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The self-employment paradox in India: growing numbers, declining returns and deepening inequality

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ABSTRACT

Self-employment accounts for nearly 58% of India's workforce, yet this expansion has been accompanied by stagnant growth in formal job creation and widening income inequality. Using four rounds of unit-level data from the Employment-Unemployment Survey (2004–2005, 2011–2012) and the Periodic Labour Force Survey (2018–2019, 2023–2024), this study examines the growth and changing composition of non-agricultural self-employment and evaluates its implications for earnings and wage inequality. Findings show that rural non-agricultural self-employment has almost doubled from 50.9 million workers in 2004–2005 to 100 million in 2023–2024, along with a decline in casual employment. Despite this expansion, real earnings of self-employed workers have consistently remained lower than those of regular workers, and this gap has widened in sectors such as agriculture, construction, and transport. Inequality deepens in self-employment, with the Theil T index increasing from 0.316 to 0.333. Decomposition results show that while education, sector and region explain 72% of the income gap, but a substantial portion remains unexplained, reflecting power asymmetries, institutional exclusion, and structural segmentation rather than individual characteristics. The study concludes that while self-employment continues to absorb labour in the absence of adequate formal job creation, it reproduces income vulnerability and reinforces inequality within the labour market.

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1. Introduction

Self-employment constitutes a foundational component of the Indian labour economy, serving as a primary source of livelihood for millions (Gindling & Newhouse, 2014). In a diverse economic environment, a substantial segment of the workforce is moving away from agricultural activities in search of more sustainable and self-reliant livelihoods, often under precarious conditions. Within the process of changing labour market, rural India has witnessed a decline in agricultural employment without a commensurate expansion of formal wage opportunities. Consequently, non-agricultural self-employment has increasingly emerged as a critical mechanism for household sustenance and, in some instances, modest socio-economic mobility (Fields, 2023).

The recent evidence confirms the sheer scale of this phenomenon. Self-employment accounts for nearly 58% of India's total workforce (PLFS, 2024). At the same time, India Employment Report (ILO, 2024) indicates that approximately 73.2% of workers are in informal employment, either self-employed or casual labourers. Nearly four out of five self-employed workers engage within the informal economy, often without access to social protection or employment security (Chen, 2022). These patterns suggest that the expansion of self-employment is intertwined with the persistence of informality.

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However, it is crucial to problematise the narrative that a rise in self-employment automatically signals entrepreneurial dynamism or upward mobility (ILO, 2024). On the contrary, this growth often reflects conditions of pervasive underemployment and the absence of secure wage alternatives (Adjei-Mantey & Kunawotor, 2024; Das & Shrivastav, 2024). The expansion of self-employment, therefore, does not necessarily translate into equitable income growth; it may instead reinforce existing structural inequalities. Deshpande and Sharma (2016) observed that the low-income groups are disproportionately concentrated in self-employment, which tends to sustain rather than reduce disparities. Although self-employment allows for relatively easy entry and offers a degree of autonomy, it is frequently characterised by unstable earnings, limited upward mobility and negligible social protection (Ghosh & Neogi, 2017). Considering these constraints, for millions of households, especially those from low-income groups and marginalized communities, it serves less as a path to sustained progress and more as a survival strategy against extreme poverty (Adjei-Mantey & Kunawotor, 2024).

To understand this heterogeneity, the International Labour Organization (ILO, 2019) provides a useful typology, classifying self-employment into four categories: employers, own-account workers, members of producer cooperatives, and contributing family workers. This classification underlines the internal diversity of the sector. While a small, often privileged, segment operates viable, growth-oriented enterprises, the majority are engaged in low-return, survival-oriented activities (Ghosh & Neogi, 2017).

Furthermore, access to profitable opportunities is not equally distributed and is shaped by intersecting socio-economic factors such as gender, caste, and regional differences (Kundu & Chakrabarti, 2022). Despite these critical insights, the existing literature has largely been limited to descriptive characteristics, with little analytical attention paid to the structural causes and implications of the shift from agriculture to non-agricultural self-employment.

India's experience, for all its complexity, offers a valuable glimpse into the challenge facing many developing nations: how to provide dignity and security to the workforce largely engaged outside the formal system (Yerrabati, 2022). The reality on the ground is one of immense variety, where self-employment and informality are two sides of the same coin (Rawat, 2023). Hence, this study seeks to make sense of this reality by pursuing three core objectives. First, the study examines how self-employment in India has changed over time, with a specific focus on non-agricultural self-employment (non-Ag SE) across rural and urban areas between 2004–2005 and 2023–2024. Second, it investigates whether the expansion of non-agricultural self-employment has improved income outcomes by comparing earnings of self-employed workers with those in regular wage employment across sectors. Third, it analyses the extent and sources of wage inequality within this non-agricultural self-employment. By bringing these strands together, this study contributes to the broader debate on whether growth of self-employment in developing economies reflects expanding opportunity, persistent constraint, or a complex combination of both.

2. Brief review of literature

In the early 19th century, society began to move away from farms and toward factories. This shift didn't just change how people worked but has reshaped entire economies. The scholars like Lewis (1954) and Todaro (1970) saw this as a natural progression towards formal work, where wages were tied to industry and employment became more structured. But the story has unfolded differently in many low-and-middle-income countries.

However, across large parts of the world, this path hasn't led to factory floors and formal contracts. Instead, workers have ended up running small shops, selling goods on streets, or offering services from their homes. The International Labour Organization confirms that for billions of people, the informal economy isn't a fringe phenomenon, it's the main event (ILO, 2023). Lanjouw and Murgai (2009) offer a sobering take on this reality, describing much of this self-employment as a form of hidden under-employment, a recourse when adequate employment opportunities are lacking. In recent times, Kalleberg (2009) and Standing (2011) framed these workers under the broader category of precarious workers, people whose livelihoods are marked by uncertainty, instability and a lack of protection. For them, work is plentiful, but security is not.

For the millions of people across South Asia and Sub-Saharan Africa, self-employment isn't a choice born of ambition, but a choice born of necessity to survive (Adjei-Mantey & Kunawotor, 2024; Gindling & Newhouse, 2014). We can see them everywhere: a woman running a small tea stall on a rural roadside, a family selling vegetables from a cart. These are the faces of self-employment. There is no sick leave, no health insurance, no pension at the end of the road. These are the defining features of precarious work, labour that absorbs risk, not the employer or the state. For many, it becomes a trap, a way to survive, but not a way to get ahead (Acs, 2006; Adjei-Mantey & Kunawotor, 2024; Beegle et al., 2013; Block & Wagner, 2010; ILO, 2024). As Cramer et al. (2002) pointed out, this kind of work rarely lifts people out of poverty.

So why do so many people in India choose this path? In India, the reason is that for most, it's not much of a choice at all. Merfeld (2019) puts it plainly: when formal jobs aren't there, self-employment is what fills the gaps. Since 2004-05, India has observed a steady rise in people working for themselves, not due to entrepreneurship but because regular salaried jobs have dried up (Awasthi et al., 2021; Dewan, 2024). As Breman (2023) observed most self-employed workers live in a state of perpetual uncertainty, working odd jobs just to make ends meet. Even well-intentioned government programmes tell a complicated story. In 2014, India launched 'Make in India', an attempt to encourage people toward self-employment by promoting small enterprises and offering financial assistance and training (Goel & Deshpande, 2016; Sukanya, 2018). Yet, critics say such initiatives, while well-intentioned, often ignore the structural instability that traps workers in low-return activities (Awasthi et al., 2021; Imbert & Papp, 2015).

Furthermore, many studies return to the point that increases in self-employment tell us more about what's missing than about what's growing. Kannan and Raveendran (2009) and later Tripathi and Mishra (2021) argue that this trend reflects the formal economy not growing enough to create jobs, rather than a sudden surge in entrepreneurial spirit. Abraham (2017) also observed a similar pattern, with a rise in self-employment due to the lack of formal and secure salaried jobs particularly in rural areas. The result is that precarious workers in the labour force are no longer the exception but the rule. And within this already fragile space, some are more vulnerable than others. Women constitute a large part of the informal workforce, but they are often placed in invisible roles, such as working from home, helping with family chores without pay, or doing housework that is poorly paid and has little say in how the work goes on. (Georgellis & Wall, 2005; ILO, 2019). The scholars like Chen (2022) have long highlighted how women in informal self-employment face a double burden; they are precarious workers in the economy and subordinate voices in their own households.

