

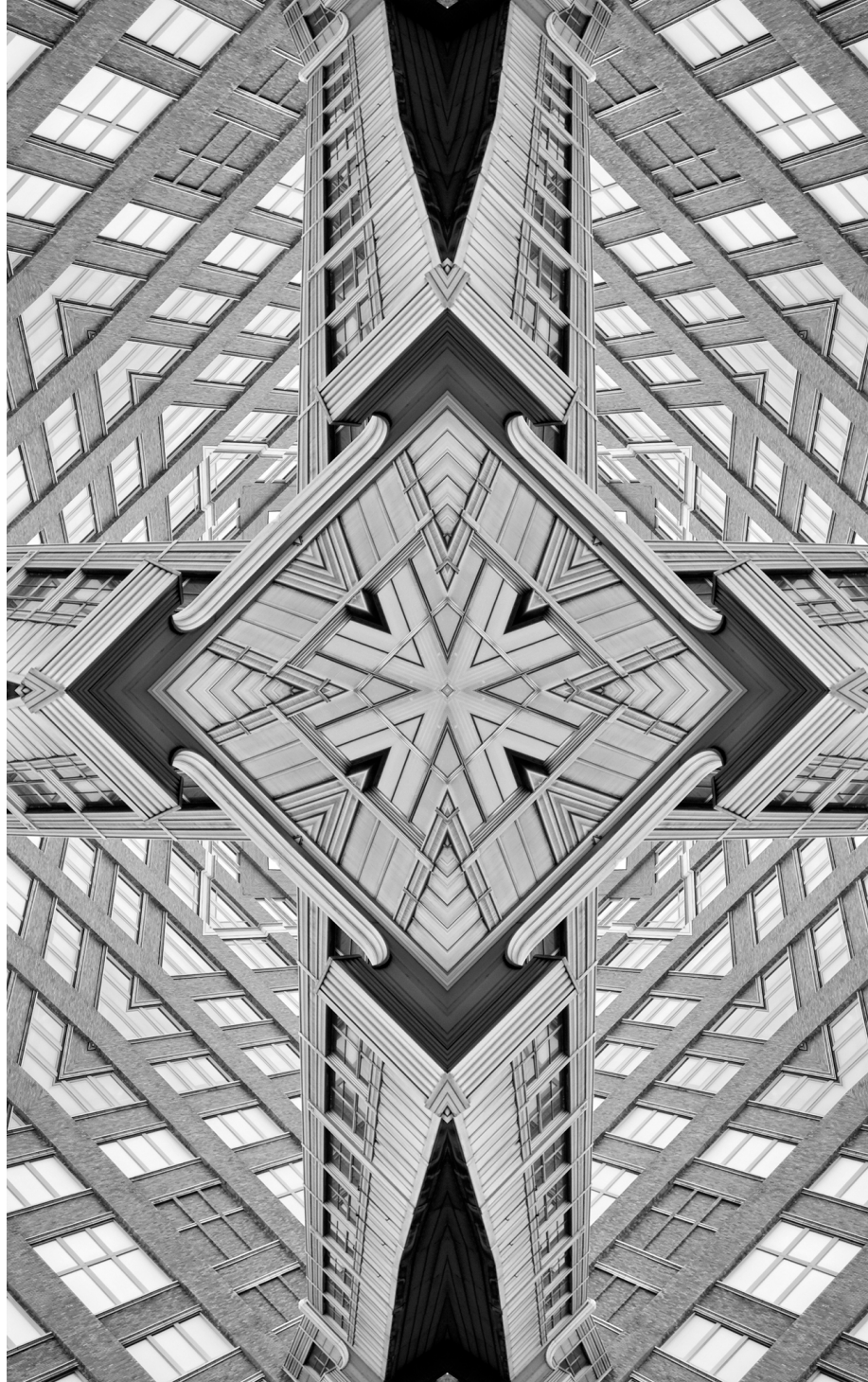
# Issue

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# Brief

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**ISSUE NO. 792**  
**APRIL 2025**



