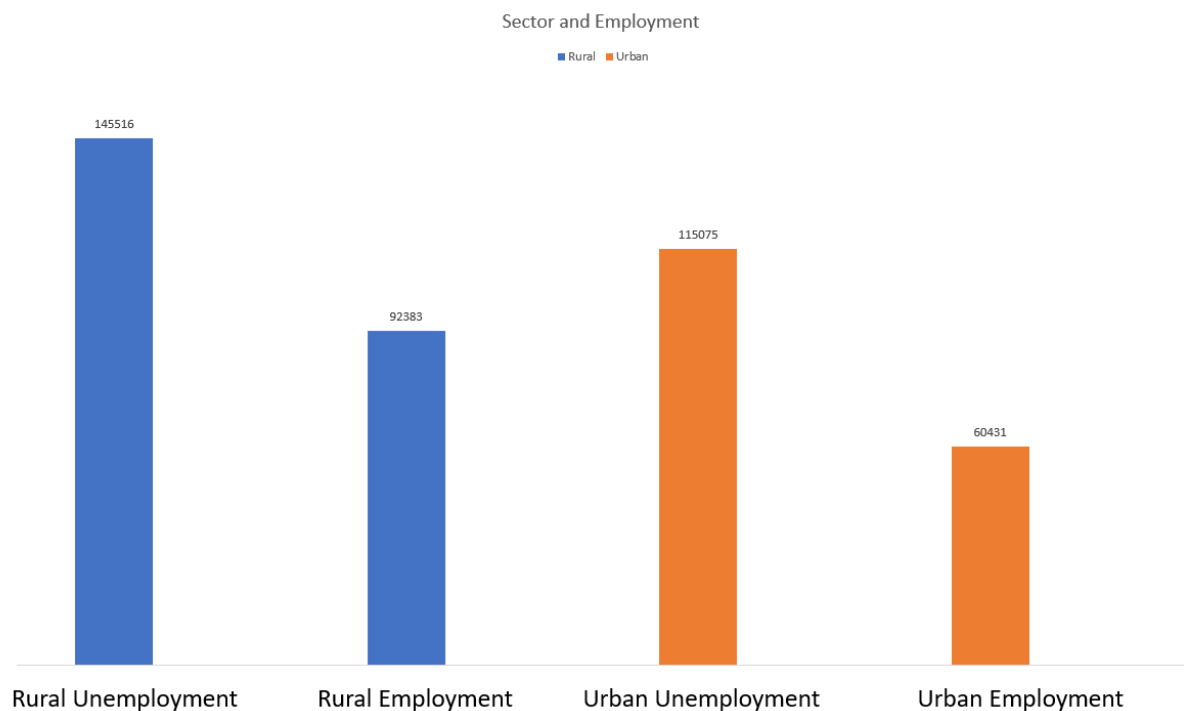


Figure 4

This figure compares employment distribution between rural and urban sectors.

- e. **Rural–Urban Employment:** Unemployment patterns reveal nuanced challenges. In rural areas, 145,516 are unemployed while 92,383 are employed, highlighting reliance on seasonal and agriculture-dependent work. Urban areas face a sharper structural gap: 115,075 unemployed versus 60,431 employed, indicating that formal-sector job creation is lagging despite higher economic activity. While rural unemployment dominates in absolute numbers, urban unemployment reflects deeper issues like skill mismatches and slow industrial growth. Policy responses must balance rural livelihood diversification with urban skill development and industrial expansion.

Year	NEET Total (%)
2018	30.8
2019	31.2
2020	30.7

Year	NEET Total (%)
2021	28.0
2022	25.8
2023	23.5
2024	24.2

Year	Male NEET (%)	Female NEET (%)	Gender Gap (Female–Male)
2018	15.3	48.1	+32.8
2019	16.0	47.6	+31.6
2020	17.7	45.7	+28.0
2021	13.7	43.5	+29.8
2022	11.2	41.8	+30.6
2023	10.2	38.1	+27.9
2024	10.3	39.0	+28.7

Table 3

This figure illustrates the percentage of males and females aged 15–29 who are Not in Education, Employment, or Training (NEET) between 2018 and 2024.