This necessity-driven version of self-employment not only reflects the inequalities present in Indian society but often deepens them. This gap between what self-employed workers earn and what regular wage workers bring home remains stubbornly wide (PLFS, 2024; Tripathi & Mishra, 2024). Yet, at the societal level, self-employment provides livelihood opportunities, but also replicates the hierarchical inequalities based on caste, class, education and gender that shape India's labour market. These overlapping inequalities show that self-employment reflects the country's entrenched social structure rather than transforming it. (Tripathi & Mishra, 2021). The studies on precarious workers remind us that this isn't just an economic condition, it's a social location.

As Standing (2011) argues, the 'precariat' is not simply a group of people with insecure jobs; it is a class-in-the-making, defined by chronic uncertainty and a fractured relationship with labour and society. Although several studies have traced the rise of self-employment in India, fewer have focused on the non-agricultural self-employed—the millions running small shops, driving auto-rickshaws, stitching clothes at home—and examined about their income, their vulnerability, and the inequalities they face (Das & Shrivastav, 2024; Dewan, 2024). Even fewer have examined them through the lens of precarity, asking not only how many people are in this situation, but also what their daily lives look like and what their future holds (Rawat, 2023).

This study extends earlier research on self-employment in India (Das & Shrivastav, 2024; Dewan, 2024; Goel & Deshpande, 2016) by having a closer look at non-agricultural self-employment in India, what it means for those who depend on it, how it shapes their lives, and what it reveals about inequality in a rapidly changing but deeply divided country. Further, this paper contributes to the ongoing discussion by situating these workers within the broader conversation on precarious work and exploring its implications for livelihoods, labour dynamics and inequality in contemporary India.

3. Concept, data and methods

3.1. Conceptual and analytical framework

To understand self-employment in India, this study integrates classical and contemporary labour market theories to analyse non-agricultural self-employment in India. Lewis (1954) and Harris and Todaro (1970) provide basic insights into the shift away from agriculture, but do not explain persistent inequalities within the non-agriculture sector. First, segmented labour market theory distinguishes the primary sector characterized by stable, protected employment and the secondary sector as work that is easy to enter but difficult to make a living from, marked by precarity, low wages and limited mobility (Doeringer, 1986). In India, non-agricultural self-employment constitutes a secondary segment.

The second lens focuses on informality and precarity, which suggest informal work not as a residual category but as integral to contemporary capitalism (Castells & Portes, 1989). It functions as a risk-shifting mechanism, transferring uncertainty from capital and state onto workers (Kalleberg, 2009; Standing, 2011). For many self-employed workers, this isn't a temporary phase; it's just how things are. The third lens concerns social reproduction of inequality, which recognizes that labour market outcomes are shaped by social structures, caste, class and gender (Thorat & Newman, 2007). These factors determine both sectoral entry and return, explaining why self-employment often reproduces existing hierarchies.

Together, these theories provide the analytical foundation for the study, as presented in Figure 1. From segmented markets, we expect to find lasting earning gaps between regular workers and the self-employed; this is where Oaxaca-Blinder decomposition is used. From precarity, we expect to see wider income swings among the self-employed, which we explore using Lorenz curves and inequality decomposition. And from social reproduction, we expect factors like gender and caste to determine who goes into self-employment and how much they earn.

3.2. Data source

The National Sample Survey Office (NSSO) under the Ministry of Statistics and Programme Implementation (MoSPI), Government of India, has been carrying out large-scale surveys on various socio-economic issues in India since 1950. The first quinquennial survey on employment and unemployment was undertaken in 1972–1973, following the recommendations of the 1970 Expert Committee on Unemployment Estimates. The most recent survey in this series was carried out in 2011–12. To enhance the timeliness and regularity of labour market data, the NSSO introduced the Periodic Labour Force Survey (PLFS) in 2017. Since its inception, the PLFS has been conducted annually and has become the primary source of data for analysing employment and unemployment trends in the country. The information derived from PLFS is crucial for shaping government policies, informing planning exercises, and supporting academic research.

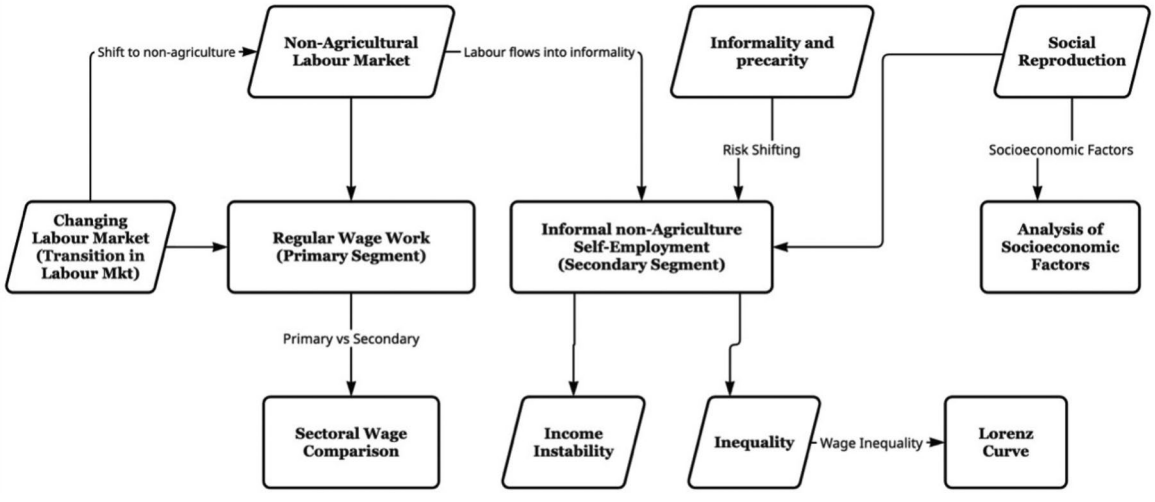

Figure 1. The analytical framework for assessing self-employment in India. *Source:* Created by the author's.

This study utilises data from surveys conducted by NSSO, specifically the data from the Employment Unemployment Survey (EUS) 2004-05 to the PLFS 2023–2024 to scrutinise the evolution of self-employment over the last two decades. The 2004–2005 survey corresponds to the phase of rapid economic growth, while the 2011–2012 survey captures the post-global financial crisis period. The recent rounds of survey, i.e. PLFS 2018–2019 and PLFS 2023–2024, provide valuable insights into the structural shifts in employment patterns preceding and following the COVID-19 pandemic.

Both the EUS and PLFS follow a stratified multi-stage sampling design, with distinct procedures for rural and urban areas. In urban regions, PLFS employs a rotational panel sampling method, where each selected household is surveyed four times over a twelve-month cycle. In contrary, rural areas are covered using a single-visit sampling method, with each selected household visited once during the survey period. The sample for all eight quarters is pre-determined for each two-year survey period using a uniform sampling frame. Each quarter, approximately one-fourth of the total rural sample is surveyed that enabled the generation of independent quarterly estimates.

The PLFS encompasses the entire Indian Union, except for a few villages in the Andaman and Nicobar Islands that remain inaccessible throughout the year due to geographical constraints. In the EUS 2004–2005, the survey collected data from 602,834 individuals, while the 2011–2012 round included 456,999 respondents across the country. However, the PLFS 2018–2019 and PLFS 2023–2024 surveyed 420,757 and 418,159 individuals, respectively. These large and representative samples provide an inclusive view of the evolving patterns of employment across rural and urban India (NSSO, 2005; 2012; PLFS, 2019; 2024). Alongside the survey data, official Union Budget documents were used to compile the series on budgetary allocations for self-employment generation schemes.

3.3. Methods

This study follows a step-by-step approach. It starts with broad patterns in the labour market and moves to more detailed analysis in non-agricultural self-employment, comparing earnings, measuring inequality, explaining wage gaps, and a robustness check to assess whether the results hold up under scrutiny. All estimates use unit-level survey data as explained above from EUS and PLFS datasets, applying the sampling weights provided in each dataset.

3.3.1. Who works and where?

The analysis begins by estimating the Workforce Participation Rate (WPR) and mapping the broad structure of employment across rural and urban India. The WPR is calculated as:

$$WPR = \frac{W}{P} \times 100$$

where W is the number of workers and P is the total population. Workers are classified into three broad categories, namely self-employed, regular wage workers, and casual labourers, based on usual principal and subsidiary status. The proportion of self-employed workers (PLFS, 2024) in total employment is estimated as:

$$SE = \frac{SEW}{TW} \times 100$$

where SEW denotes self-employed workers and TW denotes total workers. Within self-employment, the proportion engaged in non-agricultural activities is estimated as:

$$NonAgSE = \frac{NASEW}{SEW} \times 100$$

where $NASEW$ denotes non-agricultural self-employed workers. These measures provide the basis for the descriptive trends reported in Figures 2–4 and Supplementary Appendix Table A1.

