

How India Works Today: Insights into Wages, Skills, and Informal Employment through the Lens of PLFS 2025 report using unit level data for the first time

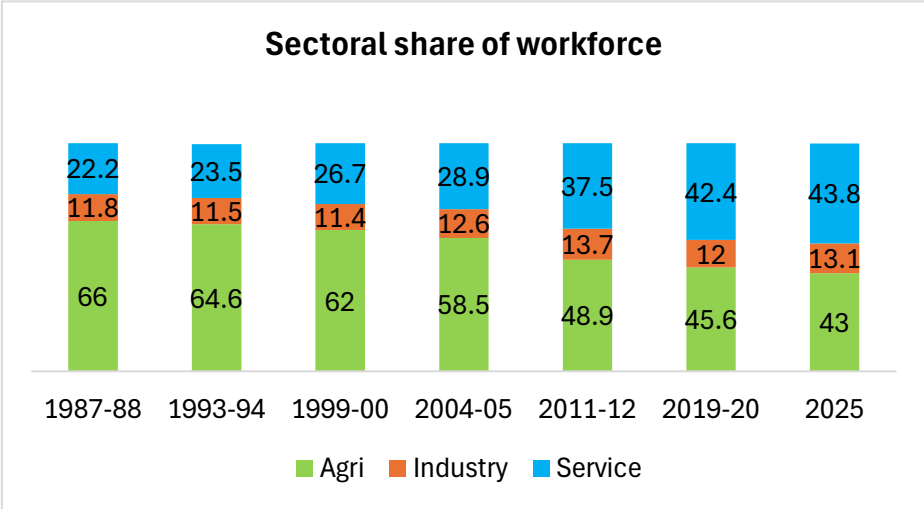
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- ❑ **This employment study is first of its kind in India using the latest PLFS data (2025) at the unit-level...** India's labour force is undergoing structural transformation with share of agriculture in the workforce witnessing a modest 23% decline from 66% in 1987-88 to 43% in 2023-24 over a 37-year period... **Large enterprises(>20 workers) now employ 13.7% of the workforce... significantly higher than 10.8% in 2024 with government's renewed push on manufacturing...**
- ❑ **The LFPR for persons aged 15 years and stands at 59.3% in 2025...Male LFPR stood at 79.1%, while female LFPR stood at 40.0%**
- ❑ There exists substantial regional disparities in labor market conditions across India... states such as Gujarat (0.9%), Madhya Pradesh (1.5%), Karnataka (2.3%), and Chhattisgarh (2.3%) exhibit comparatively lower unemployment rates, indicating relatively better labor market absorption and stronger employment generation capacity
- ❑ **Youth unemployment as per PLFS 2025 stood at 9.9%.... Significantly lower than the global average 12.6% in 2025 for the age group 15-24 years...**However youth unemployment rate estimation methodology in PLFS report needs to be refined for a better measure...**we believe that looking at the unemployment rate of 30+ is a better metric than 15-29 years (people are still undergoing formal education during this age) as given in PLFS report because it might show the structural shift in employment rather than unemployment.. Our estimates show that unemployment rate for the 30+ population came out to approximately 0.78% for rural males while it is 2.6% in PLFS...Similarly, for urban male PLFS reported unemployment rate of 11.8% which comes down to 2.26% for 30+ population..** This is also validated at the unit-level data
- ❑ **Gini coefficient shows lower inter-state inequality in regular wage and high in self employment** suggesting that average regular wage earnings are relatively more uniform across states

