

Rural Growth and Distribution: Two Narratives from the PLFS 2017–23

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Abstract: This paper investigates a striking puzzle about rural India that has emerged in recent times: individual real wages have shown weak or stagnant growth for large segments of the labour force, while household per capita incomes have risen materially and, in many cases, at a faster pace among lower deciles. Using microdata from the Periodic Labor Force Survey (PLFS) 2017–23, we document these contrasting patterns and reconcile them. First, we undertake a simple decomposition that separates (i) average real wage per earner, (ii) the number of earners per household, and (iii) household size. Our empirical analysis shows that demographic and labour supply adjustments – chiefly an increase in earners per household driven by rising labour force participation and expanded non-farm employment – account for the bulk of observed gains in household per capita income even as individual real wages remain subdued. Distributional analysis reveals that percentage growth has been relatively progressive (lower deciles recording larger proportional gains), but absolute level gaps have persisted and, in many cases, widened. We further disaggregate decile income by occupational category and find that lower deciles have seen significant shifts from casual work to self-employed status. Since the latter category provides, on average, higher incomes, this can partially explain much of the observed progressivity of household income growth.

Keywords: Rural India, real wage stagnation, household income growth, Periodic Labour Force Survey (PLFS), labour force participation rate, non-farm employment, distributional analysis, occupational transition, casual labour, self-employment.

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INTRODUCTION

India's development trajectory has been marked by persistent inequalities between urban and rural areas, across sectors, and within rural society itself. While poverty has declined over the long term, the distribution of incomes, wages, and consumption remains highly uneven. For rural households, this inequality translates into a dual disadvantage: relative deprivation compared to urban households, and stratification within rural communities by land, caste, and access to non-farm work.

Contemporary debates on India's economic performance are organised around two contrasting narratives. On the one hand, there is an optimistic account – emphasising structural transformation, more recently rising female labour force participation (FLFP), rapid expansion of services, and increased household consumption – which has been advanced in recent public and policy commentary (Bhalla and Bhasin 2024; Panagariya and More 2025). This view stresses the broad gains in household incomes. On the other hand, there is a more cautious or pessimistic diagnosis (Drèze 2023; Das and Drèze 2024) – which highlights stagnant real wages, persistent rural distress, poor job quality, and established social inequalities that limit the benefits of macroeconomic growth for large parts of the population.

Despite their opposing emphases, the two narratives often rely on the same empirical building blocks: household surveys (Household Consumption Expenditure Survey (HCES)/National Sample Survey (NSS) rounds and their successors), labour force microdata (notably the Periodic Labour Force Survey, PLFS), and wage series constructed from those surveys and administrative records (such as the Rural Wage series). The interpretive difference therefore arises not primarily from different data sources but from different levels of aggregation, measurement choices, and the causal stories used to relate observed aggregates to living standards. Optimists point to rising household per capita consumption and income aggregates; pessimists point to the stagnation of real wages for individual workers, declining quality of jobs, and to the fragility of casual and farm employment.

This paper foregrounds an empirical puzzle that helps reconcile these two contrasting impressions. Using PLFS microdata, we document the simultaneous occurrence of two patterns over recent years: (i) stagnant or weak growth in real individual wages for large segments of the labour force, and (ii) substantial and, in many cases, progressive growth in household per capita incomes, with the lower and middle deciles recording faster percentage gains than the top. Taken at face value, these two facts are paradoxical: if individual wages are stagnant, how can household per capita income rise so markedly and so broadly? We are in particular interested in questions of the changing income distribution, and hence in the kinds of growth patterns by income fractile.

Our central claim is that this paradox is resolvable once household composition and labour supply responses are accounted for. Demographic and labour market mechanisms are especially important. Most critically, the number of earners per household has increased in recent PLFS rounds – driven in large part by rises in FLFP and by expanded non-farm employment opportunities that allow additional household members to earn. This effect can generate large increases in household per capita income in the absence of commensurate growth in real wages for individual workers. We then discuss changes in labour market composition to explain the relative progressivity of household income growth.

In the following sections, we document these patterns and quantify their contribution to measured improvements in household well-being. First, we situate our contribution in the literature emphasising the divergent interpretations of PLFS statistics. Then, we describe the data and measurement choices (including our construction of household earners, wages, and per capita income). Next, we present the core empirical facts: trends in individual wages, household per capita income by decile, and changes in earners per household and household size. We decompose household per capita income growth into (a) wage growth per earner and (b) changes in number of earners per household. This decomposition shows that demographic/labour supply channels account for the bulk of the observed divergence. The following section uses this insight to further disaggregate data by class and employment category, examining how different groups and employment categories experience these dynamics, and what this implies for rural inequality, structural transformation, and policy design. Finally, we draw out the implications of our findings for measurement, for how we interpret PLFS evidence in policy debates, and how the weight of the data falls in favour of the narrative of rural distress.