# Growth in India: Jobless or Job-Full? Observations from Empirical Data

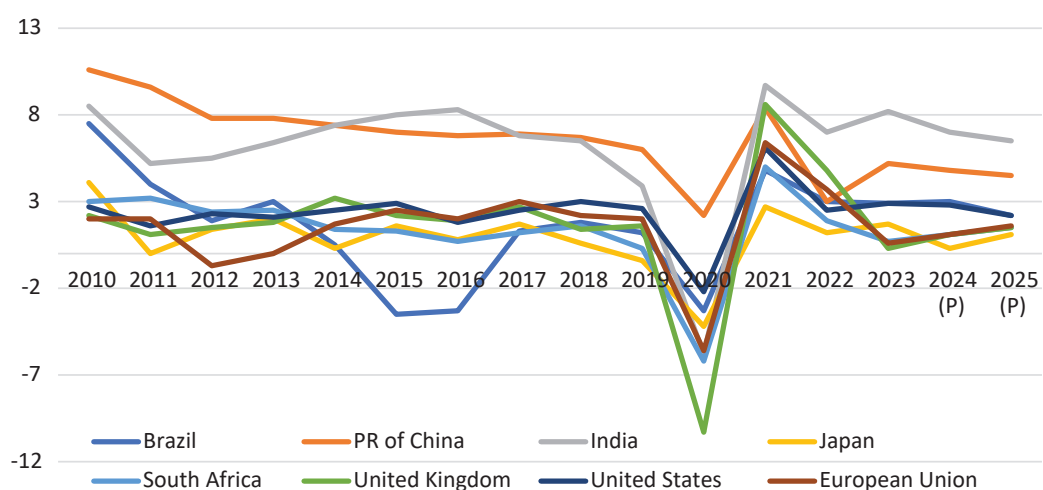
**Nilanjan Ghosh and  
Arya Roy Bardhan**

## **Abstract**

The hypothesis of “jobless growth” has been central to recent debates around India’s economic development trajectory. This brief undertakes an evaluation of secondary data to test whether India is indeed experiencing jobless growth. The authors find that the characterisation of “jobless growth” is both reductive and empirically unsound, and India’s employment landscape has experienced notable expansion alongside robust Gross Domestic Product growth. However, job creation needs to be sustained at a high level for the country to reap its so-called “demographic dividend”. Furthermore, the complexities of the Indian labour market could impede the potential for progress, and a comprehensive understanding of this dynamic necessitates a detailed interrogation of data trends, theoretical frameworks, and labour market realities.

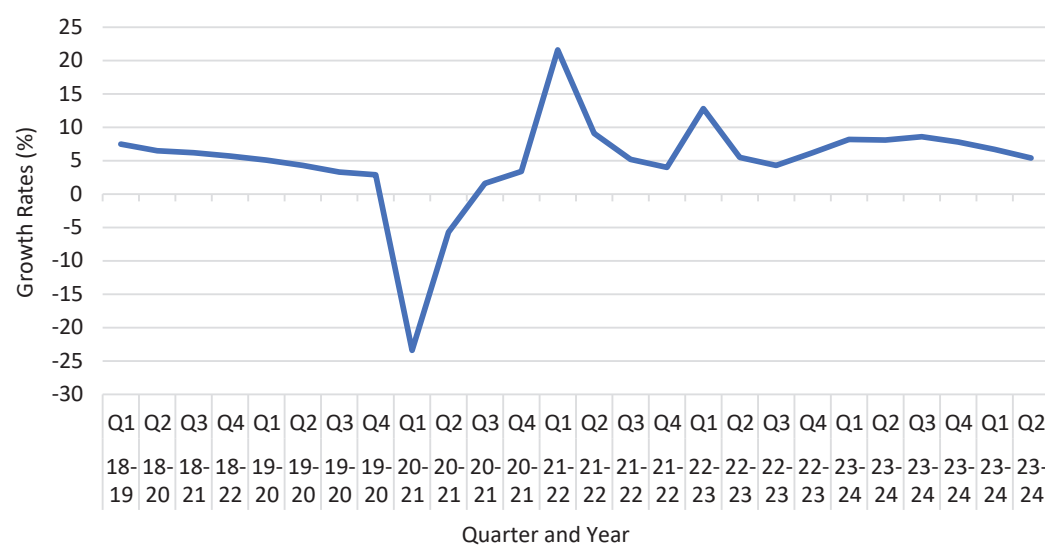
India has consistently been the fastest growing among all the major economies of the world, with growth projected at 7 and 6.5 percent for 2024-25 and 2025-26, respectively (see Figure 1).<sup>1</sup> However, following robust growth in the post-pandemic recovery period, the economy is experiencing slower-than-expected growth over the first two quarters of 2023-24 (see Figure 2).<sup>2</sup>

### Figure 1: Real GDP Growth (Annual Percent Change)



Note: (P) indicates projections; Source: IMF<sup>3</sup>

**Figure 2: Quarter-Wise Real GDP Growth Rates (%) for FY 2018-19 to FY 2024-25 (Q2) (Constant Prices with Base Year 2011-12)**



Note: Growth rates calculated with respect to previous year same quarter. Q1: Quarter 1; Q2: Quarter 2; Q3: Quarter 3; Q4: Quarter 4; Source: MoSPI, India<sup>4</sup>