3.3.2. Identifying non-agricultural self-employed workers

To be more precise about which workers are counted as non-agricultural self-employed, industry codes are used from the National Industrial Classification (NIC). Workers are identified at the two-digit and three-digit level under the Usual Principal and Subsidiary Status (UPSS) framework. This ensures that workers in agriculture, allied activities, and non-agricultural sectors are correctly separated.

Once identified, the study looks at how these non-agricultural self-employed workers are spread across different industries, manufacturing, construction, trade, transport, and other services. These findings appear in Figures 3 and 4 and Supplementary Appendix Table A2.

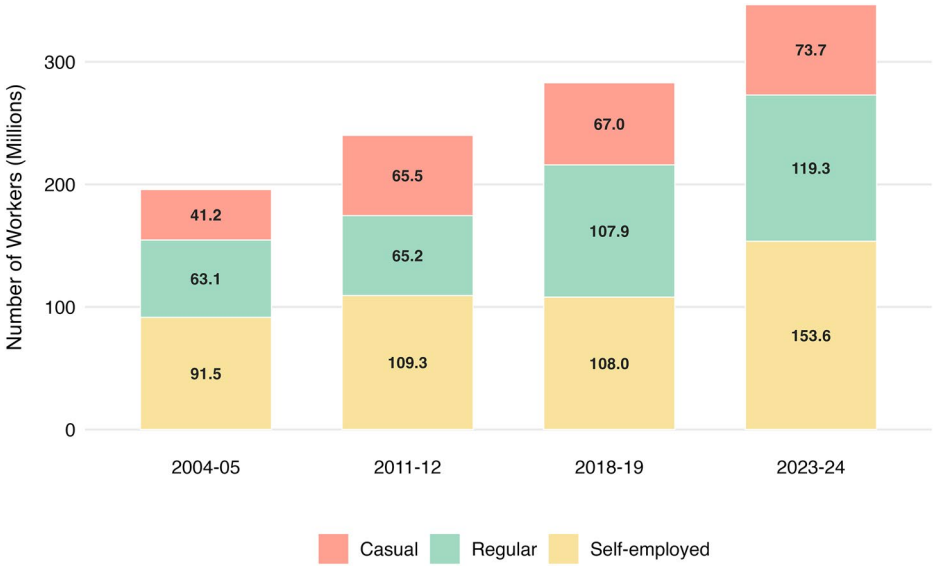

Figure 2. Total workers in the non-agricultural sector (in millions) by type of employment and location, 2004–2005 to 2023–2024. *Source:* Calculated by the author using unit-level data from the EUS (2004-05) to the PLFS (2023–24), conducted by the NSSO.

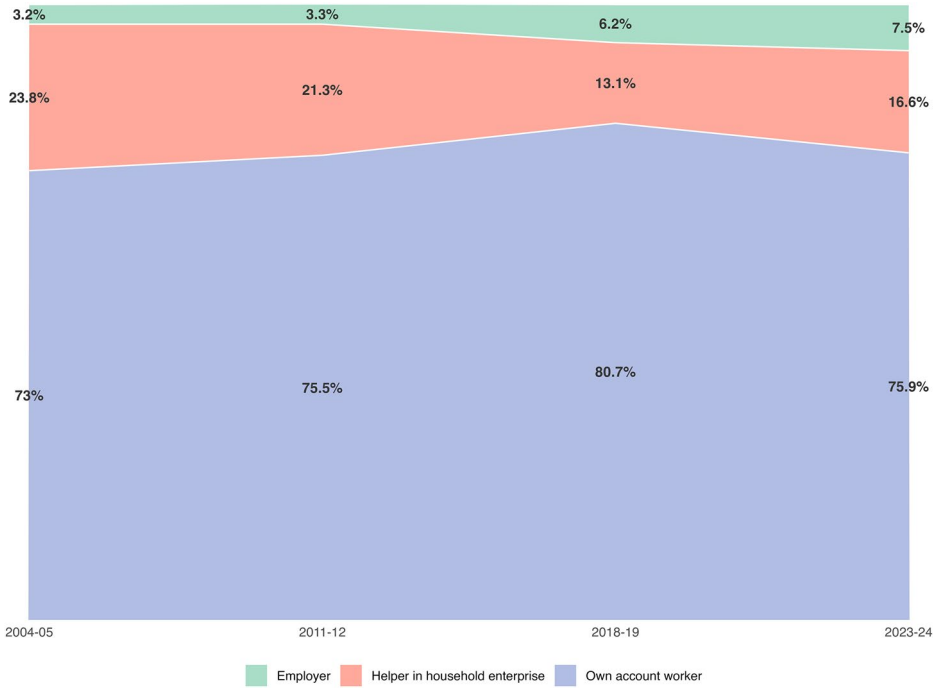

Figure 3. Percentage distribution of non-agricultural self-employed workers by within self-employed categories, 2004–2005 and 2023–2024. *Source:* Calculated by the author using unit-level data from the EUS (2004–2005) to the PLFS (2023–2024), conducted by the NSSO.

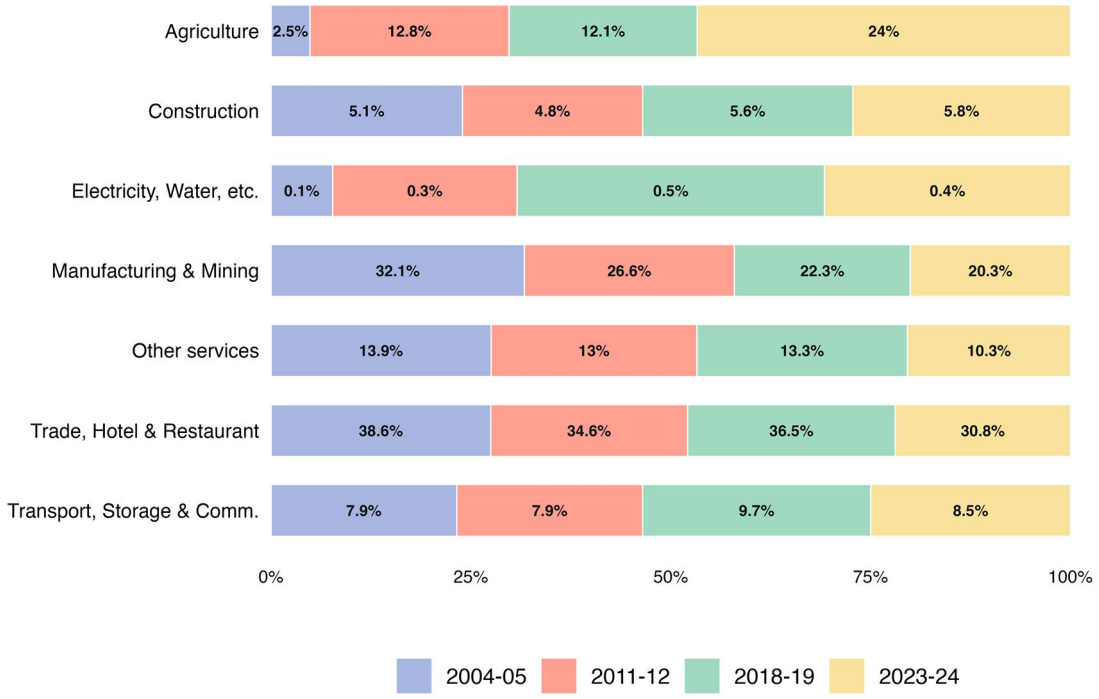

Figure 4. Percentage distribution of non-agricultural self-employed workers, working in different Industrial sectors, 2004–2005 and 2023–2024. *Source:* Calculated by the author using unit-level data from the EUS (2004–2005) to the PLFS (2023–2024), conducted by the NSSO.

3.3.3. Comparing earnings

The next step is to compare what non-agricultural self-employed workers earn versus what regular wage workers earn. The study follows the NSSO procedure for estimating gross earnings of the self-employed, defined as the difference between gross output (value of goods and services produced, including own consumption) and total expenses (inputs, hired labour payments, rent, interest, and production taxes net of subsidies). Whereas, for regular salaried, earnings refer to the gross remuneration received in cash or kind for work done or time worked, including payments for leave and bonuses (NSSO, 2023). Since prices change over time, nominal (current price) earnings are converted into real earnings using the Consumer Price Index (CPI, base year 2011-12). Separate price indices are used for rural and urban areas.

$$RW_i = \frac{NW_i \times 100}{CPI_s}$$

where RW_i is real wage earnings of worker i, NW_i is nominal wage earnings, and CPI_s is the rural-urban CPI for the relevant survey year. For 2018–2019, the CPI values used are 141 for rural areas and 138 for urban areas. For 2023–2024, these are 167 and 165 respectively. Average real earnings are then compared across employment type, industry, and worker background characteristics. These results are reported in Table 1 and Supplementary Appendix Table A3.