REVIEWING RURAL INCOME AND EMPLOYMENT IN INDIA: DISTRESS AND OPPORTUNITY

The trajectory of rural India's growth is contested. On one side lies a narrative of distress: employment volatility, stagnant real wages, and persistent informality. On the other, scholars and policymakers document evidence of opportunity: rising labour market participation, wage recovery, and expanding non-farm employment. This review synthesises the literature on rural income and employment, drawing on recent survey data, government reports, and academic studies. It argues that both narratives are simultaneously true – and that the balance between them depends on regional, gendered, and institutional contexts.

The Distress Narrative

The most persistent element in the literature is the concern over stagnant rural wages. After sustained growth through the 2000s, wage gains slowed markedly in the mid-2010s. Studies using the Rural Wage Rate Index (WRRI) and PLFS show stagnation or decline between 2015 and 2020, with COVID-19 further depressing incomes (Jha

and Basole 2023; Dubey and Bhandari 2025). Village-level research published in the *Review of Agrarian Studies* (RAS) reinforces this finding, documenting falling real wages in many regions and disproportionate vulnerability of casual workers (Thomas and Jayesh 2016). Despite schemes such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS), wage stagnation remained a structural feature of the rural economy.¹

Informality deepens this story of fragility. Even when jobs are available, they are frequently low-paid, casual, and without protection. Bahl and Sharma (2024) argue that informality, more than skill mismatch, drives persistent inequality. Studies published in RAS echo this, showing that mechanisation displaced women agricultural workers without providing stable alternatives (Harilal and Eswaran 2018).

Female Labor Force Participation (FLFP) adds another dimension of distress. Between 2004–05 and 2017–18, rural FLFP fell from nearly half of working age women to barely a quarter (Deshpande and Singh 2024). Studies published in RAS show that women faced compounded exclusion: mechanisation reduced demand for female labour while lockdowns cut off non-farm employment (Ramakumar 2020). Even when women worked, their returns remained marginal.

Finally, the distress narrative emphasises uneven access to non-farm work. Hashmi (2025) shows that diversification in poorer districts was often distress-driven, with construction dominating and manufacturing stagnating. Abraham (2024) points to a stagnation and even rupture in non-farm transformation since 2011–12, with reverse shifts back to agriculture and mixed livelihoods emerging as coping strategies. Himanshu (2024) underscores how repeated shocks – drought, demonetisation, GST, and COVID-19 – produced reversals of structural change, with millions returning to farming. Narayanamoorthy and Nuthalapati (2023) document how farmers' incomes have decelerated, with cultivation yielding negative growth and most earnings now coming from wages and livestock. Kumar (2025) situates this crisis historically, connecting it to the Green Revolution fallout, liberalisation, and the recent resurgence of farmer protests. Nutrition outcomes, too, reveal persistent distress: recent data show calorie intake in rural India remains below the 1970s poverty norm, with protein stagnation despite income growth (Economic and Political Weekly [EPW] 2025).

The Opportunity and Improvement Narrative

Another set of studies point to real improvements in rural employment and income. First, aggregate labour force participation has risen. The PLFS bulletin for June 2025 reported a labour force participation rate of 54.2 per cent for those aged 15 and above (Ministry of Statistics and Programme Implementation 2025). Importantly,

¹ Other relevant discussions of wages and employment include Dhar and Kaur (2013), Satheesha and Thomas (2023), and Dhar and Singh (2025).

rural female LFPR has rebounded from its nadir: official data show an increase from 24.6 per cent in 2017–18 to 35.6 per cent in 2021–22 (Directorate General of Employment 2023). These shifts suggest that members of rural households, including women, are re-entering the labour market.

Second, there is very recent evidence of a rebound in wage growth. Recent brochures from the Press Information Bureau (PIB) highlight sustained increase in rural wages in 2024–25, with particularly strong gains for women in both the agricultural and non-agricultural sectors (PIB 2025). Although these figures come from the labour bureau and not from PLFS, they suggest at least a partial reversal of the earlier stagnation.

Third, rural India has seen substantial non-farm diversification. The share of non-farm employment has grown steadily, accounting for over 40 per cent of rural jobs (Saroj *et al.* 2022). Bhattacharjee, Chakrabarti, and Rajeev (2024) argue that inclusive rural transformation requires simultaneous expansion of both agriculture and the formal economy to foster balanced traditional and modern non-farm growth. Hashmi (2025) notes how in prosperous western Uttar Pradesh, landowners and educated groups shift into higher value non-farm work through demand pull, while Goel (2024) highlights the role of literacy and state development spending in promoting service sector jobs. The NABARD survey of 2021–22 suggests that rural household incomes have risen significantly, with services now the largest source of earnings, even if financial inclusion lags behind (EPW 2024).