- ❑ Female headed households are now showing better employment quality...Result of improved access to better jobs and better education...**Our results indicate that women who are household heads are associated with a 4.4% higher probability of being in regular wage work**
- ❑ **Industry wise employment quality shows Female employment earning regular wages outpaces Men in transport...** while in case of Mining and Industry, the share of female employment in regular wage is very low while it is significantly high in case of men
- ❑ States such as Karnataka, Tamil Nadu, Odisha have high employment quality as well as high labour force participation rate...UP, Bihar and Punjab display lower participation as well as lower worker's quality index
- ❑ **States need to strictly implement the Minimum Wages Act...Chhattisgarh (~70%), Odisha (~66%), and Jharkhand (~65%) exhibit the highest incidence of workers earning below the statutory minimum wage**
- ❑ Punjab records the highest share of informal workers at 82%, followed by Uttar Pradesh and Bihar at 81% each.. there is a greater need for formalization...agriculture remains the largest source of informal employment, accounting for nearly 42% of the informal workforce, followed by trade and hotels (17%)
- ❑ **Female workers are ~4.8% more likely to be informal workers compared to male workers whereas construction sector workers are ~4.5% more likely to be engaged in informal employment relative to agricultural sector**
- ❑ Government training plays a significant role in improving self employment among female. **Our results show that government funding is associated with 5.8% rise in the probability of self employment**

Economic Transition in India dictates India's labor market

- ❑ The share of agriculture in the workforce has seen a modest 23-percentage point decline from 66% in 1987-88 to 43% in 2023-24 over a 37-year period. In recent years, also a rising female participation rate in rural areas has resulted in a slow decline in share of agriculture in the total workforce
- ❑ In 2025, agriculture employed 43% of the workforce. Non-agricultural enterprises with fewer than 19 workers employed 42.3% of all workers.. **Therefore, in principle, only 14.5% of the workforce had access to a significant volume of capital being employed in firms having more than 20 workers.. The good thing is that these numbers have increased manifold from 2024 levels, when they were at 10.8% with the Government having a renewed focus on manufacturing sector**
- ❑ In principle, Indian enterprises are small in employment-intensive sectors such as apparel, footwear, furniture, and other light manufacturing and are informal. India needs to undertake policy changes that would reallocate some of the capital into labour-intensive activities. This is precisely what the Government has been doing in terms of say the Production Linked Incentive (PLI) Scheme covering the following 14 critical sectors, with tailor-made incentives and performance frameworks as well as on-the-job skill acquisition and upgradation.... **A discussion of all this in this report by using the PLFS unit level data gives us an idea of how India works today**



Source: PLFS 2025

Worker Distribution Across agriculture and Non-agricultural Enterprises by Size	
Sector/Enterprise Size	Percent Share in Total Workforce
Agriculture	43
Non-agricultural Enterprises by Size	
Less than 10 Workers	38.4
10 to 19 Workers	4.1
20 or More Workers	13.7
Size Unknown	0.8
Total	100.0
Source: PLFS 2025	

PLFS 2025 Report using Unit Level data

- ❑ The Periodic Labour Force Survey is a nationwide survey conducted to estimate key employment and unemployment indicators and assess the labour force situation in India. The PLFS 2025 survey covered a total of 22,594 First Stage Units (FSUs) across India, comprising 12,441 villages in rural areas and 10,153 urban blocks
- ❑ A total of 2,70,472 households were surveyed under the study, including:
 - 1,48,718 rural households
 - 1,21,754 urban households
- ❑ The survey enumerated 11,48,634 persons across the country of which:
 - 6,56,160 persons were from rural areas
 - 4,92,474 persons were from urban areas
- ❑ Among the total surveyed population, 8,91,266 persons were aged 15 years and above, forming the core working-age population used for labor market analysis
- ❑ The larger rural sample reflects the significant share of the rural workforce in India and enables detailed analysis of employment, unemployment, and informality across regions and demographic groups

- ❑ PLFS 2025 data (January–December) was obtained from MoSPI website in raw text format
- ❑ The dataset comprises two files:
 - (i) Household-level data
 - (ii) Individual (person-level) data
- ❑ Raw text files were extracted and converted into structured datasets using Stata
- ❑ Unique identifiers are constructed using a combination of variables, including FSU Serial Number, Sub-sample ID, Sector, NSC Region/District Code (year-specific), Stratum, Sub-stratum, Hamlet/Sub-block Number, Household Number, and Person Number (for individual-level uniqueness)
- ❑ The household and individual-level datasets were merged using these identifiers to create a unified micro dataset
- ❑ State and district identifiers are appended to enable regional analysis
- ❑ **The final dataset was used to generate state-level variables, summary statistics, and visualizations by applying the weights..**