At the same time, it is often posited that Gross Domestic Product (GDP) fails to measure the true state of development of an economy and that multiple macroeconomic parameters need to be considered to make a fairer assessment.<sup>5,6</sup> One crucial parameter is the level of employment (or unemployment) in the economy, which has both economic and social relevance.<sup>7</sup> Higher employment not only indicates a healthy economy but also serves as a means to spur consumption and economic activity. Therefore, it is important that growth generates productive and remunerative employment. This aspect underlies all the debates about the possibilities of “trickling-down” of growth<sup>8</sup> and serves as an entry point for the academic analysis undertaken in this brief. From a policy standpoint, this brief responds to the ongoing debate on “jobless growth” in India.<sup>9,10</sup> Despite the phenomenal economic growth in India over the last decade (with the exception of 2020, which was the year of the COVID-19 pandemic), it has been argued that there has not been a concomitant growth in employment and, indeed, that unemployment has increased.<sup>11,12,13</sup>

This brief argues that the hypothesis of “jobless growth” has been predicated on poor interpretations of survey data. The proponents of this hypothesis claim that the post-reform era growth, despite being robust, did little to increase employment in the country. They are of the view that the shift from agriculture to a services-centric growth model has constrained India’s capacity to generate jobs, owing to the low labour intensity in services.<sup>14</sup> While it is true that services are more skill-intensive than manufacturing, it is not more capital-intensive, as shown in various studies.<sup>15,16,17</sup> Data shows that the economy’s labour income share has remained constant.<sup>18</sup> This brief supports this argument with RBI-KLEMS<sup>a</sup> data, further corroborated by figures from the International Labour Organization (ILO).

The Reserve Bank of India’s (RBI) KLEMS database offers evidence of substantial employment growth. Between 2016-17 and 2022-23, employment levels rose by 36 percent, creating 170 million additional jobs,<sup>19</sup> while GDP experienced an average annual growth rate exceeding 6.5 percent, marking a departure from the stagnation from 2010 to 2016. The Worker Population Ratio (WPR), derived from Periodic Labour Force Survey (PLFS) data, also registered an increase of 9 percentage points between 2017 and 2023.<sup>20</sup> These data points invalidate claims of systemic joblessness and emphasise a labour market in recovery.

Meanwhile, proponents of the ‘jobless growth’ hypothesis have alleged data manipulation or overestimation, citing the absence of a Population Census since 2011.<sup>21,22</sup> However, triangulation of datasets—including PLFS and KLEMS—validates the directional reliability of these employment figures. The KLEMS dataset aligns with the PLFS data, as the former uses the PLFS and the Employment-Unemployment Survey (EUS) figures to produce the macro-level estimates of the number of employed people.<sup>23</sup> The consistency of these indicators, when viewed against broader macroeconomic trends, suggests that economic growth has been equitably distributed across sectors and income groups.

Additionally, this brief has identified premature manufacturing development and the maturing of the demographic dividend as two phenomena that will affect the evolution of India’s employment landscape and potentially impede the transformation to ‘Viksit Bharat’.

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a RBI-KLEMS stands for Reserve Bank of India’s (RBI) Capital (K), Labour (L), Energy (E), Materials (M), and Services (S) database. The RBI uses this database to measure productivity growth in India.

# The Consumption Challenge to the “Jobless Growth” Narrative

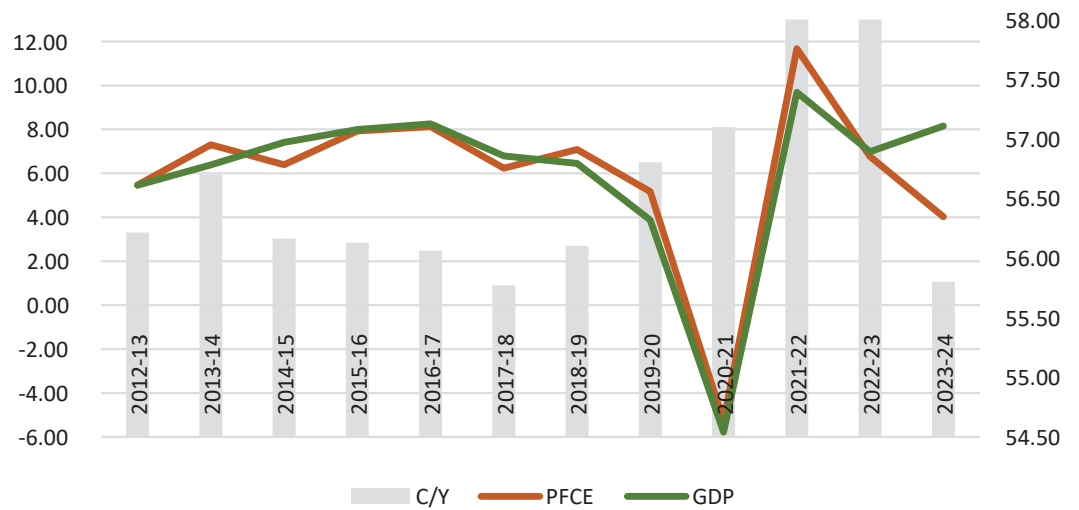
India’s growth model has been primarily consumption-driven. Consumption stimulates growth through two channels. First, it directly enhances GDP through expenditure. The standard national-income accounting identity shows how rising consumption directly raises output. Second, the nature of the consumption function, i.e., the behavioural assumptions about consumption, implies multiple stages of positive shocks to output—which means that consumption has an autonomous and income-dependent component. Axiomatically, the GDP increases by the same amount as consumption at the very initial stage. In the following stages, the higher income stimulates consumption which, in turn, boosts GDP through the multiplier effect.