3.3.4. What drives earnings?

To understand which worker characteristics are linked to higher or lower earnings, log-linear wage regressions are run separately for non-agricultural self-employed and regular wage workers, for both 2018–2019 and 2023–2024.

$$ln\left(RW_i\right) = \alpha + \beta_1 Age_i + \beta_2 Gender_i + \beta_3 Sector_i + \beta_4 Education_i + \beta_5 Caste_i + \beta_6 Wealth_i + \beta_7 Region_i + \varepsilon_i$$

where $\ln(RW_i)$ is the logarithm of real wage earnings, and the explanatory variables include age, sex, rural or urban location, education, caste or social group, household wealth quintile, and state or region.

Table 1. Average real earnings (INR) gross earning (nominal and real) during last 30 days engaged in non-agricultural self-employed and regular workers by different industrial sectors during 2018–2019 to 2023–2024.

Broad industry division as per NIC 2008	PLFS 2018–2019				PLFS 2023–2024			
	Nominal wages		Real wages		Nominal wages		Real wages	
	Self employed	Regular	Self employed	Regular	Self employed	Regular	Self employed	Regular
Agriculture	4724.0	7152.5	3363.0	5100.4	4367.6	13,120.1	2618.0	7885.5
Construction	13,378.4	14,372.5	9593.8	10,334.9	18,533.2	20,350.5	11,160.7	12,276.4
Electricity, Water, etc	12,196.1	21,112.2	8796.6	15,188.1	15,467.7	23,680.7	9350.4	14,272.4
Manufacturing, Mining & Quarrying	10,391.8	13,289.1	7484.0	9575.4	8926.6	17,217.1	5380.9	10,387.6
Other services	12,563.2	18,670.9	9040.4	13,434.9	16,873.0	22,881.6	10,188.4	13,809.1
Trade, Hotel & Restaurant	11,076.4	10,363.4	7955.3	7465.5	13,971.4	13,367.8	8422.0	8066.7
Transport, Storage & Comm.	11,780.0	18,355.0	8451.9	13,225.5	16,130.0	30,619.4	9714.9	18,506.6
Total Wage	**10,553.6**	**16,006.9**	**7581.5**	**11,524.0**	**11,316.9**	**20,767.8**	**6818.6**	**12,535.4**

Source: Calculated by the author using unit-level data from the PLFS (2018–2019) to the PLFS (2023–2024), conducted by the NSSO; Real wages are adjusted using CPI (2011–2012 = 100): for 2018–2019, rural 141 and urban 138; for 2023–2024, rural 167 and urban 165; All figures in Indian National Rupees, (INR); whereas average 1USD = 83.40 INR in 2023–2024.

Table 2. Wage inequality decomposition between non-agricultural self-employed and regular workers in India, 2018–2019 to 2023–2024.

Employment status	2018–2019				2023–2024			
	Theil T	Theil L	GE(−1)	Gini	Theil T	Theil L	GE(−1)	Gini
Self-Employed	0.316	0.359	0.586	0.404	0.333	0.307	0.574	0.413
Regular	0.321	0.317	0.474	0.429	0.317	0.315	0.446	0.428
All groups	0.328	0.342	0.551	0.426	0.350	0.334	0.584	0.434
Within group	0.318	0.333	0.542		0.327	0.311	0.560	
% share	97.1	97.3	98.3		93.34	92.93	96.03	
Between group	0.009	0.009	0.010		0.023	0.024	0.023	
% share	2.9	2.7	1.7		6.66	7.07	3.97	

Source: Calculated by the author using unit-level data from the EUS (2004–2005) to the PLFS (2023–2024), conducted by the NSSO.

Separate equations are estimated for self-employed and regular workers because earnings are shaped by different mechanisms across the two groups. In regular wage employment, earnings are more likely to reflect institutional wage-setting, contractual arrangements, and formal returns to education and experience, whereas self-employment earnings are more closely linked to household resources, market access, and informal constraints. The results of these regressions are presented in Supplementary Appendix Table A4.

3.3.5. How unequal are earnings?

The study then looks at how unequal earnings are, both within each group and between the two groups. Four standard inequality measures are used: the Theil T index, Theil L index, GE(−1), and the Gini coefficient. The Theil T index is defined as:

$$T = \frac{1}{N}\sum_{i=1}^{N}\left(\frac{y_i}{\mu}\ln\frac{y_i}{\mu}\right)$$

where y_i is the income of worker i, μ is mean income, and N is the total number of workers. The Theil T index, for example, compares each worker's earnings to the average, workers earning much more than average push the index up, and so do workers earning much less. Lorenz curves are also plotted to show how wages are distributed across the two employment types. Total inequality is split into two parts, how much comes from differences within each group (say, among self-employed workers themselves), and how much comes from the earnings gap between the two groups. These findings are in Table 2 and Figure 6.

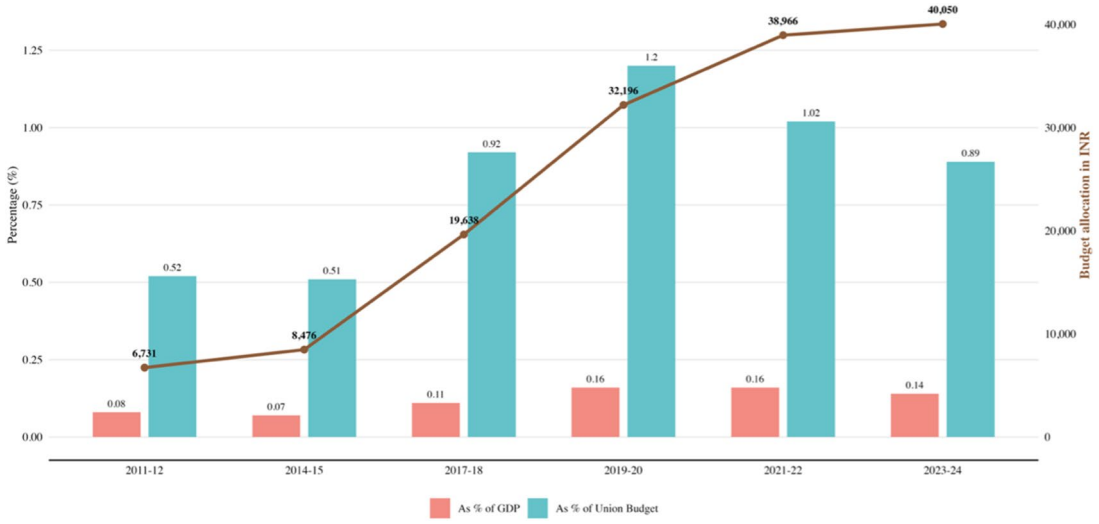

Figure 5. Budgetary Allocation for Self-Employment Schemes: 2011–2012 to 2023–2024. *Source:* Calculated by the author using Centre for Budget and Governance Accountability (CBGA) data.

3.3.6. Why is there a wage gap? Oaxaca-blinder decomposition

To understand why self-employed workers earn differently from regular wage workers, the study uses the Oaxaca-Blinder decomposition method (Blinder, 1973; Oaxaca, 1973). The wage equation for each group is expressed as:

$$\ln W_g = X_g \beta_g + \varepsilon_g$$

where g denotes the employment group, X_g is the vector of observed characteristics, β_g is the vector of coefficients, and ε_g = error term The mean wage gap is decomposed as:

$$\bar{Y}_R - \bar{Y}_S = \left(\bar{X}_R - \bar{X}_S\right)\beta^* + \bar{X}_R\left(\beta_R - \beta^*\right) + \bar{X}_S\left(\beta^* - \beta_S\right)$$

where R denotes regular workers, S denotes self-employed workers, and β^* is the reference coefficient vector. This technique breaks the overall earnings gap into two parts, the first part is the explained component, how much of the gap is because the two groups differ in characteristics like education, age, social group, or region. The second part is the unexplained component, how much of the gap remains even after accounting for those differences, reflecting unobserved factors or differences in how the same characteristics are rewarded in each group. The decomposition results are in Table 3.