Methodological changes in PLFS 2025 report has made it more aligned with the idiosyncrasies of India's labor market

Key Changes in PLFS 2025			
	Earlier PLFS	PLFS 2025 Change	Implication
Survey period	Annual PLFS followed July–June agricultural year cycle.	Shifted to January–December calendar year from 2025.	Aligns labour indicators with international/calendar-year reporting practice.
Coverage for high-frequency estimates	Quarterly PLFS estimates were mainly for urban areas.	Revamped design extends quarterly estimates to both rural and urban areas under CWS.	Enables more frequent tracking of rural labour market conditions.
Visit structure	Earlier design had a different rotational structure.	Introduced four consecutive monthly visits under rotational panel design.	Ensures 75% sample matching between consecutive months and 50% across successive quarters.
Sampling frame	Earlier sampling design used previous rural/urban FSU structure.	Large villages and UFS blocks divided into sub-units of broadly equal population/households.	Improves representativeness and sample balance.
District stratification	Districts were not uniformly treated as basic strata everywhere.	Districts treated as basic strata separately for rural and urban sectors, broadly aligned with NSS regions.	Improves geographic representation.
Sampling method	Earlier sample selection procedure differed.	FSUs selected using Simple Random Sampling, one FSU per stratum/sub-stratum each month.	Strengthens randomness and monthly representativeness.
Sample size	Up to Dec 2024, average sample was about 12,800 FSUs and around 1.02 lakh households.	From Jan 2025, sample increased to 22,692 FSUs and around 2.72 lakh households.	Sample size is about 2.65 times higher, improving precision of estimates.
Annual Report 2025 sample	Earlier annual reports were based on July–June cycle.	PLFS 2025 covers Jan–Dec 2025, with 22,594 FSUs, 2.70 lakh households, and 11.49 lakh persons surveyed.	First comprehensive PLFS Annual Report on a calendar-year basis.
Comparability	Earlier PLFS results up to 2024 were based on old sample design.	2025 results use changed sampling and estimation design.	PLFS 2025 estimates may not be strictly comparable with previous annual/calendar-year estimates.
Labour indicators	LFPR, WPR, UR definitions remained broadly same.	Concepts and definitions are broadly unchanged, but methodology changed.	Changes in level estimates may partly reflect sampling/design revision, not only labour-market change.

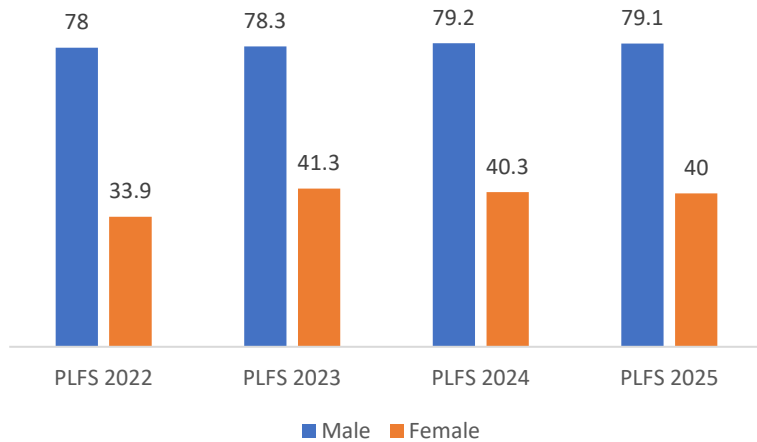
Part	Description
Part-1	▪ Trends in LFPR and unemployment rate ▪ Youth unemployment rate: Trends and measuring issues
Part-2	▪ Mapping the quality component of employment ▪ Determinants of women's employment quality such as female headship, education and social backgrounds based on unit-level data using multinomial logit model ▪ Quality of employment and labour force participation using state-level analysis as well as by industry type
Part-3	▪ Determinants of Minimum Wage non-compliance among Casual Workers across age group, social group, religion, industry
Part-4	▪ Informal workforce dynamics which includes inter-state variations, determinants of informality
Part-5	▪ Impact of training on reducing informality, and its role in regularization and self employment