The ‘multiplier effect’ of consumption prevails with the expansion of any component of GDP. This multiplier effect is directly proportional to the marginal propensity to consume (mpc), i.e., the percentage rise in consumption due to a percentage increase in (disposable) income. In other words, mpc is the propensity to spend out of any income change. The mpc has been empirically established to be inversely proportional to income level; people tend to spend a lower fraction of their income as their income level rises.<sup>24</sup> This follows directly from universal preference patterns, which suggest that people will first spend on necessary goods, and as their income rises, they tend to save more.<sup>25</sup>

It can be inferred that people entering the workforce will be at the initial levels of earnings and will have a higher mpc compared to people with higher incomes. As long as there are new entrants in the workforce or the creation of jobs across the skills spectrum, consumption will reserve a major share in GDP and drive growth. The parallel movement of GDP and Private Final Consumption Expenditure (PFCE), as evident in Figure 3, suggests that there has been continued expansion of employment. The expanded employment generation in the period following 2017-18 also resulted in a higher share of consumption in GDP.

# The Consumption Challenge to the “Jobless Growth” Narrative

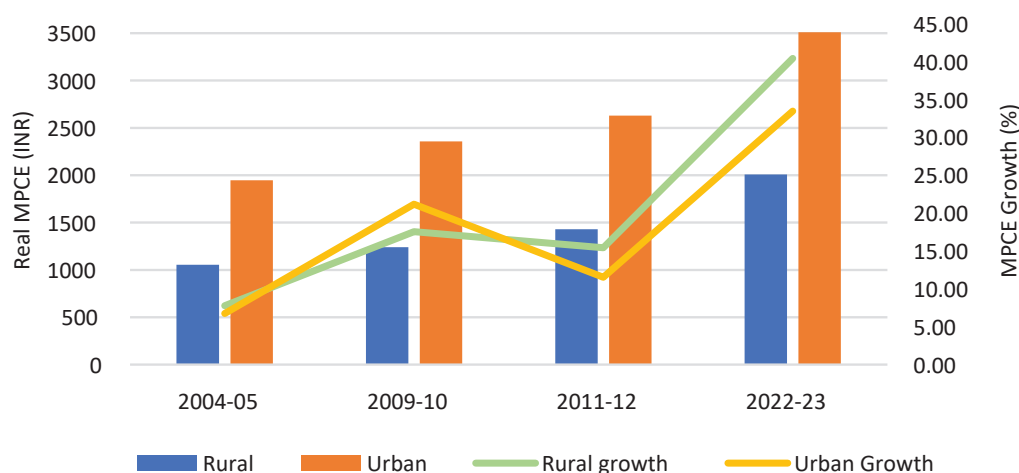
### Figure 3: Consumption and GDP Growth—PFCE-GDP Ratio



Source: MoSPI<sup>26</sup>

From a theoretical perspective, therefore, the assertion that India is undergoing jobless growth is contrary to the mechanics of a consumption-driven economy. Employment creation is a prerequisite for rising household incomes which, in turn, propel consumption. It is not plausible for consumption to grow other than from the creation of new jobs. Data from the Household Consumption Expenditure Survey (HCES) (see Figure 4) underscores this interdependence, revealing sustained growth in both rural and urban consumption over the past decade. This parity with GDP growth highlights the symbiotic relationship between employment generation and economic expansion.

**Figure 4: Real Monthly Per Capita Consumption Expenditure and its Growth Rate**



Source: HCES<sup>27</sup>

Assertions that employment gains are confined to unpaid or low-wage informal work<sup>28</sup> are similarly unfounded. If this were the case, household incomes would contract, and consumption patterns would deteriorate. Instead, the parallel growth of GDP and consumption—the latter contributing over 55 percent of GDP (as suggested by Figure 3)—belies such claims. This dynamic reflects a virtuous cycle, wherein job creation stimulates economic activity, further reinforcing labour market strength. Additionally, the growth in household purchasing power has disproportionately benefited lower-income groups, amplifying multiplier effects across the economy.