3.3.7. Does selection bias affect the results?

One concern is that workers do not randomly end up in self-employment or regular wage work, their choice may be influenced by unobserved factors that also affect their earnings. Since employment status may not be exogenously determined, an additional robustness exercise is carried out separately for 2018–2019 and 2023–2024. The analysis is restricted to non-agricultural self-employed and regular wage workers. A binary variable is defined as:

$$newemp_i = \begin{cases} 1, & \text{if worker } i \text{ is non-agricultural self-employed} \\ 0, & \text{if worker } i \text{ is a regular wage worker} \end{cases}$$

The baseline wage equation is estimated as:

$$\ln\left(RW_i\right) = \alpha + \beta newemp_i + \gamma X_i + \varepsilon_i$$

where X_i includes sector, sex, age group, religion, social group, education, and MPCE quintile. Because employment status may be correlated with unobserved wage determinants, a two-stage least squares

Table 3. Oaxaca decomposition analysis of factors causing earnings disparities between non-agricultural self-employed and regular workers, 2018–2019 to 2023–2024.

	2018–2019				2023–2024			
Background characteristics	Explained difference	Unexplained difference	%Contribution explained difference	%Unexplained difference	Explained difference	Unexplained difference	% Contribution explained difference	%Unexplained difference
Age	0.052***	−0.002***	−19.13	0.77	0.045***	−0.002***	−14.49	0.64
Sex								
Male®								
Female	−0.003***	−0.002***	1.14	0.78	−0.012***	−0.017***	3.92	5.34
Sector								
Rural®								
Urban	−0.010***	0.058***	3.80	−21.38	−0.028***	0.062***	8.95	−20.18
Education								
Illiterate®								
Bel Primary	0.009***	−0.02	−3.22	7.49	0.012***	−0.021	−3.8	6.65
Primary	0.026***	−0.01	−9.76	3.52	0.029***	−0.026	−9.48	8.31
Up to Inter	−0.022***	−0.065	8.20	23.89	−0.008***	−0.029	2.46	9.37
Graduate+	−0.157***	−0.002	58.09	0.73	−0.188***	−0.029	60.9	9.53
Caste								
Others®								
ST	−0.003***	−0.007***	1.06	2.63	−0.001*	−0.003	0.18	1.00
SC	0.006****	−0.008***	−2.28	3.04	0.003***	−0.008***	−1.09	2.61
OBC	−0.004***	0.008	1.51	−2.87	−0.003***	0.018***	0.88	−5.67
MPCE								
Poorest®								
Poor	0.006***	0.001	−2.14	−0.16	0.002***	0.002	−0.59	−0.79
Middle	0.008***	−0.001	−3.03	0.40	0.003***	−0.004	−1.10	1.17
Rich	−0.001	−0.004	0.52	1.41	−0.001***	−0.004	0.17	1.22
Richest	−0.047***	−0.036***	17.42	13.25	−0.061***	−0.030***	19.59	9.80
State Region								
North®								
Centre	−0.002***	−0.006	0.73	2.31	−0.002***	−0.004	0.70	1.26
East	−0.013***	−0.018***	4.72	6.70	−0.007***	−0.005	2.24	1.69
West	0.001	0.009***	−0.27	−3.50	−0.002***	0.012***	0.52	−4.01
South	0.001***	−0.009	−0.52	3.45	−0.004***	−0.002	1.21	0.60
Northeast	0.001***	−0.008	−0.38	2.78	0.004***	−0.004	−1.26	1.28
UT	−0.003***	0.006***	1.26	−2.18	−0.005***	0.005***	1.70	−1.67
Cons		0.002***		−0.68		−0.001***		0.44
			57.7	**42.38**			**71.62**	**28.38**

Note. ***Significant at 1%, **at 5%, *at 10%; Reference categories are denoted with ®.
Source: Author's calculation using unit-level data from the EUS (2004-05) to PLFS (2023-24), NSSO.

(2SLS) model is estimated using household size ($HHSize_i$) and household type ($HHType_i$) as instruments. In the first stage, employment status is regressed on the excluded instruments together with the full set of exogenous controls:

$$newemp_i = \pi_0 + \pi_1 HHSize_i + \pi_2 HHType_i + \pi_3 X_i + u_i$$

In the second stage, the predicted value of employment status from the first stage is used in the wage equation:

$$\ln(RW_i) = \alpha + \beta \widehat{newemp}_i + \gamma X_i + \mu_i$$

This model tests whether the wage gap between non-agricultural self-employed and regular workers is affected by endogenous selection into employment status. Endogeneity, first-stage relevance, and over identification tests are used to assess the robustness of the specification. The results are reported in Supplementary Appendix Table A5 and are interpreted as robustness checks rather than definitive causal estimates.

4. Self-employment in numbers: urban and rural workforce trends in India

Over the past two decades, the way Indians work has shifted in quiet but significant ways. Table 4 presents the distribution of workers by type of employment across urban and rural sectors from

Table 4. Distribution of workers in type of employment by urban and rural 2004–2005 to 2023–2024.

			Type of employment (%)			Total workers in millions			
Sector	Years	WPR	All self employed	Regular	Casual	All self employed	Regular	Casual	All workers
All India	2004–2005	42.0	56.9	14.3	28.9	262.5	65.7	133.1	**461.3**
	2011–2012	38.6	52.0	15.3	32.7	243.7	71.6	153.1	**468.4**
	2018–2019	35.3	52.1	23.8	24.2	239.9	109.6	111.3	**460.7**
	2023–2024	43.7	58.4	21.8	19.8	325.0	121.0	110.3	**556.3**
Rural India	2004–2005	43.9	60.2	7.1	32.8	207.5	24.4	113.1	**345.0**
	2011–2012	39.9	55.1	7.3	37.7	183.9	24.2	125.8	**333.9**
	2018–2019	35.8	58.0	13.4	28.6	178.7	41.3	88.1	**308.1**
	2023–2024	45.6	64.7	12.7	22.5	243.2	47.9	84.6	**375.7**
Urban India	2004–2005	36.5	45.4	39.5	15.1	52.8	46.0	17.5	**116.3**
	2011–2012	35.5	42.7	39.9	17.4	57.4	53.7	23.4	**134.5**
	2018–2019	34.1	37.8	48.7	13.5	57.6	74.4	20.5	**152.5**
	2023–2024	38.9	40.4	47.5	12.1	73.0	85.7	21.9	**180.6**

Source: Calculated by the author using unit-level data from the EUS (2004-05) to the PLFS (2023–2024), conducted by the NSSO.

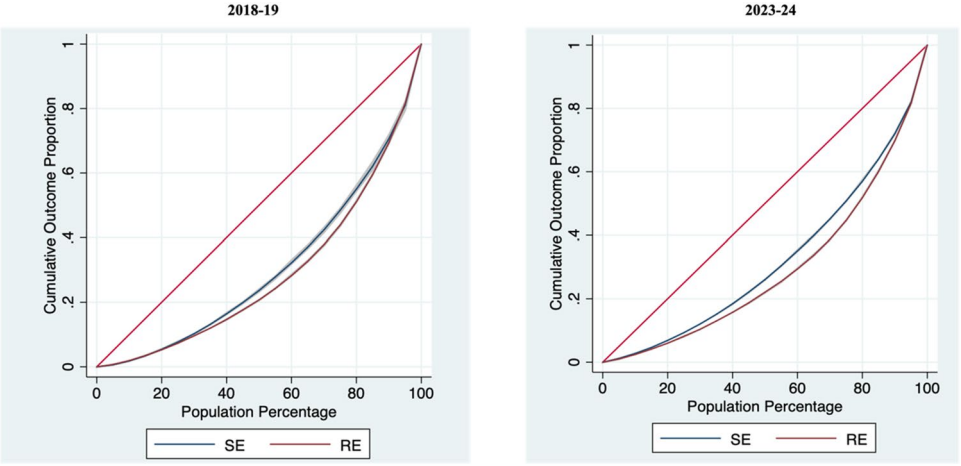

Figure 6. Lorenz curve for wage by non-agricultural self-employed (SE) and regular (RE) workers in India from 2018–2019 to 2023–2024. *Source:* Calculated by the author using unit-level data from the EUS (2004–2005) to the PLFS (2023–2024), conducted by the NSSO.