Part 1

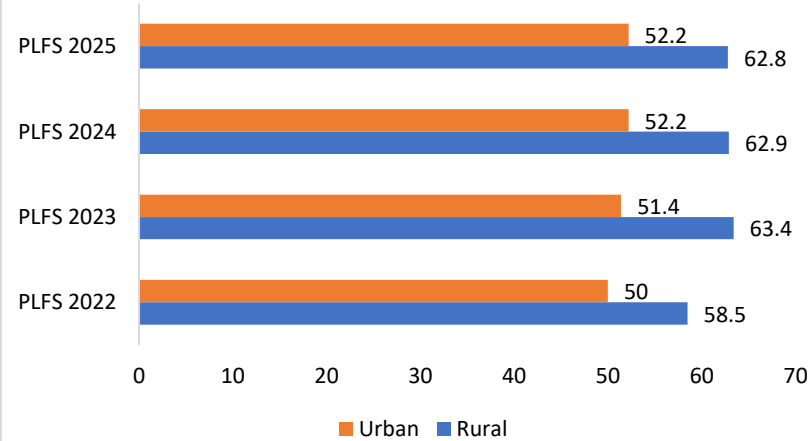
Trends in LFPR and Unemployment Rate (Unbiased !)

- ❑ The LFPR for persons aged 15 years and above was 59.3% in 2025, compared with 59.6% in 2024, indicating broad stability at the aggregate level
- ❑ Male LFPR stood at 79.1%, while female LFPR stood at 40.0%, showing a persistent and substantial gender gap
- ❑ Rural participation (62.8%) remained higher than urban participation (52.2%)
- ❑ Gap between urban and rural female LFPR persists: urban female LFPR was 27.7%, compared with 45.9% for rural females