**E**mployment elasticity, a measure of employment responsiveness to GDP growth, serves as a critical metric in assessing the health of the labour market.

**Table 1: Arc Elasticity of Employment wrt Gross Value Added in India**

Period	Employment Elasticity with respect to Gross Value Added (GVA)
2011-12 to 2016-17	0.0080
2017-18 to 2023-24	1.1112

Source: Estimated by authors on the basis of RBI-KLEMS data

Table 1 shows estimates of employment elasticity with respect to GVA. Between 2017 and 2023, employment elasticity in India was 1.11, indicating that every 1 percent increase in GDP was accompanied by a 1.11 percent rise in employment. This marks a sharp improvement from the near-zero elasticity recorded from 2011 to 2016 as seen in Table 1, and reflects a renewed alignment between economic growth and job creation. Furthermore, this elasticity highlights the substantial contributions of labour-intensive sectors in driving employment recovery.

**Table 2: Capital and Labour Stock Over 10 Years**

Year	Capital Stock (in INR Crore)	Employment (in 1000s)	Gross Capital Formation (INR Crore)
2014-15	32,776,818	471,465	4,179,779
2015-16	34,912,282	472,041	4,422,659
2016-17	37,239,577	473,202	4,918,077
2017-18	39,750,221	474,955	5,053,181

# Quantifying the Growth-Employment Nexus: Employment Elasticity and Capital Dynamics

Year	Capital Stock (in INR Crore)	Employment (in 1000s)	Gross Capital Formation (INR Crore)
2018-19	42,592,390	492,610	5,886,657
2019-20	45,335,509	534,434	5,855,617
2020-21	47,618,471	565,601	5,463,457
2021-22	50,544,413	577,536	7,193,484
2022-23	53,658,182	596,689	8,564,099
2023-24 (P)	57,116,415	643,348	N.A

N.A. - Not Available. Source: RBI KLEMS<sup>29</sup>

Table 2 shows the changes in labour and capital stock in the last decade. Capital stock has grown by 74 percent, while employment<sup>b</sup> has increased by over 36 percent. This implies an increase in capital-intensity or capital-labour ratio by almost 28 percent, as estimated from Table 2. This 28-percent growth in capital intensity partly explains the robust growth rates.

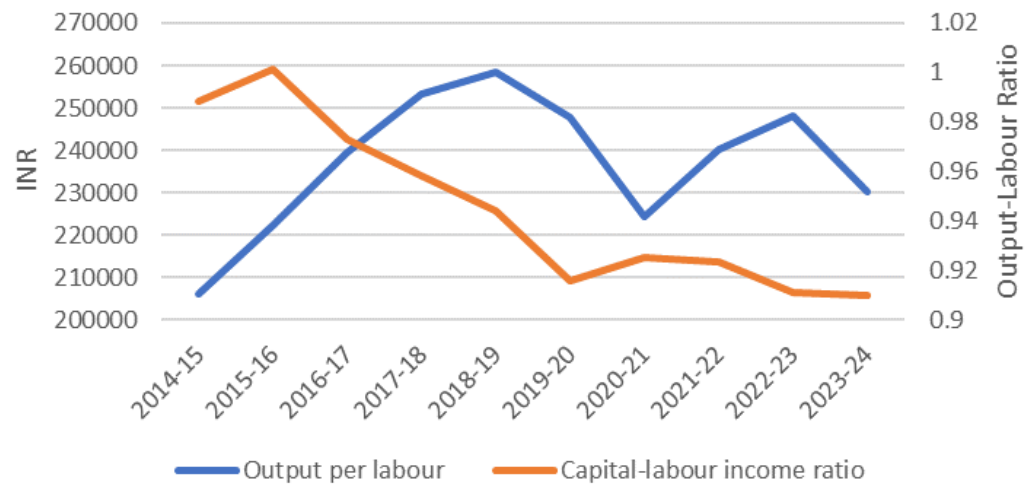
The capital-labour ratio or capital intensity reflects multiple features of the economy. First, it is the key variable in the Solow model of growth.<sup>c,30</sup> An economy continues to grow till its capital-labour ratio reaches a steady level (or zero growth). Second is the role of capital-labour ratio in explaining labour productivity; a higher capital per worker can result in an increase in labour productivity, which is reflected in higher output per worker over time. In terms of factor substitution, this entails movement towards parity, i.e., more capital is now required to replace workers.

Figure 5 shows that between 2014-15 and 2023-24, the capital intensity increased by 27 percent, while the capital-labour income ratio remained relatively stable, fluctuating between 0.92 and 0.97. Meanwhile, capital stock expanded by 74 percent. Our analysis of National Statistical Office (NSO) data reveals that gross capital formation grew by 104 percent till 2022-23 from 2014-15—both significantly outpacing the growth in capital intensity. These trends, coupled with the static nature of the capital-labour income ratio, indicate that despite greater capital deepening in the economy, both labour employment and labour share in national income have grown.