2004–2005 to 2023–2024. The data reveal marked changes in workforce participation, employment patterns, and sectoral composition over the two decades. The worker population ratio (WPR) of India displayed a fluctuating trend, starting at 42.0% in 2004–2005, declining steadily to 35.3% by 2018–2019 and rebounding to 43.7% in 2023–2024. A similar pattern was observed in rural India, where the WPR reached a peak of 45.6% in 2023–2024 after a period of decline. These fluctuations in rural employment may be associated with changes in livelihood patterns, agrarian distress, and the mechanisation of agriculture, as discussed in earlier studies (Abraham, 2009; Lanjouw et al., 2013). In contrast, urban India has exhibited relatively stable WPRs, ranging from 36.5% to 38.9% during 2004–2005 and 2023–2024. This pattern may reflect comparatively lower volatility in urban workforce participation and the continued concentration of better job prospects in urban regions (ILO, 2024; Kannan & Raveendran, 2009).

A distinct structural divergence between rural and urban employment patterns is also apparent. In rural areas, self-employment has consistently dominated the labour market, rising from 60.2% in 2004–2005 to 64.7% in 2023–2024. This isn't simply a story of budding entrepreneurs; it's often about people who make do with what they can find when formal jobs are limited. For countless rural households running a small shop, doing repair work, or taking on construction contracts becomes the most viable way to survive (Kundu, 2014). In contrast, urban areas recorded a much lower share in self-employment (40.4% in 2023–2024), thereby indicating a relatively more structured and formalised employment environment.

The contrast becomes even clearer when we look at regular, salaried work. The proportion of regular workers in urban areas increased from 39.5% in 2004–2005 to 47.5% in 2023–2024, indicating a greater presence of regular employment opportunities. In rural areas, regular employment remained limited, though it increased from 7.1% to 12.7% during the same period. Meanwhile, the share of casual workers declined in both rural and urban areas. Rural casual employment fell sharply from 32.8% in 2004–2005 to 22.5% in 2023–2024, while urban casual employment decreased from 15.1% to 12.1%. This reduction may suggest a movement away from short-term casual work toward self-employment or semi-formal occupations, alongside broader economic growth and changing labour preferences (Lanjouw & Murgai, 2009; Singh & Pattanaik, 2025). Nonetheless, this shift does not necessarily imply improvement in job quality; rather, it points to a possible process of informalisation within non-farm growth, where many workers move into informal self-employment without significant gains in security or income.

Looking at the broader picture, the sheer size of India's workforce tells its own story. The overall size of workers in India expanded from 461.3 million in 2004–2005 to 556.3 million by 2023–2024. This growth was largely driven by the rural workforce, which increased from 345.0 million to 375.7 million. Urban employment expanded simultaneously from 116.3 million to 180.6 million during the same period, a pattern that is consistent with ongoing urbanisation, industrial expansion, and rural-to-urban migration discussed in the literature (Jatav & Sen, 2013). These patterns illustrate both the persistence of dualism and the evolving structure of India's labour market amid broader economic change.

4.1. Where are they working? Transitioning towards self-employment in non-agricultural sectors

The rise in non-agricultural self-employment in India points to a slow but continuing reorganisation of the labour market. Figure 2 shows the steady increase in the total number of non-agricultural self-employed workers between 2004–2005 and 2023–2024, highlighting both the urban-rural divide and the underlying sectoral transitions.

Back in 2004–2005, the majority of rural self-employed workers were engaged in agriculture and allied activities with only a small proportion participating in non-agricultural sectors. This pattern reflected the predominantly agrarian nature of rural economies, where self-employment was largely rooted in agricultural production and related occupations. Over the next two decades, rural self-employment in non-agricultural activities expanded substantially from 207.5 million workers in 2004–2005 to 243.2 million in 2023–2024. This diversification appears to be linked with several overlapping factors, including declining cultivation returns, the expansion of rural non-farm enterprises, and improved access to roads, credit facilities, and communication technologies. These shifts indicate that self-employment in rural India may increasingly function both as a coping mechanism and as a source of incremental income diversification, rather than as clear evidence of formal structural transformation (Abraham, 2023).

In 2023–2024, out of the total rural self-employed workforce of 243.2 million, 100.2 million were engaged in non-agricultural activities, signifying a gradual diversification of rural livelihoods beyond the agricultural sector. In contrast, urban non-agricultural self-employment expanded to 73.0 million workers, out of which 53.4 million were engaged in non-agricultural activities (as shown in Supplementary Appendix Table A1). This growth suggests the pull of expanding service activities and the push of limited formal employment in urban industries, addressing our research objective of tracing the changing nature of non-agricultural self-employment across rural and urban India.

Looking closer at these workers has revealed something important about the nature of self-employment itself. Figure 3 breaks down the composition of non-agriculture self-employed workers over the past two decades. The largest group by far has always been own-account workers, those operating independently without employees. On average, they make up three-fourths of all self-employed workers.

This dominance highlights the continuation of small and single-person enterprises that operate with limited capital or scale. In rural areas, the share of helpers in household enterprises was 16.6% in 2023–2024, pointing to the continued reliance on unpaid family labour. This pattern of unpaid family labour, overwhelmingly female, is consistent with what social reproduction theory identifies as the invisible work that sustains households and enterprises alike (Thorat & Newman, 2007). Conversely, the proportion of

employers, who manage their enterprises with hired workers, has only marginally grown, reaching 7.5% in 2023–2024. This suggests extensive growth in self-employment without clear parallel evidence of improvements in productivity or enterprise size (as shown in Supplementary Appendix Table A2).

The kind of work people do has also shifted in revealing ways. Figure 4 compares the sectors where non-agricultural self-employed workers were concentrated in 2004–2005 versus 2023–2024. Two decades ago, the largest concentration of non-agricultural self-employment was in trade, hotels, and restaurants, followed by manufacturing and transport, storage and communications. These sectors may have attracted workers because of low entry barriers, immediate income, and limited requirements of formal education or investment. By 2023–2024, the composition of self-employment had changed. The decline in the share of trade and hospitality coincides with retail formalisation, the expansion of e-commerce, and the spread of franchise-based business. Similarly, the decline in manufacturing self-employment appears to be associated with rising automation, higher technological costs, and the growing presence of capital-intensive production systems (Nijman, 2015; Sinha & Vira, 2021). These shifts may have made it harder for small producers to compete in formal value chains, pushing some workers toward low-return services or transport-related work (Abraham, 2023; Chen & Raveendran, 2012).

In contrast, transport, storage, and communications show a marked increase in the share of non-agricultural self-employment. This pattern is likely to be associated with the expansion of the gig economy, digital platforms, and logistics networks. App-based services and e-commerce have altered the contours of informal work by offering flexible, but often precarious, opportunities in the urban labour market (Afridi, 2025; Kuhn & Maleki, 2017; Theodore & Peck, 2013). Similarly, the growth of financial and other services may be linked with digitalisation, urbanisation, and the spread of professional and IT-based micro-enterprises (Afridi, 2025; Gandini, 2019; Kalleberg, 2009). These patterns point to a dual movement within the labour market, new sectors are opening space for some forms of self-employment, while many workers remain exposed to unstable earnings and weak protection.

What these shifts tell us is that India's self-employed workers are not a single unchanging group. They are moving with the times, sometimes pushed by circumstances, sometimes pulled by new opportunities. The sectors change, the technologies evolve, but one thing remains constant: the burden of risk rests squarely on the workers. As Standing (2011) argues in context of precariat, this is the defining feature of our era, the systematic transfer of risk from employers and the state into individuals. Whether stitching clothes in a village, driving an auto-rickshaw in a town, or delivering food in a city, India's self-employed workers carry the uncertainties of economic life on their own shoulders.

4.2. How budgetary investments shape India's self-employment labour market

Over the past decade, the Indian government has positioned self-employment at the centre of its economic strategy. Budgetary allocation for self-employment schemes has grown substantially, reflecting a policy vision that casts entrepreneurship as both a solution to unemployment and a pathway to inclusive growth. Figure 5 traces this allocation from 2011–2012 to 2023–2024.

In 2011–2012, budgetary allocations were modest. Self-employment had not yet emerged as a policy priority. This changed in 2015–2016, when allocations began to rise alongside a broader reorientation toward entrepreneurship as a tool for job creation. This period witnessed the beginning of several target-based initiatives designed to empower small businesses and micro-entrepreneurs, particularly in rural and semi-urban areas. From 2016 to 2017 onwards, the budgetary allocations witnessed a sharp and steady rise, coinciding with the launch of flagship programs such as the Pradhan Mantri Mudra Yojana (PMMY) and Stand-Up India (Sahasrabuddhe et al., 2018) that enhanced access to credit and promoted entrepreneurship. The numbers impress: crores of rupees disbursed; lakhs of enterprises supported. But Awasthi et al. (2021) raised questions about what this credit achieves. They further suggested that much of the loan amount is used for consumption rather than business investment, however it has contributed to an increase in the number of self-employed workers.