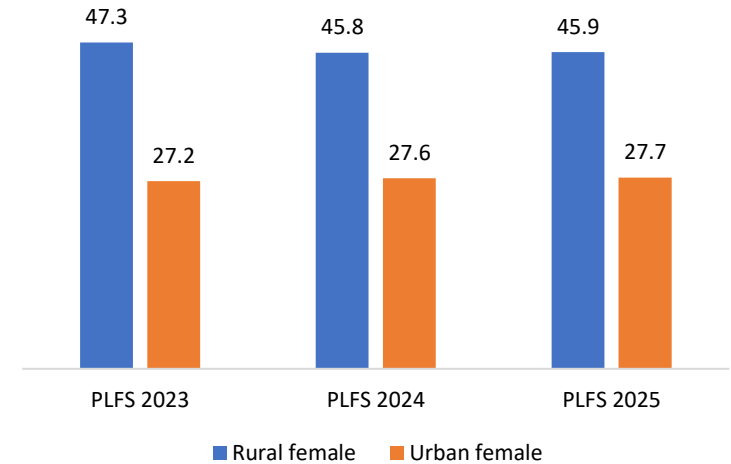
Labour force participation rate



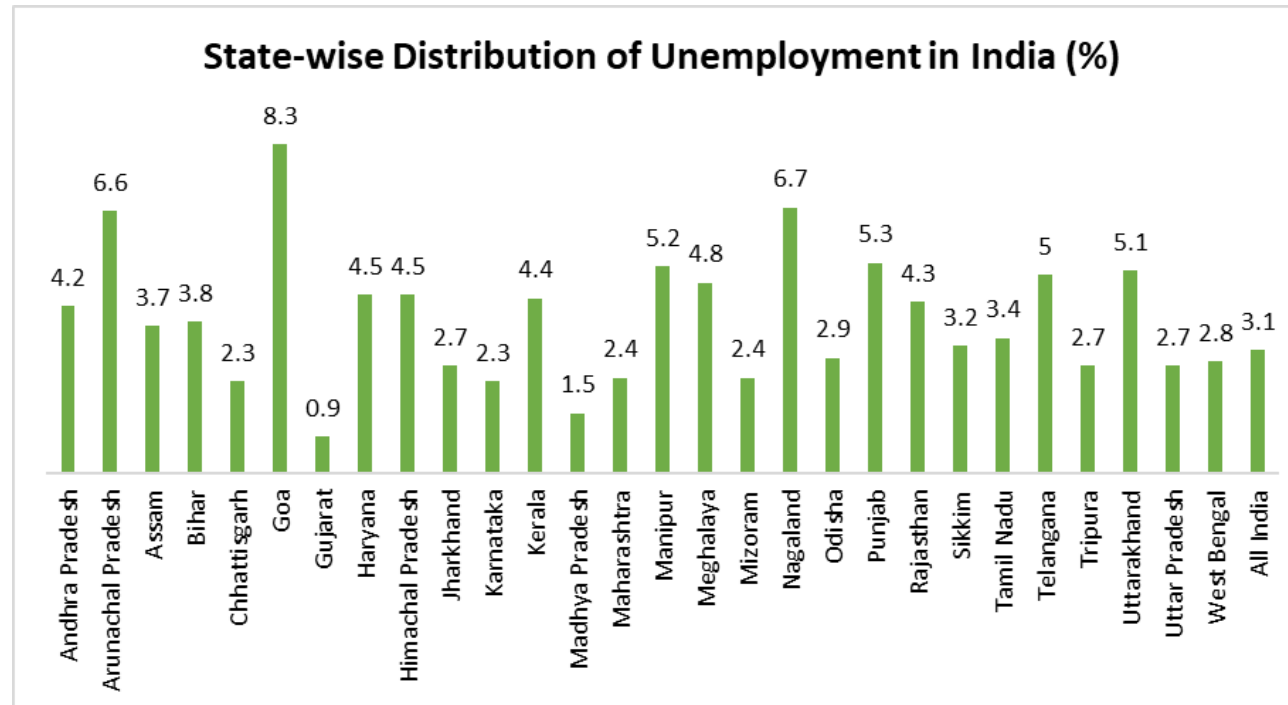
Rural and Urban LFPR



Female LFPR - Rural and Urban

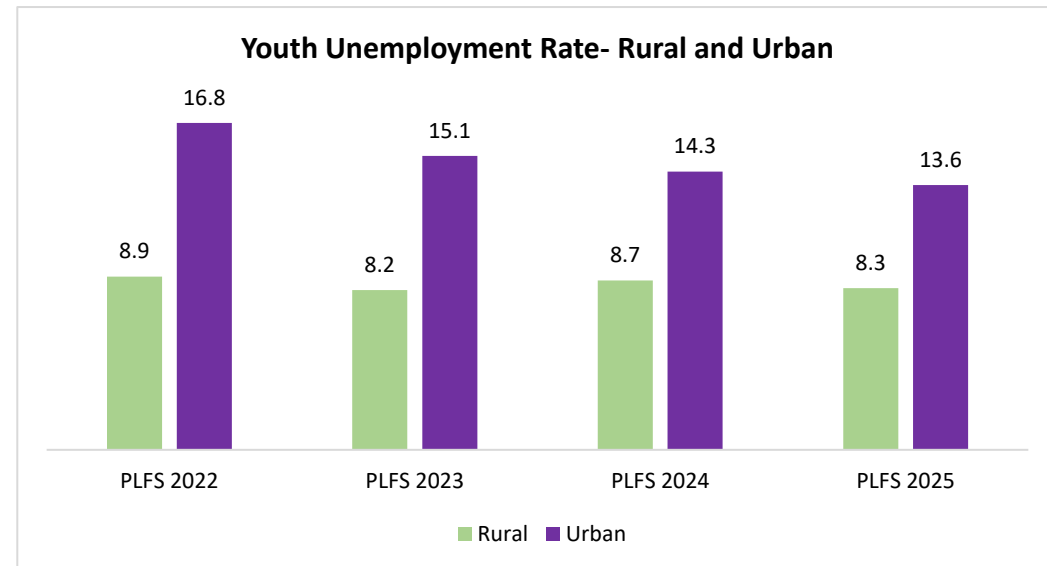
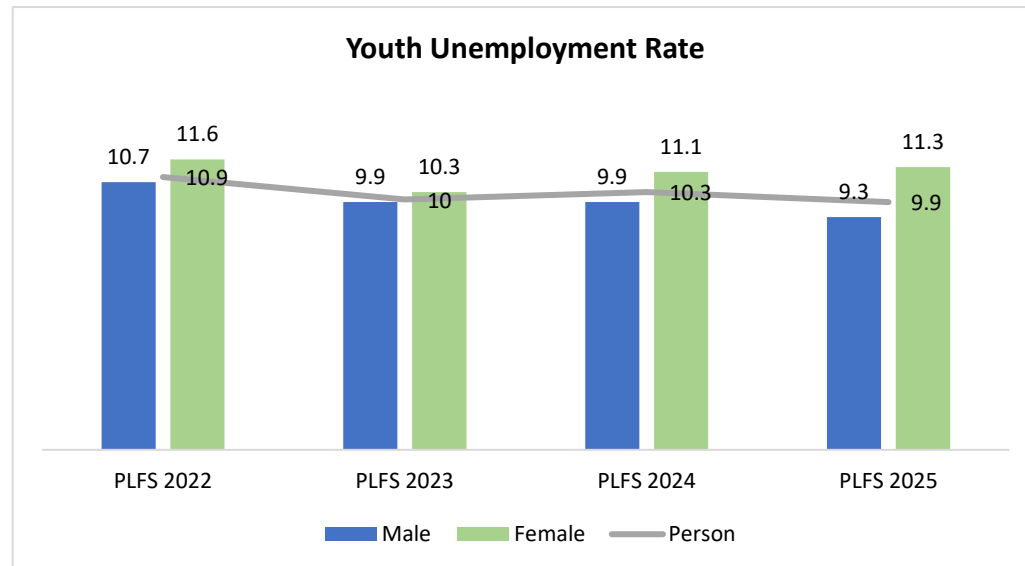


- ❑ The state-wise analysis of unemployment rates (15 years and above) reveals substantial regional disparities in labor market conditions across India. State such as Goa (8.3%), Nagaland (6.7%), Arunachal Pradesh (6.6%), Punjab (5.3%), and Telangana (5%) reports unemployment rates significantly higher than the national average of 3.1%
- ❑ In contrast, states such as Gujarat (0.9%), Madhya Pradesh (1.5%), Karnataka (2.3%), and Chhattisgarh (2.3%) exhibit comparatively lower unemployment rates, indicating relatively better labor market absorption and stronger employment generation capacity



Urban youth unemployment is declining in India and is much lower than Global youth unemployment rate ...

- ❑ Globally youth unemployment rate is estimated at around 12.6% in 2025 for the age group 15-24 years (ILO, 2025), this is significantly higher than the overall global unemployment rate, highlighting the persistent challenges faced by young population in accessing employment opportunities
- ❑ In India, youth unemployment rate declined from 10.9% in PLFS 2022 to 10.3% in PLFS 2024, with PLFS 2025 at 9.9%
- ❑ The rural–urban pattern shows persistently higher youth unemployment in urban areas, although urban unemployment declined from 16.8% in 2022 to 14.3% in 2024, while rural unemployment remained lower and broadly stable around 8–9%
- ❑ Female youth unemployment remains a concern: after falling from 11.6% in 2022 to 10.3% in 2023, it rose to 11.1% in 2024 and stands at 11.3% in 2025, suggesting weaker improvement for young women