Taken together, the literature suggests that rural India is undergoing a slow and uneven transformation. The distress narrative captures real vulnerabilities: stagnant real wages in the recent past, entrenched informality, and gender exclusion. At the same time, the opportunity narrative highlights recent improvements: rising participation, signs of wage recovery, and diversification into non-farm work.

One can hypothesise which narrative dominates depends on context. In prosperous States with better infrastructure and market access, non-farm growth creates genuine opportunity. In lagging regions, rural workers may face stagnant incomes and remain trapped in casual, low-return employment. Gender disparities cut across both, but the recent rebound in female participation hints at shifting dynamics.

Given this background, we return to our concern around attempting to identify the sources of divergence in interpretation.

EVIDENCE FROM PLFS: A PUZZLE

Data

We begin by assessing monthly income/wages and trends in the rural sector from the PLFS. The wage variable was constructed by combining multiple components of

earnings. For casual wage workers, earnings are reported on a daily basis, so weekly wages were first calculated and then multiplied by a factor of four to obtain monthly wages. Regular salaried and self-employment earnings are reported on a monthly basis. Total household income was calculated as the sum of monthly wages, self-employment earnings, and salaried earnings, with non-positive values treated as missing.

Consumer price indices, disaggregated by sector and year with a base of January 2011, were applied to obtain real earnings for each income type. Real total household income was calculated as the sum of real salaried, self-employed, and casual earnings.

In PLFS, earnings for self-employed workers are reported as gross, which in principle could include both labour and capital income. However, treating self-employment income as principally labour income is reasonable in the Indian context for the following reasons.

First, the overwhelming majority of self-employed workers in India are own-account workers or unpaid family workers. Employers who might plausibly earn significant returns on capital constitute less than 2 per cent of the total workforce. Given this composition, the self-employed population is largely made up of individuals operating small, often subsistence-level activities where capital investment is minimal and income primarily reflects labour effort. Second, following Basole and Jha (2023), we treat business income in the PLFS as income from self-employment in microenterprises, which in the vast majority of cases is labour income rather than capital income. The scale and nature of these enterprises makes it unlikely that capital returns constitute a significant share of reported earnings.

Further, the PLFS collects monthly earnings directly for self-employed and regular salaried workers, while casual wage earnings are recorded on a weekly basis. To harmonise earnings into a comparable monthly figure across all employment categories, we multiply casual weekly earnings by a factor of four. While this is an approximation, it is the closest harmonisation possible given the structure of the data and is standard practice in the literature using PLFS earnings data.

Additionally, agricultural income in India is highly seasonal and lumpy in nature; farmers typically receive income concentrated around harvest periods rather than as a smooth monthly flow. PLFS can address the seasonality to an extent through its rotating quarterly design by pooling across all four quarters; the survey captures respondents at different points in the agricultural calendar, which partially smooths out seasonality at the aggregate level.

Finally, in many of the calculations, we count non-positive values as missing. Non-positive values for self-employed income are not trivial and can range from 25–30

per cent of observations in a given year. However, these were dropped because of difficulties in interpretation.

Although we limit our analysis to those with earnings that are positive for ease of interpretability, the general finding, stagnant real wages on the one hand and progressive average earnings per household on the other would continue to be the case if we included incomes that were negative.

Results

Tables 1 and 2 present a consistent and concerning picture of weak rural real wage dynamics over 2017–18 to 2023–24. While nominal median and mean wages rise in levels, deflation to the 2011-January base reveals only modest gains in the real median and mean across the period. Year-to-year volatility is salient: the series record interim declines (notably around 2019–20 and 2020–21) and only partial recoveries thereafter. The quintile breakdown sharpens this diagnosis. The lowest income quintile experiences a sustained fall in mean wages (negative average annual growth), the second quintile registers only small positive gains, and the top three quintiles remain broadly stagnant in real terms. Collectively, these patterns indicate that wage improvements, where they exist, are neither large nor broadly distributed; instead, the lower tail experienced deterioration.

These wage dynamics have three central implications for inequality. First, persistent weakness or decline at the bottom compresses the wage floor and increases vulnerability among low paid earners, thereby exacerbating within-worker

Table 1 *Trends in nominal and real (deflated to Jan-2011 base) rural wages, India, 2017–23 in rupees*

Year	Nominal (in rupees)		Real (in rupees)	
	Median	Average	Median	Average
2017–18	6500	8079	4148	5190
2018–19	7000	8384	4350	5265
2019–20	7000	8715	4284	5246
2020–21	7800	9211	4321	5202
2021–22	8400	10183	4426	5401
2022–23	9000	10890	4468	5466
2023–24	9500	11405	4452	5415
Average annual growth (per cent per annum)	5.6	5.1	1.0	0.6

Notes: Wages are monthly. Real wages deflated using consumer price index (2011-Jan base). Zero earnings observations were dropped. It should be noted that among women workers in livestock rearing and other agricultural activities, it is very possible that women were noted as workers by a time criterion, and therefore counted as potential earners, but the returns to their labour may be implicit, low, variable, and even reported as zero. A data irregularity (FSU 10386) in 2022 was retained; results are sensitive at the margin.