By 2018–2019, the budgetary allocations for self-employment schemes reached unprecedented levels. The near to doubling of funding during this period underscored the government's commitment to leveraging self-employment as a tool for inclusive economic development, aimed at bringing Scheduled

Castes, Scheduled Tribes, and women into the fold of entrepreneurship. Yet here again, the gap between intent and outcome demands attention. The trend continued in 2023–2024, with policy attention increasingly turning towards digitalization and technology-linked livelihoods. This shift coincides with the growing prominence of the gig economy and platform work. But as Afridi (2025) notes, these new forms of work also carry their own precarity.

However, what Figure 5 cannot show is the distribution of benefits behind rising budget lines. Although the rising budgetary allocations coexist with falling real earnings for many self-employed, raising a troubling possibility: that policy investments, while expanding the number of people working for themselves, have done little to improve the quality of their work or lift them out of vulnerability. This disconnect between expanding opportunities and deteriorating outcomes brings us to a critical question: the earnings of self-employed workers? The next section examines this question.

4.3. Income realities: what are non-agricultural self-employed workers earning?

The analysis of the average nominal and real earnings across non-agricultural sectors from 2018–2019 to 2023–2024 reveals persistent and widening income disparities between non-agricultural self-employed and regular wage workers (Table 1). Detailed estimates of average real earnings by socioeconomic characteristics are provided in Supplementary Appendix Table A3 and Appendix Table A4. These findings address our objective of assessing whether the expansion of self-employment has translated into improved income outcomes. In the agriculture sector, self-employed workers have experienced a decline in their real wages, falling from Rs. 3363 in 2018–2019 to Rs. 2618 in 2023–2024, despite modest nominal growth. The erosion of purchasing power reflects rising input costs and falling farm-gate prices, suggesting that small producers are unable to benefit from economies of scale or technological advancements. The informal nature of rural non-agricultural self-employment exposes these workers to market volatility. In contrast, a smaller group of regular workers in agriculture saw steady real wage growth, supported by institutional and contract-based employment that provides income stability and access to benefits.

In the construction sector, both self-employed and regular workers experienced an increase in real income, despite a widening of the income gap. The real earnings of self-employed workers increased from Rs. 9593–11,160, while that of regular workers increased from Rs. 10,334–12,276. The relatively faster wage growth among regular workers may be associated with the formalisation of large-scale infrastructure projects and stronger enforcement of minimum wage laws in organised construction activities. Meanwhile, self-employed workers such as masons, petty contractors, and small service providers remain vulnerable to demand fluctuations, credit constraints, and delayed payments that affect their income stability.

A divergence in real wages is also visible in manufacturing and mining, where self-employed workers faced a decline in income. The contraction in small-scale manufacturing appears to be associated with growing mechanisation, capital-intensive production, and the uneven integration of informal enterprises into supply chains. In such a setting, small producers may face stronger competition from larger firms while remaining constrained by limited access to credit or technology upgrades (Kruse et al., 2023). However, regular workers in this sector appear to have benefited from productivity gains, collective bargaining, and steadier demand within formal establishments. In the trade, hotel, and restaurant sectors, both regular and self-employed workers witnessed moderate nominal wage growth (Mishra et al., 2024). The relatively narrow wage gap in these sectors may reflect the prevalence of small-scale enterprises and informal businesses, where working conditions are often similar for both self-employed and regular workers.

Similarly, the transport, storage, and communications sectors demonstrate one of the most striking divergences. Between 2018–2019 and 2023–2024, real wages of self-employed workers increased slightly from Rs. 8451 to Rs. 9714, while they surged from Rs. 13,225 to Rs. 18,506 for regular workers. The disparity reflects the dual structure of the sector, where on one side, formal logistics and digital communication industries have expanded and offered higher-paying and secure jobs to regular employees, while on the other side, the proliferation of app-based delivery and gig platforms has drawn self-employed workers into precarious, task-based work with limited income stability or social protection. Across all sectors, regular workers consistently earned higher wages than self-employed workers in both nominal

and real terms. The wage gap widened between 2018–2019 and 2023–2024, particularly in sectors such as agriculture, construction, and transport, where regular workers appear to have benefited more from formalisation and productivity growth. Conversely, self-employed workers, especially in manufacturing and mining, faced stagnation or even decline in real earnings, pointing to persistent inequality and structural vulnerability. Detailed wage rates by socioeconomic variables, including age group, sex, sector, education level, caste group, household wealth quintile, and state-region, are shown in Supplementary Appendix Table A3. This earning disparity across caste and gender is consistent with the social reproduction framework. The Scheduled Caste and Scheduled Tribe workers consistently earn less than upper caste counterparts, even when education and locations are similar. Women earn only a fraction of what men earn. These gaps persist because labour markets inherit the hierarchies of society within which they operate, including caste-based access to markets and networks and gendered concentration in low-return or unpaid work.

5. Measuring wage inequality within and between non-Ag SE and regular workers

The wage inequality decomposition between non-agricultural self-employed and regular workers in India from 2018–2019 to 2023–2024 is presented in Table 2. The decomposition uses inequality indices of Theil T, Theil L, GE(−1), and Gini coefficients. The analysis reveals significant structural factors driving this inequality. In 2018–2019, the overall wage inequality across self-employed and regular workers, as measured by the Theil T index, stood at 0.328, with a Gini coefficient of 0.426. However, these figures increased to 0.350 (Theil T) and 0.434 in 2023–2024 (Gini), indicating a rising trend in wage inequality across employment types. This upward trend highlights that there is increasing divergence in earnings between non-agricultural self-employed and regular workers over the period. A small share of high-income self-employed individuals, such as traders, professionals, and contractors, are economically advanced, yet most self-employed workers are associated with low-return, informal activities. This pattern suggests that self-employment in India is far from homogeneous; it encompasses both opportunity-driven entrepreneurship and necessity-driven survival work. The widening income disparity between these two worker-groups contributes directly to the intensification of inequality within the group, because there is no institutional floor, no minimum wage, no collective bargaining, no standardised pay. Hence, earnings can fan out widely, a few people do well, while the majority just survive.

Disaggregated analysis reveals that wage inequality among self-employed workers has increased over the period, with the Theil T index rising from 0.316 in 2018–2019 to 0.333 in 2023–2024, and the Gini coefficient increasing from 0.404 to 0.413. The distribution of earnings in the self-employed workforce is largely due to a small group of high-earning self-employed workers who are separated from most of the lower-income workers. Such increased volatility in income among the self-employed is consistent with the fact that uncertainty is reflected not only in lower average earnings but also in greater dispersion of earnings. In contrast, wage inequality among regular workers has remained relatively stable, as shown by the slight decline in the Theil T index from 0.321 in 2018–2019 to 0.317 in 2023–2024, and the almost persistent Gini coefficient at 0.429 and 0.428, respectively. This relative stability exhibits the effects of institutional wage setting, collective bargaining, and government pay commissions that act as the equalising force within the formal sector. Standardised wage structures, minimum wage laws, and social security mechanisms help moderate dispersion among regular workers and highlight the vulnerability of self-employed workers.

Moreover, within-group inequality, ie wage disparities within each employment category (Non-Ag SE and regular workers), accounted for 97.1% of total wage inequality in 2018–2019 (Theil T of 0.318), which decreased to 93.34% (Theil T of 0.327) in 2023–2024. On the contrary, between-group inequality captures wage disparities between self-employed and regular workers, these disparities notably increased from 2.9% of total inequality in 2018–2019 (Theil T of 0.009) to 6.66% in 2023–2024 (Theil T of 0.023). These trends indicate the widening wage gap between the two employment groups, where regular workers in the formal sectors have benefitted from sustained wage growth, while non-agricultural self-employed workers in the informal sectors have encountered stagnant or declining real wages. This suggests that the rise in between group inequality is deeply rooted in structural disparities that adversely affect the

informal sector of India (Deshpande & Sharma, 2016; Mukhopadhyay, 2024). Indeed, non-agricultural self-employment in India is often synonymous with informality, lacking access to credit, technology, and social security (Khan et al., 2023).

Furthermore, the Lorenz curve (Figure 6) provides additional insights into the distribution of wages between non-agricultural self-employed and regular employees in India for the years 2018–2019 and 2023–2024. In both the years, the curve for non-agricultural self-employed workers lies further from the line of equality as compared to regular workers, indicating the wage inequality is higher among the former workers. In 2018–2019, this divergence between the two groups is especially visible among the lower- and middle-income earners. By 2023–2024, the curve for self-employed workers has slightly shifted closer to the equality line, indicating marginal improvement in wage distribution, though inequality still remains more pronounced than in regular employment. Taken together, these findings suggest that India's wage inequality is increasingly shaped by both the persistence of informality and unequal access to the gains of growth.