- ❑ Youth unemployment rate prima facie looks high. However, we believe that looking at the unemployment rate of 30+ is a better metric than 15-29 years (people are still undergoing formal education during this age) as given in PLFS report because it might show the structural shift in employment rather than unemployment..
- ❑ To estimate the unemployment rate for 30+ years, we first reconstructed the implied weighted number of unemployed persons and the implied weighted labour force for each group
- ❑ For each sex-sector group, we took the PLFS unemployment rate and LFPR for the 15+ population, and multiplied them by the corresponding population share of the 15+ group; this gave us a population-weighted proxy for the total number of unemployed persons and labour-force persons among the 15+ population. We then did the same for the younger age group using the PLFS youth unemployment rate and youth LFPR, along with the relevant youth population share
- ❑ The formula for calculating 30+ unemployment rate is given as

$$UR_{30+,g} = \frac{[(UR_{15+} * LFPR_{15+} * P_{15+}) - (UR_{youth} * LFPR_{youth} * P_{youth})]}{[(LFPR_{15+} * P_{15+}) - (LFPR_{youth} * P_{youth})]}$$

Where UR= Unemployment rate

P refers to the proportion of the population in that age group taken from NHP 2023

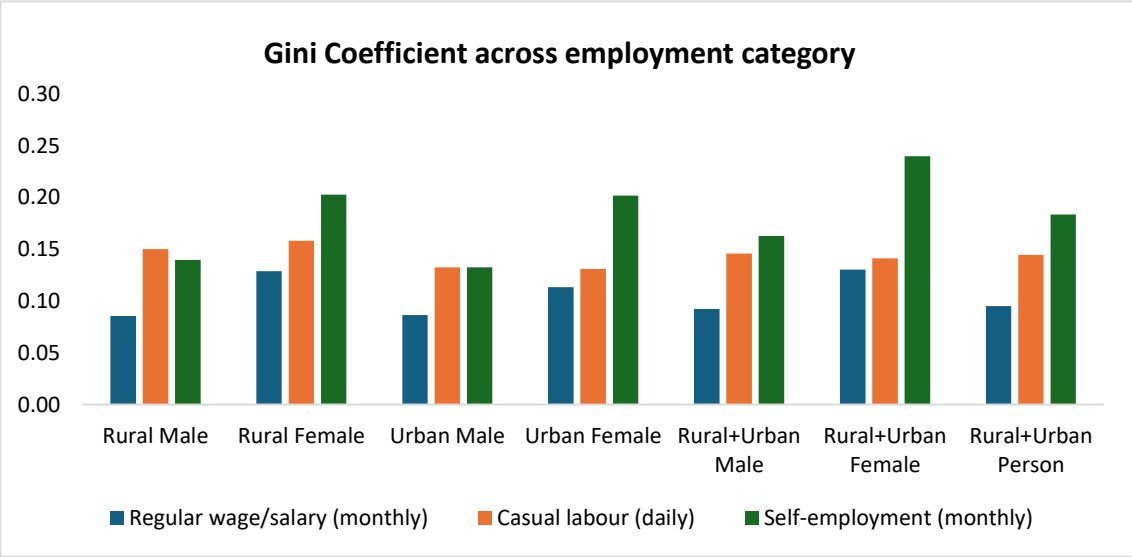
- Our estimates show that unemployment rate for the 30+ population came out to approximately 0.78% for rural males while it is 2.6% in PLFS
- Similarly, for urban male PLFS reported unemployment rate of 11.8% which comes down to 2.26% for 30+ population
- Thus, it is important to measure unemployment rate of 30+ population as the youth unemployment rate in the 15-29 age group does not accurately reveal the changing preference towards higher education among youth

Estimated unemployment rates for 30+ in usual status (%)					
Group	15-29 population share (%)	LFPR youth (%)	UR 15+ PLFS (%)	UR youth PLFS (%)	Estimated UR 30+ (%)
Rural male	22	65.5	2.6	8.2	0.78
Rural female	22	29.3	2.1	8.6	0.58
Urban male	19.8	60.9	4.2	11.8	2.26
Urban female	20	23.2	6.4	18.9	3.05
Source: NHP, SBI Research					