Table 2 *Average rural wage by income quintile, India, 2017–23*

Year	Ave Q1	Ave Q2	Ave Q3	Ave Q4	Ave Q5
2017–18	1553	2983	4185	5708	11547
2018–19	1632	3060	4317	5822	11488
2019–20	1581	3056	4318	5811	11465
2020–21	1568	3002	4287	5816	11358
2021–22	1586	3143	4487	6104	11690
2022–23	1559	3095	4477	6253	11963
2023–24	1432	3027	4444	6225	11948
Average annual growth (per cent)	–1.1	0.2	0.9	1.3	0.5

Notes: i) “Ave Qk” denotes the mean (or average) monthly wage within earnings quintile k (Q1 lowest, Q5 highest). ii) Average Q1 = lowest quintile, average Q5 = top quintile. iii) Annual growth is the average annual percentage change across 2017–18 to 2023–24. iv) See main text for details on deflation and sample construction.

inequality and reducing the redistributive capacity of wages. Second, modest gains concentrating in middle deciles but not at the bottom imply that observed aggregate changes in labour market aggregates can mask deepening precarity: measured reductions in some summary inequality metrics may coexist with worsening conditions for the poorest wage earners if improvements are unevenly distributed. Third, the COVID-19 shock may have amplified these tendencies. The pandemic produced acute employment disruptions, return migration, and sectoral shocks that depressed wage rates and job quality in several domains; these effects introduced greater volatility into wage series.

Yet, when we use the same PLFS dataset to construct household-level per capita incomes, a very different picture emerges. Median and mean household incomes have grown, and growth has been progressive across deciles, with the poorest households often experiencing stronger percentage gains. We show this in the following table which depicts household per capita income across these years.

The decile series in Table 3 exhibits a dramatic pattern of high and progressive growth across rural India: lower deciles register substantially higher average percentage increases (over 3.5 per cent for deciles 1–4) than the top decile (about 3 per cent). In relative terms, this is convergence: the ratio of the 2017 top-to-bottom decile incomes ($5,260/383 \approx 13.7$) falls modestly by 2023 ($6,002/478 \approx 12.6$). Put differently, the poorest deciles have seen faster proportional gains than the richest decile over this interval.

Two qualifications are crucial. First, despite faster percentage growth at the bottom, absolute gaps in levels have widened: the rupee gap between top and bottom increased from 4,877 in 2017 to 5,524 in 2023. Thus, relative convergence in growth rates coexists with larger level differences – the poor remain far behind in absolute terms even as their incomes grow faster per cent-wise. Second, the pandemic years

Table 3 *Real per capita household income, by income decile, monthly (rural), India, 2017–23 in rupees (real terms) and per cent*

Decile	2017	2018	2019	2020	2021	2022	2023	Average annual growth (in per cent)
1	383	430	402	410	418	474	478	3.76
2	679	716	720	734	746	818	844	3.69
3	860	903	919	942	960	1038	1066	3.64
4	1026	1074	1103	1133	1153	1238	1274	3.67
5	1209	1265	1298	1329	1348	1453	1487	3.51
6	1410	1482	1529	1552	1581	1695	1740	3.57
7	1678	1746	1814	1838	1872	1995	2029	3.22
8	2056	2115	2196	2227	2256	2431	2448	2.95
9	2682	2739	2821	2876	2936	3147	3180	2.88
10	5260	5127	5482	5465	5538	5934	6002	2.22
Overall	1724	1759	1828	1850	1880	2022	2055	2.97

Notes: Values show real per capita monthly income for rural households by income decile (years shown). Average annual growth reports the compound annual growth rate (CAGR) between 2017 and 2023. Entries have been rounded off to the nearest integer for readability.

show interrupted trajectories (notably 2019–21) when employment, migration, and incomes were volatile; subsequent rebounds – particularly among lower deciles – drive much of the measured percentage growth at the bottom. This pattern suggests that some of the progressive gains may be cyclical (catch-up after a trough).

Taken together then, we have a profoundly strange puzzle. Has India’s rural growth been spectacularly fast and progressive (as shown by the household data), or painfully slow and somewhat regressive (as indicated by the individual data)?