5.1. Unpacking wage disparities: a decomposition analysis of non-agricultural self-employed and regular workers earnings

Due to the difference in salaries between those engaged in non-farm work and those engaged in regular work, a deeper investigation is needed beyond simply comparing average incomes. To uncover socioeconomic and structural factors driving these differences, an Oaxaca-Blinder decomposition is applied. Table 3 presents the decomposition of wage gaps into explained and unexplained components for the years 2018–2019 and 2023–2024.

The results show that the variation in salaries due to observable characteristics such as age, education, occupation and job sector was 57.7% in 2018–2019, which increased to 71.6% by 2023–2024. The rising explained share suggests that differences in human capital and sectoral allocation have become more salient in shaping wage outcomes. Nevertheless, this trend needs to be examined: it suggests that as the workforce becomes more educated, those in regular jobs are benefiting more from their education, while self-employed workers are benefiting less from their qualifications. Education, in other words, does not operate as a neutral asset; its value is mediated by the sector in which it is deployed.

Among the reasons given, education has emerged as the main reason for wage inequality. Those in regular jobs generally have higher levels of schooling and better access to skill development, leading to higher earnings. For the non-agricultural self-employed workers, education enhances learning opportunities and is often contingent on access to capital or networks. This pattern reveals the interaction between human capital and constraints, indicating that education alone is insufficient to overcome the barriers imposed by informality and low market access.

Age also acts as a critical element in wage differentiation. The findings suggest that income volatility increases among older self-employed workers considering their engagement in low-return sector that has negligible scope of productivity gains. In contrast, regular workers benefit from the cumulative effect of their experience and tenure that safeguard the stability of their earning. This implies that the reward of experience varies between regular and self-employed workers.

The study further highlights regional and rural-urban disparities. Non-agricultural self-employed workers in less-developed regions face lower returns due to poor infrastructure, weak market linkages, and limited access to non-farm opportunities. Contrary to this, those in urban or industrially advanced states benefit from proximity to markets and services. These spatial inequalities reveal that geography and regional policy continue to mediate the benefits of growth, particularly for informal self-employment. Additionally, caste-based and social disparities remain persistent even after accounting for education and occupation. The incessant disparity in wage by caste is evident, thus indicating that discrimination and unequal access to networks still influence income generation. For many self-employed individuals from marginalised groups, access to higher-paying activities is constrained by both social barriers and economic exclusion (Deshpande & Sharma, 2016).

The unexplained component, which constituted between 28% and 42% of the gap across the study period, warrants careful interpretation. Conventionally, such residuals are attributed to omitted variables,

unmeasured traits like ability, motivation, credit constraints, capital ownership, risk preference, or entrepreneurial skill, that are not captured in the available data. In segmented labour markets, the portion of the wage gap that cannot be explained by observable characteristics may also indicate structural asymmetry. It may capture institutional advantages enjoyed by regular workers, such as collective bargaining, social security, and employer accountability, while non-agricultural self-employed workers depend more on individual negotiation and face fluctuating demand. These differences cannot be fully captured by the observed characteristics and should therefore be interpreted as suggestive evidence of broader structural divides, not as direct causal proof.

As a further robustness check, an IV-based endogeneity test was estimated separately for 2018–2019 and 2023–2024 by treating employment status as potentially endogenous in the real wage equation (Supplementary Appendix Table A5). The results reject the null of exogeneity in both rounds, suggesting that the allocation of workers into self-employment and regular wage work is not random and may itself shape the observed wage gap. At the same time, the overidentification test rejects the instrument set, which means that the IV estimates cannot be interpreted as clean causal effects. For this reason, the decomposition results are best understood as offering a robust account of structural wage differences and their correlates, rather than a definitive causal estimate of the returns to employment status.

The decomposition, then, does more than slice a wage gap. It reveals the anatomy of India's labour market divide. The explained component shows how workers' endowments are distributed unequally. The unexplained component shows how the same endowments are rewarded unequally. Together, they map a terrain marked by deep fault lines; between those who enjoy institutional protection and those who do not. For self-employed workers, the wage gap is not simply about earning less. It is about being placed on the wrong side of a structural divide, one that no amount of education or experience, by itself, can bridge.

6. Conclusion

The study reveals that a large proportion of India's workforce, especially in rural areas, depends on self-employment, and this share is continuously increasing. Self-employment remains a central pillar of income generation for millions of households and a major contributor to the national economy. This steady growth of non-agricultural self-employment is consistent with ongoing changes in India's labour market. Technological advancements, shifting demand, and the slow pace of formal job creation appear to be part of the wider context within which people work and earn.

During the study period, the government has increased its policy focus on promoting self-employment through targeted schemes and higher budgetary allocations. A range of flagship programmes have been initiated to promote micro-enterprises and skill training with the objective of creating new opportunities for small producers and workers in rural and semi-urban areas. These efforts have helped stabilise incomes for millions, but these interventions have not been sufficient to narrow the persistent gap between self-employed and regular workers.

The study shows that regular workers continue to earn more than self-employed workers particularly in agriculture, construction, and transport sectors, thereby resulting in the intensification and widening of income disparity. However, the inequality within self-employment itself has also deepened, as a small share of self-employed individuals, typically those with better education, access to capital, or social networks, earn far more than the majority. Furthermore, factors such as age, education, and sector play a significant role in driving wage disparities. Even so, the robustness checks suggest that the observed wage gap should be interpreted with caution, since employment status is not fully exogenous.

Taken together, these patterns confirm that India's labour market is fragmented; this instability is reflected not only in low earnings but also in large fluctuations in income, and social reproduction ensures that caste, gender and place inequalities are exacerbated rather than eliminated. So, self-employment in India is both a source of livelihood and a reflection of structural weaknesses. It is an essential source of income in the absence of formal job opportunities, yet much of it remains informal, unregulated and unstable. The persistence of such informality excludes a large section of workers from

the benefits of labour laws, social security and institutional support. Therefore, while self-employment continues to absorb the surplus labour of a growing economy, it simultaneously reinforces structural inequality and limits upward mobility.

6.1. Policy recommendations

This study shows that for most workers, self-employment is closer to survival than upward mobility. Policy must therefore move beyond credit and skills to address vulnerabilities. First, access to credit should be paired with health insurance, pensions, and income support. Self-employed workers need security, not just capital. Second, the unexplained wage gap should be read as a possible sign of power asymmetry. Therefore, policy should extend protection to dependent workers and support collective organisation through cooperatives and unions. The Self-Employed Women's Association (SEWA) demonstrates what is possible when workers organise. Third, over-reliance on self-employment without expanding regular work may deepen informality. Public investment should focus on sectors with potential for quality employment, including manufacturing, care work, and green energy, and public procurement can be used to generate decent jobs. Further, the e-Shram portal launched by the Ministry of Labour has registered more than 290 million informal workers by 2024. The portal can go beyond registration and evolve into a comprehensive platform for inclusion. It can be used to connect non-agricultural workers with training, credit, and social insurance programmes, thus creating pathways for their gradual integration into the formal economy.

6.2. Limitations of the study and data

This study has used the large-scale data of EUS and PLFS, which are cross-sectional and do not track individuals over time. This study therefore cannot fully account for self-selection into employment status or other unobserved factors that may jointly affect employment choice and earnings. An IV-based endogeneity test was conducted as a robustness check, and the results suggest that employment status is endogenous in the wage equation. However, since the overidentification test rejects the instrument set, these estimates should be interpreted cautiously and not as conclusive causal evidence. Further, the earning data for the self-employed are self-reported and may not fully capture seasonal fluctuations or in-kind income. Further, helpers in household enterprises are classified under self-employed, yet often recorded with zero earnings. To prevent this from mechanically inflating inequality, we excluded all zero-earning observations from our earnings analysis and decomposition. Despite these limitations, this study provides evidence on the changing Indian labour market.

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Author contributions

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Authors contributions statement (CRediT taxonomy)

All authors meet the Taylor & Francis authorship criteria and have made substantial contributions to the development of this manuscript. All authors have approved the final manuscript.

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Data availability statement

The data used in this study are publicly available and were obtained from the Government of India's official microdata archive maintained by the Ministry of Statistics and Programme Implementation. These datasets are open for academic use and can be accessed after a simple registration process on the portal. https://microdata.gov.in/NADA/index.php/catalog/213. Further, the data that support the findings of this study are also available from the corresponding author, Pushpendra Singh, upon reasonable request.

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