<sup>b</sup> Here, employment means the number of jobs in the economy and not the employment rate expressed as a fraction of the working population.

<sup>c</sup> The Solow growth model, or Solow-Swan model, is an economic model that explains long-run economic growth by focusing on capital accumulation, labour or population growth, and technological progress, ultimately determining a country's capital-to-labour ratio.

**Figure 5: Capital-Labour Income Ratio and Output-Labour Ratio**

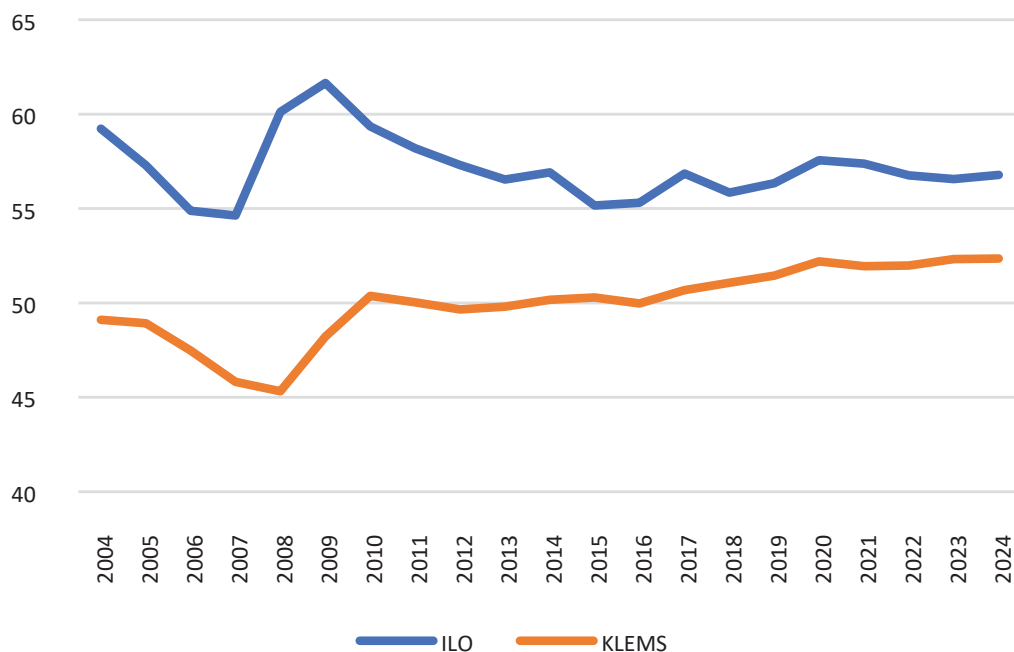


Source: MoSPI

The consistent labour-income share is evident from data from both the RBI and ILO. According to the ILO, labour-income share stagnated around 56 percent over the last decade.<sup>31</sup> The ILO tends to overestimate the labour-income share due to its broader macroeconomic estimation techniques, while the RBI uses sectoral estimates to arrive at weighted numbers at the macro level. The steady labour-income share against slow wage growth implies that employment has increased, since labour income is the weighted average of all wages with labour input as the weights. Greater employment has allowed labour income to remain constant as a proportion of national income against the backdrop of lower growth in wages. This also aligns with the theory of labour economics, which states that higher labour employment will be associated with lower real wages.

# Quantifying the Growth-Employment Nexus: Employment Elasticity and Capital Dynamics

**Figure 6: Labour-Income Share**




Source: KLEMS and ILO<sup>32</sup>

Labour productivity, measured as the ratio of value added to persons employed, recorded a 12-percent increase in 2023-24 compared to 2014-15 but recorded a decline from 2022-23. In the absence of employment generation, specifically quality worker addition, a sustained increase in productivity is difficult. Therefore, the data suggests that the Indian economy is experiencing capital deepening, which has enhanced its labour productivity and enabled sustained growth over the last decade.

There are two distinct challenges to this growth: surplus labour in agriculture and the limited capacity of the manufacturing sector to absorb this surplus labour. Some historical characteristics need to be highlighted in this context.

# Quantifying the Growth-Employment Nexus: Employment Elasticity and Capital Dynamics



The focus on and state control of heavy industries in the post-independence period hampered exports and stymied the industrial sector.<sup>33</sup> Despite liberalisation, delicensing, and broader decontrol, the post-reform period did not result in a growth in the share of manufacturing. The simplest explanation is that India had missed the opportunity. Rigid labour codes and lack of market freedom created a highly skewed manufacturing sector,<sup>34</sup> which is still weighing down on India's current account—merchandise exports lag behind services exports.<sup>35</sup> This also exacerbated the first problem, with unskilled agricultural labour being unable to shift either to the manufacturing sector due to a paucity of jobs or to the services sector due to a lack of skills. Therefore, creating a manufacturing employment base is necessary to address export expansion and, in turn, ensure growth. Manufacturing expansion can also catapult the capital-labour ratio, translating into faster growth.