RESOLVING THE PUZZLE: HOUSEHOLD COMPOSITION EFFECTS

A Simple Mathematical Illustration

The paradox of stagnant real wages alongside rising household per capita income can be illustrated and resolved with a simple decomposition. Let household per capita income be defined as

$$y = (w/e) \times e/n \tag{1}$$

where *w* denotes total household wage income, *e* the number of earners in the household, and *n* the number of household members. That is, per capita income is equal to average wage per earner (*w/e*) multiplied by the number of earners *e*, divided by total household size *n*.²

² In urban areas, the data shows a fall in total household size *n*, but not in rural areas. We focus here on the first two terms.

By algebraic simplification, this reduces to

$$y = w/n \quad (2)$$

That is, per capita household income depends on the ratio of total household income w to household size n . Yet, this identity masks the mechanism by which w itself can grow: an increase in the number of earners e , even if the average wage (w/e) is constant.

To see this explicitly, consider the growth rate of y in “hat calculus” (log-differentiation):

$$\hat{y} = \hat{w} - \hat{n} \quad (3)$$

where $\hat{z} \equiv \dot{z}/z$ denotes the proportional growth rate of variable z . Expanding $w = (w/e) \cdot e$, we obtain

$$\hat{w} = (\widehat{w/e}) + \hat{e} \quad (4)$$

Substituting back, household per capita income growth is

$$\hat{y} = (\widehat{w/e}) + \hat{e} - \hat{n} \quad (5)$$

This decomposition shows that per capita income growth can arise from three channels: (i) rising average real wages per worker, (ii) rising number of earners per household, and (iii) shrinking household size. In the PLFS data, the first channel has been weak or stagnant, but the second channel – more earners per household – has been robustly positive. Even with constant wages, an increase in $\hat{e}$ raises total household income w and thereby household per capita income y . In short, household incomes can improve even under stagnant wage conditions if more household members, particularly women and youth, enter the labour force.

One comprehensive, if early, review by Chand and Singh (2022) of the PLFS suggested such patterns. They argue that India’s labour force rose from 485.3 million (2017–18) to 537.9 million (2019–20), while the number of workers rose from 455.8 million to 511.9 million over the same period – an increase of roughly 56 million workers. Critically, they suggest that about 72 per cent of the net increase in jobs was rural. Female workers increased by ≈ 37.7 million versus ≈ 18.3 million male entrants. The worker-to-population ratio and LFPR also rose substantially ($WPR \approx 34.7\% \rightarrow 38.2\%$; $LFPR \approx 36.9\% \rightarrow 40.1\%$), with the largest gains among rural women.

These PLFS patterns strongly support the contention that the number of earners per household has increased, driven particularly by rising rural participation.

We begin by directly examining this contention in Table 4.

Table 4 *Share of rural household members who are earners, India, 2017–23*

Year	Share (earnings > 0) proportion	Share (earnings ≥ 0) (proportion)
2017	0.35	0.35
2018	0.35	0.35
2019	0.36	0.38
2020	0.37	0.39
2021	0.36	0.39
2022	0.38	0.42
2023	0.39	0.44

Notes: Two measures are shown. “Earnings > 0” counts household members reporting strictly positive earnings; “earnings ≥ 0” uses a looser definition that also counts members reporting non-negative earnings (including zero-valued reports or other non-positive responses depending on survey coding).

Values are proportions of total household members in rural households.

See text for caveats on measurement and sample construction.

Table 4 documents a clear upward trend in the share of rural household members who are earners between 2017 and 2023. Under the stricter definition (earnings > 0), the share rises from 0.35 in 2017 to 0.39 in 2023; using the broader (earnings ≥ 0) definition, the increase is larger, from 0.35 to 0.44 over the same interval. The acceleration begins around 2019–20, and although there is a small dip in 2021 under the strict definition, the post-2021 rebound is pronounced.

These patterns imply that on average, more members of rural households are participating in income-generating activities than in the late 2010s. Several plausible mechanisms can account for this rise: higher female and youth labour force participation, increased self-employment or casual work opportunities in rural areas, and the return-migration of working-age members (notably during the COVID-19 shock) who temporarily or permanently joined household labour efforts. The larger increase under the “≥ 0” definition suggests measurement sensitivity: including non-negative reports (zeros, marginal, or irregular earnings) captures a broader set of household members who contribute (or claim to contribute) economically, highlighting the role of marginal and precarious work.

We turn now to explore one of the key drivers of this increased participation – the rise of precarious female employment. Table 5 shows a substantial increase in the worker population ratio (WPR) in rural India between 2017 and 2023, rising from 44.8 to 56.5. This increase occurs alongside relatively stable demographic shares of men and women in the 15+ population. The decomposition highlights that the rise in WPR is largely attributable to changes in gender-specific participation rates. While male WPR increases modestly from 69.1 to 75.3 over the period, the increase in female WPR is far more pronounced, rising from 20.1 to 38.1. Given the near-constant population weights, this sharp increase in female participation accounts for a larger fraction of the aggregate rise in WPR.