- f. **Youth NEET (Not in Employment, Education, or Training):** India's youth NEET rate dropped from 31% in 2018 to 24% in 2024, a modest but meaningful improvement. Men's NEET fell from 15% to 10%, yet women's remained high at 39%, leaving a persistent 30-point gender gap. Nearly four in ten young women are still outside work or education, highlighting entrenched barriers such as limited access to higher education, early marriage, and restricted formal job opportunities. While overall integration is improving, this gendered gap underscores the urgent need for targeted, inclusive interventions to ensure growth benefits are equitably shared.

Year	Maharashtra	Tamil Nadu	Uttar Pradesh	Karnataka	Bihar	Arunachal Pradesh	Mizoram	West Bengal	Odisha
1993–94	101,767	51,643	70,935	36,982	20,780	812	—	48,398	16,185
2004–05	370,023	193,645	231,029	148,729	70,167	3,188	2,400	190,029	67,987
2011–12	1,126,595	674,478	645,132	554,952	228,497	10,229	6,404	473,205	204,226
2019–20	1,788,569	1,099,402	980,279	1,034,380	359,241	17,087	15,663	676,434	345,645
2023–24	2,079,756	1,383,808	1,206,156	1,263,925	411,359	—	—	791,144	456,708

Table 4

This figure compares NSDP growth for major Indian states over three decades.

- g. State-Level NSDP Growth (1993–94 to 2023–24):** State-level economic growth shows both progress and disparity. Maharashtra, Tamil Nadu, Karnataka, and Gujarat lead in absolute output and demonstrate very high growth, driven by industrialization, IT, and services. Large states like Uttar Pradesh and West Bengal grew moderately, constrained by size and slower structural transformation. Smaller north-eastern states show rapid relative growth, reflecting low starting bases. Agriculture-heavy states like Bihar and Odisha lag behind, highlighting the ongoing need for productivity improvements and industrial diversification. Overall, India's economic expansion is robust but uneven, emphasizing that regional development strategies must accompany national growth.

State	1993–94 NSDP (₹ Cr)	2023–24 NSDP (₹ Cr)	Growth Intensity
Maharashtra	101,767	2,079,756	● Very High
Tamil Nadu	51,643	1,383,808	● Very High
Gujarat	42,560	1,114,179	● Very High
Karnataka	36,982	1,263,925	● Very High
Uttar Pradesh	70,935	1,206,156	● High
West Bengal	48,398	791,144	● Moderate

State	1993–94 NSDP (₹ Cr)	2023–24 NSDP (₹ Cr)	Growth Intensity
Bihar	20,780	411,359	● Moderate
Odisha	16,185	456,708	● Moderate
Kerala	23,851	1,383,808	● High
Delhi	18,967	590,836	● High
Smaller NE States	812–364 (range)	20,230–70,197	● Low

Table 5

This figure presents employment and economic expansion across states from 1993–94 to 2023–24.

- h. Growth Intensity:** The Growth Intensity legend reveals significant disparities in economic expansion across Indian states over the period under review. Smaller states, particularly in the Northeast such as Sikkim, Mizoram, and Tripura, exhibit very high growth intensity, reflecting their low initial economic base and rapid relative expansion. Industrial and IT-driven states like Karnataka, Tamil Nadu, and Gujarat also show high growth, driven by modernization, infrastructure development, and service sector growth. In contrast, larger states such as Maharashtra, Uttar Pradesh, and West Bengal, despite having the highest absolute NSDP values, display moderate growth intensity, highlighting the impact of the law of large numbers on percentage growth. States like Bihar, Odisha, and Chhattisgarh register low growth intensity, pointing to slower industrialization and continued dependence on agriculture. Overall, the legend underscores that while absolute economic size matters, relative growth intensity offers critical insight into catch-up dynamics, development potential, and regional economic disparities across India.