# The Potential Demographic Dividend and Challenges

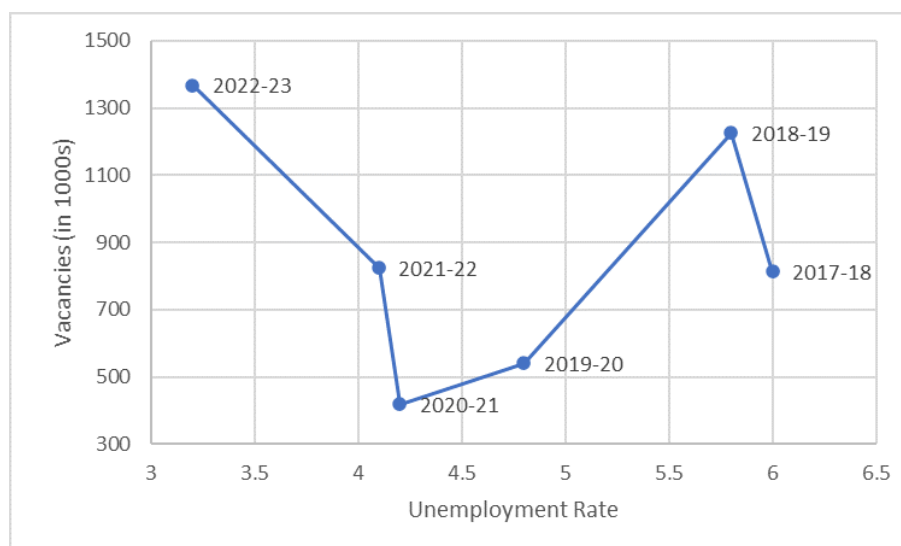
According to the 2019 Population Projection Report,<sup>36</sup> 57.6 percent of India's population in 2036 will be in the 20-59 years age group. Given the projected population of 1.52 billion in 2036, the working-age population will be around 880 million against the estimated 795 million. With an expected increase in the Labour Force Participation Rate (LFPR), an entry of at least 100 million people into the workforce should be expected in the coming decade. This aligns with the 2019-20 Economic Survey projections,<sup>37</sup> which also made a case for rethinking domestic policy to fit the needs of the demographic transition.

The economic implications of adding roughly 10 million workers annually over the next decade are discussed in the following paragraphs. This demographic dividend—which could potentially arise from a population characterised by a large and young labour force—presents a pivotal opportunity for sustained economic growth but is also beset with challenges. ILO research suggests that youths are more likely to be employed in vulnerable occupations in the informal sector.<sup>38</sup> As of 2017-18,<sup>39</sup> India's informal or unorganised sector contributed over 52 percent of Gross Value Added (GVA). Informal workers (i.e., workers with no contract, paid leaves, or social security) constituted almost 90 percent of India's employment, as of 2017-18.<sup>40</sup> It is imperative to address the challenges faced by the informal sector. Policies to formalise employment, improve job quality, and ensure equitable wage structures are essential to bridge the disparities between potential and realised economic outcomes.

To better explain the current situation of the Indian labour market, this brief uses the Beveridge curve. The Beveridge curve shows the relationship between vacancies and unemployment in an economy. Axiomatically, the curve should be negatively sloped,<sup>41</sup> i.e., there should be a higher number of vacancies when the unemployment rate is low, and vice versa. The job market is defined as “tight” when there are few vacancies and a high unemployment rate and “slack” when vacancies are abundant and the unemployment rate is low. The Beveridge curve for India is presented in Figure 7 by using employment exchange notifications as a proxy for job vacancies.

# The Potential Demographic Dividend and Challenges

**Figure 7: India's Beveridge Curve**



Source: *Employment Exchange Statistics*<sup>42</sup> and *Employment Unemployment Situation in India*<sup>43</sup>

This curve is based on time-series data from 2017-18 to 2022-23. For better representation, it is structured as a line diagram; the vertical axis shows vacancies, and the horizontal axis shows unemployment rates. The graph shows a downward trend in unemployment, whereas there is no specific trend in the vacancies. Therefore, the curve does not exhibit a linear downward slope, and tight and slack phases occur only at the beginning (2017-18) and the end (2022-23).