Table 5 *Worker population ratio (WPR) and decomposition by gender, rural, India, 2017–23 in per cent*

Year	WPR	WPR		Share 15+		Employment Share	
		Men	Women	Men	Women	Men	Women
2017	44.8	69.1	20.1	0.5049	0.4951	34.9	9.9
2018	45	68.9	20.9	0.5019	0.4981	34.6	10.4
2019	48.4	70.1	26.7	0.5008	0.4992	35.1	13.3
2020	49.6	70.5	28.4	0.5023	0.4977	35.4	14.1
2021	49.9	71.7	27.9	0.5015	0.4985	35.9	13.9
2022	54.4	74.1	34.6	0.4998	0.5002	37.1	17.3
2023	56.5	75.3	38.1	0.4942	0.5058	37.2	19.3

Note: WPR refers to the workforce participation rate for the rural population aged 15 and above. The aggregate WPR is decomposed by gender as:

$WPR = (\text{Share of men aged 15+} \times \text{men's WPR}) + (\text{Share of women aged 15+} \times \text{women's WPR})$.

The “Employment Share” columns report the gender-wise contribution to the aggregate WPR and their sum forms the total WPR.

Source: PLFS various rounds.

The employment share figures reinforce this interpretation. Female employment share nearly doubles from 9.9 to 19.3, while male employment share increases only marginally. This implies that the expansion of employment in the economy during this period is disproportionately driven by women entering the workforce. However, it is important to note that while this represents a significant quantitative shift, the qualitative nature of this employment growth remains to be examined, particularly in terms of the types of jobs women are entering.

Table 6 provides insight into the nature of the increase in female employment by examining its composition. The data show a clear and sustained shift towards self-employment among women. The share of self-employed women rose steadily from 56.3 per cent in 2017 to 73.53 per cent in 2023, with a corresponding decline in other types of employment. This indicates that the increase in female workforce participation documented in Table 5 was not primarily driven by an expansion of wage or salaried employment, but rather by growth in self-employment.³

This compositional shift raises important questions about the quality and sustainability of employment gains. Self-employment in the Indian context often includes own-account work and unpaid family labour, which may reflect distress-driven labour supply rather than improved labour market opportunities. As such, while the rise in female WPR represents a significant change in aggregate participation, Table 6

³ A referee commented, “This is mainly due to improvement in capturing female workers who were engaged in production or collection of primary goods for home consumption. The instruction to the investigators regarding workers was revised in 2023–24 to make clear the definition of workers, which resulted in a substantial rise in the WPR between 2022–23 and 2023–24.” While we cannot verify this, it is a plausible interpretation for the observed patterns.

Table 6 *Composition of female employment, India, 2017–23 in per cent*

Year	Self-Employed	Non-Self-Employed
2017	56.29	43.71
2018	57.8	42.2
2019	62.42	37.58
2020	64.29	35.71
2021	67.38	32.62
2022	70.95	29.05
2023	73.53	26.47

suggests that this change may be associated with a reallocation into more precarious or informal forms of work, rather than a structural transformation towards formal employment.

Policy and interpretive implications follow (see in particular Arora (2023)). First, the increase in earners per household can raise household-level resources even when individual wages are stagnant – a compositional channel that complicates assessments based solely on individual wage trends. Second, the nature of the additional earners matters: if gains reflect low-paid, precarious, or part-time activities, then household-level improvements may be fragile and inequality within households or across individuals may persist or worsen. Third, the post-2019 rise – contemporaneous with COVID-19–related labour market disruptions – highlights volatility: some of the increase may represent temporary coping strategies (return migration, short-term work) rather than permanent labour market improvement. We follow this therefore by disaggregating the earnings ratio by decile in Table 7.

Table 7 *Ratio of earners to total household members by income decile, rural, India, 2017 and 2023*

Decile	2017	2023
1	0.23	0.26
2	0.25	0.28
3	0.27	0.30
4	0.29	0.33
5	0.31	0.36
6	0.34	0.39
7	0.36	0.42
8	0.41	0.48
9	0.46	0.53
10	0.52	0.61

Notes: Values represent the proportion of household members who are earners by income decile in rural households.

Ratios exclude zero earnings observations.

Table 7 shows a steady increase in the share of earners among household members across all rural deciles between 2017 and 2023. Three important features emerge.

First, in both 2017 and 2023, richer rural households have a higher earners-to-members ratio. The ratio in the bottom decile rose from 0.23 to 0.26, while that in the top decile increased from 0.52 to 0.61. This suggests that household labour force participation is structurally higher at the top of the distribution.

Second, ratios improved across all deciles over the six-year period. Mid-decile households saw notable gains: for instance, ratio in decile 5 rose from 0.31 to 0.36, and in decile 7 from 0.36 to 0.42. This reflects a broad rise in the effective share of earners per household.