5. Discussion

India's economy has been growing rapidly, and aggregate unemployment remains relatively low at 4.3%. At first glance, this seems to confirm the classic inverse relationship between GDP growth and joblessness. However, this headline figure masks deep structural challenges. Sector-specific trends and persistently high youth unemployment suggest that growth is not equally translating into meaningful employment for all segments of the workforce.

Despite strong performance in high-value sectors like IT and finance, which drive GDP growth, job creation for young workers remains limited. These knowledge-intensive industries demand skills and experience most new entrants do not yet possess. Meanwhile, capital-heavy sectors like manufacturing and agriculture are not absorbing enough young workers, leaving many unemployed or underemployed.

Employment elasticity varies significantly across industries. Services show limited job creation relative to output, while manufacturing could offer more opportunities if supported by effective policies. Global competition and automation, however, have constrained manufacturing's ability to generate jobs in recent years. Understanding which sectors genuinely create youth employment is key to aligning growth with inclusive labour market outcomes.

Official unemployment statistics may understate labour market stress. Underemployment, discouraged workers, and low-productivity employment are often overlooked, especially among youth and informal workers. Relying on headline unemployment alone risks underestimating the scope of the challenge.

Bridging the gap between growth and employment requires more than boosting GDP. Policies must focus on developing labour-intensive sectors, improving skill alignment, and designing labour market interventions informed by accurate, age- and sector-specific data. Comparative insights from countries like Germany indicate that strategic skill development and targeted job creation can reduce youth unemployment even in slower-growing economies.

To boost youth employment, India could adopt several policies inspired by Germany's successful labour market strategies. One effective approach would be implementing a [7]⁸“Youth Guarantee” scheme—an EU-backed model that ensures every young person receives a quality offer of employment, vocational training, further education, or a traineeship within four months of leaving school or becoming unemployed. India could adapt this framework by collaborating with the European Free Trade Association (EFTA) to attract multinational corporations (MNCs) to establish operations in India, simultaneously creating domestic opportunities while enabling youth mobility abroad.

Another valuable reform would be the introduction of a dual vocational education system, where students complement academic learning with practical, industry-based experience. Rather than focusing solely on theoretical knowledge at universities, students could gain hands-on exposure through internships, apprenticeships, or shadowing programs offered in partnership with MNCs and local industries. This integration of education and work experience would enhance employability and ensure graduates enter the labour market with relevant skills, thereby reducing youth unemployment.

Finally, these initiatives should be extended to rural areas to bridge the persistent urban–rural knowledge and opportunity gap. By ensuring that young people outside metropolitan regions have equal access to vocational training and corporate partnerships, India could foster more inclusive and geographically balanced employment growth.

India's growth is impressive, but it is not yet fully inclusive. Rapid GDP expansion is benefiting experienced workers disproportionately while leaving many young entrants behind. Sectoral analysis, better labour market metrics, and policy innovation are critical to ensuring that economic growth translates into meaningful employment for India's burgeoning youth population.

6. Future Work

This study establishes a foundation for research on the relationship between economic growth and employment in India, particularly regarding youth unemployment, but there are several ways the analysis can be extended and refined.

Firstly, to provide practical context to the findings, future research could involve collaboration with industry bodies or government agencies, similar to approaches taken in studies where researchers worked alongside firms or ministries to gain access to granular labour data. By working with organizations such as the Ministry of Skill Development and Entrepreneurship or large private-sector employers, researchers could obtain more detailed information on recruitment patterns, skill requirements, and sectoral employment trends. This would allow for more precise estimates of how economic growth translates into meaningful job creation, particularly for young workers entering the labour force.

Secondly, the current study relies on publicly available datasets and national surveys, which may not fully capture underemployment, discouraged workers, or informal-sector employment. Expanding the research to include longitudinal microdata or firm-level employment records could improve the representativeness of the analysis and help overcome limitations of aggregate statistics.

⁸ Bundesministerium für Arbeit und Soziales (admin) (2024) *The Youth Guarantee*. [online] BMAS website (Germany). Available at: <https://www.bmas.de/EN/Europe-and-the-World/Europe/Employment-and-social-policy-in-the-EU/youth-guarantee.html> [Accessed 1 November 2025].

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