While the curve does not exhibit a specific trend, in the post-pandemic period, the market became slacker with lower unemployment and increased vacancies. The lack of a specific relation (or inverse relation) between vacancy and unemployment rates corroborates that India's employment problem is indeed of a qualitative nature. The search-and-match model<sup>d</sup> underlying the Beveridge curve suggests that the "transaction cost" of employment is high,<sup>44</sup> i.e., firms and seekers are unable to meet one another's needs, thereby resulting in a disequilibrium in the labour market in the macroeconomy. This poses a threat to India's emerging demographic dividend. In the absence of human capital enhancing policy, the dividend might be squandered and weigh down the government budget.

<sup>d</sup> The 'search-and-match' model of unemployment focuses on frictional unemployment, where unemployment arises from the time and effort it takes for workers and firms to find each other and agree on terms, rather than a lack of jobs.

# The Potential Demographic Dividend and Challenges

Capitalising on the demographic dividend requires strategic investments in education, vocational training, and skill development. Strengthening healthcare infrastructure and social-protection mechanisms is equally critical for fostering a resilient and productive workforce. An expansive social safety net can mitigate the disruptive impact of economic transitions, ensuring that employment gains are broadly shared. However, before considering social security, it is important to prioritise human capital development while simultaneously mitigating labour market distortions, including removing adverse selection in signalling and moral-hazard risks with adequate safeguards.<sup>45</sup>



The “jobless growth” hypothesis fails scrutiny when subjected to empirical validation and theoretical analysis. India’s growth trajectory has been characterised by rising job levels, robust consumption growth, and high employment elasticity. While challenges remain in fully leveraging the country’s demographic dividend, the overarching narrative decisively refutes the notion of systemic joblessness.

Policy interventions are necessary to maintain employment growth. The two broad concerns that have emerged from this discussion are the sectoral imbalance in employment and the challenges to realising the demographic dividend. Although the current policy structure and pace might be able to generate steady employment, there are two broad recommendations that can help realise the goal of Viksit Bharat through employment generation.

Studies have corroborated the importance of the manufacturing sector in job creation.<sup>46,47,48</sup> Although India’s historical economic stance and policies led to an abrupt shift from agriculture to services, the current government’s focus on self-sufficiency and reinvigorating industry is economically well-founded. In the last decade, policy frameworks have played an instrumental role in shaping employment trajectories in India. Initiatives such as Make in India, Skill India, and the Production Linked Incentive (PLI) scheme have catalysed job creation across diverse sectors. However, their efficacy can be enhanced through alignment with regional priorities and sectoral needs. For instance, targeted support for labour-intensive industries—such as textiles, manufacturing, and construction—alongside emerging sectors like renewable energy and digital technology could yield substantial employment dividends. Additionally, policies fostering green jobs would align employment generation with sustainability objectives.


The focus on reforming India as a manufacturing power should not hinder the country’s exceptional performance in the services sector. Since the 1990s, the sector has consistently generated around 50 percent of GVA, with a rising employment share. The higher enrolment ratios across education levels have led to the creation of a skilled class, which is being absorbed into the services sector, expanding both exports and growth. The diversion of resources from tertiary to secondary can risk the existing growth momentum of India and create a shift away from high income levels. However, given the superior growth rate in recent years, the government can increase expenditure in industry

without curtailing finance in services. The growth of the services sector can fuel industrial transformation, creating a self-reinforcing cycle that boosts economic growth.

To address the tail-heavy distribution of manufacturing enterprises, the government will need to alter market structures. Fostering an entrepreneurial ecosystem presents a vital avenue for job creation. Simplified regulatory processes, improved access to credit, and enhanced infrastructure can empower small and medium enterprises to serve as engines of employment growth. This will also allow surplus agricultural workers to shift out of unproductive activities and enhance overall labour productivity.

Finally, to utilise the demographic dividend, investment in human capital needs to be increased. Education expenditure directed towards higher education institutes, skilling organisations, and domestic professional certifications can mitigate the skills-gap portrayed in the Beveridge curve. Collaborative engagements involving government entities, private stakeholders, and civil society organisations will be pivotal in addressing skill mismatches and ensuring workforce competitiveness. Furthermore, public-private partnerships could play a transformative role in scaling training programs and fostering innovation-driven employment.

Therefore, addressing structural inefficiencies, fostering inclusive growth models, and harmonising technological advancements with labour dynamics will be critical to securing a prosperous economic future. By building on its achievements and addressing emergent challenges, India can solidify its position as a resilient and equitable economy—one that empowers its workforce and achieves its developmental aspirations.

Policy interventions in the form of higher expenditure and micro-level policies to eliminate labour quality insufficiencies are imperatives. While the demographic window of opportunity will last for almost two decades, policies need to be implemented immediately to set the foundations for Viksit Bharat. The goal to become a high-income country is dependent on ensuring the distributive nature of growth. This can be achieved through holistic employment generation. From the data presented in this brief, India does not appear to be diverging from this path. 

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