Third, the difference between the top and bottom deciles increased. In 2017, the gap was 0.29 points (0.52–0.23), but by 2023, it had grown to 0.35 points (0.61–0.26). This indicates that although poorer households also experienced gains, richer households consolidated their relative advantage in the share of earners.

Overall, the data suggest a gradual strengthening of household earning capacity in rural India between 2017 and 2023, but with persistent and widening disparities across the income distribution.

How much of the divergence can this account for? In our first set of tables, real earnings per individual rose about 0.45 per cent on a compounded base annually. Household per capita income rose by about 2.97 per cent at the same time, leaving about 2.5 per cent annual growth unexplained. However, the growth in earners per household was between 0.35 to 0.39 per household (the series with earners having income > 0) and 0.35 to 0.44 per household (the series with earners having income ≥ 0). This suggests an annual growth rate of between 1.56 per cent and 3.34 per cent in the number of earners, which can, in principle, fully account for the discrepancy between stagnant real wages and rising per capita household incomes. However, we are still left with the puzzle of progressivity in household incomes. For this, we turn to examining the changes in occupations across the income distribution.

CHANGING OCCUPATIONAL DISTRIBUTION

Since the PLFS series is a repeated cross-section and not a panel, we cannot completely isolate the changes in occupational composition within a household over time. However, we can gain a sense of changing patterns by looking at the evolution of occupations by household income decile as an approximation.

Table 8 provides a rough and ready comparison of the employment composition between 2017 and 2023 across the household income distribution. Perhaps the most significant shift between 2017 and 2023 was in the employment composition of

Table 8 *Distribution of rural employment status by decile, India, 2017 and 2023 in per cent*

Decile	Regular salaried	Self-employed	Casual work	Unemployed
2017				
1	4.75	54.75	32.83	7.67
2	5.51	51.74	37.22	5.52
3	7.88	51.82	34.79	5.51
4	9.01	60.06	26.67	4.25
5	11.05	55.56	29.05	4.34
6	11.72	52.08	32.41	3.79
7	13.17	56.27	26.61	3.95
8	18.00	55.36	22.69	3.95
9	20.42	51.90	24.37	3.31
10	41.47	40.65	14.50	3.38
2023				
1	3.58	62.35	29.26	4.81
2	7.51	58.55	31.30	2.63
3	9.55	57.35	29.97	3.13
4	9.94	60.68	26.71	2.67
5	13.70	60.32	23.52	2.46
6	14.03	58.12	25.45	2.40
7	16.11	57.73	23.68	2.47
8	17.05	57.11	22.97	2.87
9	23.01	54.66	20.06	2.27
10	40.28	45.25	11.83	2.64

workers in the lower deciles. For the bottom 30 per cent of the distribution, the share of workers in casual employment declined, while the share of the self-employed rose.

For example, in the first decile, casual work fell from 32.8 per cent in 2017 to 29.3 per cent in 2023, while self-employment rose from 54.8 per cent to 62.4 per cent.

This pattern, repeated in the second and third deciles, suggests that poorer households are increasingly relying on self-employment rather than daily wage labour. In addition, there is also a substantial decrease in the number of unemployed.

Beyond the bottom deciles, the table also reveals changes across the middle and upper distribution. Between 2017 and 2023, middle deciles (4–7) experienced modest but consistent gains in self-employment, coupled with a fall in casual labour. For the top deciles, the most striking feature is the persistently high share of regular salaried work, especially in the tenth decile where over 40 per cent of workers are in salaried employment in both years. However, even here, there is a small rise in self-employment and a contraction of casual work. Taken together, these shifts suggest that the gradual retreat of casual wage labour is not confined to the poorest

Table 9 *Average wages by employment type, rural, India, 2017–23 in rupees (real, 2011 prices)*

Year	Regular salaried	Self-employed	Casual work
2017	8114	5421	3426
2018	7855	5496	3561
2019	7867	5400	3691
2020	7986	5261	3693
2021	8038	5426	3914
2022	7971	5560	3844
2023	7881	5428	3837

households alone but is visible across much of the distribution, pointing towards a structural reorganisation of rural employment.

Table 9 examines the evolution of real wages by employment type, revealing three distinct patterns.

In level terms, regular salaried workers remain the best-paid group by a wide margin (around Rs 7,900–8,100 in real 2011 terms across the period), self-employed workers occupy an intermediate position (around Rs 5,400), and casual workers are the lowest paid (around Rs 3,400–3,900). Over 2017–2023, however, the dynamic change differs by category.

Regular salaried wages show mild stagnation and a small decline: the real level falls by about 2.9 per cent in total, corresponding to a negative CAGR of roughly 0.48 per cent per year. This suggests that salaried real earnings have not kept pace during the period and have in fact edged down slightly.

Self-employed earnings are essentially flat in real terms. The net change between 2017 and 2023 is negligible (about +0.15 per cent), with an annualised growth rate indistinguishable from zero (approximately +0.02 per cent per year). This implies no meaningful improvement in average real earnings for the self-employed over the period.

Casual workers are the notable exception: although they start from much lower levels, their real wages rose noticeably – total growth of about 12 per cent between 2017 and 2023, or an annualised gain of roughly 1.9 per cent per year. This indicates that daily wage labourers saw the strongest relative improvement in real pay among the three categories, even though their absolute wage level remains substantially lower than that of self-employed and salaried workers.

This last point, however, is critical. Despite a relative catch up in casual wages, because they are still substantially lower (at about 70 per cent of self-employment earnings), any relative shift to self-employment from casual wages should on average be income

enhancing. Given that there has been a shift from casual work to self-employment, especially in the bottom three deciles (self-employment percentage point increases are 7.6 per cent, 6.81 per cent, and 5.54 per cent respectively), the growth impact, especially given low base incomes, is likely to have been substantial in these deciles. To a first approximation, it can account for a substantial part of the observed progressivity of growth in the overall household incomes per capita over this time.

CONCLUSIONS AND IMPLICATIONS

This paper documents a puzzling but robust set of patterns seen in rural India in recent times. Household per capita incomes in the Periodic Labour Force Survey (PLFS) rounds between 2017 and 2023 have risen, often proportionally faster in lower deciles, even as individual real wages have remained weak: median and mean wages in real (2011) terms have shown only modest gains, and for many groups, have essentially remained flat. We resolve this apparent contradiction by showing that changes in household composition – principally, a sustained rise in the number of earners per household driven by greater labour force participation and occupational shifts from casual wage work to self-employment – explain the bulk of observed increases in household per capita incomes. The decomposition is mechanically suggestive: with average wage per earner growth near zero, a rise in earners per household can generate substantial growth in per capita household income.⁴

An important contribution of this analysis is to explain why household income growth appears progressive across the distribution. Compositional shifts away from casual wage labour towards self-employment have been strongest among poorer households. Since self-employment typically yields somewhat higher average earnings than casual work, this reallocation raises household incomes in the bottom deciles more than in the top, producing the appearance of progressive gains even when underlying individual wages are stagnant. In this sense, the progressivity observed in the household data is largely a compositional artefact – the result of more earners and occupational reallocation – rather than an indicator of broad-based wage growth or structural improvement.

Three implications that follow directly from our analysis are worth highlighting. First, measurement matters: looking exclusively at individual wages understates

⁴ A referee noted that an additional explanation for the observed riddle, which cannot be explored with Periodic Labour Force Survey (PLFS) data but emerges from village data, is the changing work calendar of rural manual workers, particularly men. Evidence from Foundation for Agrarian Studies (FAS) data shows that in many villages, the absolute number and share of non-agricultural days of employment is higher than the agricultural days of employment. As non-agricultural wages are higher than agricultural wages, this shift (not so much in occupation but in the composition of work during the year) can also explain higher aggregate earnings. Earlier, a rural casual worker may have worked for 100 days in agricultural and 50 days in non-agricultural tasks, and now the ratio could be reversed. Income for this worker could thus rise even if wage rates in both sectors remain stagnant due to the change in composition of employment.

improvements in household resources, while focusing only on household incomes risks overstating sustained welfare gains. Both perspectives are correct at their level of aggregation: only by jointly analysing wages, earners per household, and household size can we accurately characterise living standard dynamics. Second, household labour dynamics are central: rural households may have adapted to sluggish wages by increasing labour force participation and shifting occupational composition, thereby raising household resources. Third, structural transformation remains incomplete: compositional gains are limited and fragile – without sustained productivity growth and higher real wages, improvements in living standards may stall or be reversed.

While our decomposition explains both the arithmetic of rising household incomes and the apparent progressivity of those gains, the weight of evidence in the end points more strongly to the distress interpretation of recent rural change. Four features support this assessment. (i) Wage series show volatility around shocks (notably 2019–21) and the rebound pattern suggests significant cyclical catch-up and coping responses rather than durable structural progress (although recent growth may provide some silver lining). (ii) Except for casual wages, which have risen modestly from a low base, both regular salaried and self-employment wages have stagnated or declined in real terms, reinforcing the weakness of rural labour market outcomes. (iii) Much of the increase in self-employment may reflect petty, informal activities with low productivity and high precarity; such activities can raise household receipts in the short run while offering uncertain long-run welfare improvements. (iv) Non-income indicators – nutrition and financial inclusion – do not show commensurate improvement, indicating that measured household income gains have not uniformly translated into human-development outcomes.

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