- ❑ To validate the adjustment exercise, we also carried out a direct estimation using the PLFS unit-level data under Current Weekly Status (CWS)
- ❑ The objective was to check whether the unemployment rate for the 30-plus population is lower than the overall published CWS unemployment rate once the younger age groups are excluded. For this, we first constructed labour-market status variables from the CWS activity-status codes at the individual level
- ❑ Individuals with CWS worker status codes were classified as employed, individuals with CWS unemployment codes were classified as unemployed, and those outside the labour force were separately identified.
- ❑ We then generate weighted counts of unemployed persons, employed persons, total labour force, and population. **The estimates indicate lower 30+ unemployment rate at the unit-level as well**
- ❑ Thus, the unit-level check confirms the main intuition of the adjustment exercise: once the younger population is excluded and unemployment is estimated only for the 30+ labour force, the resulting unemployment rates are substantially lower across all rural/urban and male/female categories.

Estimation for unemployment rate for 30+ using unit-level data		
Group	CWS Unemployment rate (PLFS)	Estimated CWS 30+ UR
Rural male	4.9	1.54
Rural female	4	1.67
Urban male	6.1	2.42
Urban female	8.9	3.3

- ❑ We estimated state-level Gini coefficients of average earnings from PLFS 2025 separately for regular wage/salaried workers, casual labourers and self-employed workers, by rural/urban sector and gender
- ❑ The results show that inter-state variation is lowest for regular wage/salary work, with rural + urban person Gini at 0.095, suggesting that average regular wage earnings are relatively more uniform across states. Casual labour shows a higher Gini of 0.145, indicating larger state-level differences in daily wage earnings, especially in rural areas.
- ❑ The highest inequality is observed in self-employment, where the rural + urban person Gini is 0.183, implying that average self-employment earnings vary much more across states, likely because self-employment depends strongly on local markets, assets, enterprise scale and economic opportunities
- ❑ **A clear gender pattern also emerges: women have higher Gini values than men in regular wage work and especially in self-employment; the rural + urban female self-employment Gini is 0.240, compared with 0.163 for males, indicating that women’s self-employment earnings are uneven across states**



Part 2

Women Workers & the Quality of employment

- ❑ For this exercise, we employ **multinomial logit model on unit-level data** to examine the above objectives, i.e., how women are distributed across different forms of employment and how this distribution changes with factors such as training, education, household headship, age, social background, and other household characteristics
- ❑ Our dependent variable is employment which is a three-category measure of women's work status: Self-employment, Regular wage employment and Casual labour
- ❑ Our estimated model is

$$P(Y_i = j \mid X_i) = \frac{\exp(X_i' \beta_j)}{\sum_{k=1}^J \exp(X_i' \beta_k)}, \quad j = 1, \dots, J$$

Where:

Y_i = employment category for individual i

j = employment category (for example: self-employed, regular wage, casual labour)

X_i = vector of explanatory variables

β_j = coefficient vector for category j

m = base / reference outcome

- ❑ In a multinomial logit, dy/dx is read as the change in the predicted probability of choosing outcome/category j for a one-unit increase in X , usually expressed in percentage points, holding other variables constant
- ❑ Margins predicted probability: The margins predicted probability is read as the estimated probability that an observation falls into outcome/category j at given covariate values, or on average across the sample.

Female headed households are now showing better employment quality...

Result of improved access to better jobs and better education

- We check whether women's household headship changes the quality composition of employment using the multinomial logit model at the unit-level. Our results indicate that overall, women who are household heads are associated with a 4.4% higher probability of being in regular wage work and a 4.2% lower probability of being in casual labour, with virtually no change in self-employment, indicating a shift away from more precarious work toward more stable employment
- The rural–urban split makes the pattern sharper: in rural areas, headship reduces casual labour by 5%, with modest gains in both self-employment and regular wage work, while in urban areas it is associated with a much stronger 10% increase in regular wage work and an 8% decline in self-employment, suggesting that greater agency and bargaining power within the household translate into better employment outcomes, but the form of that gain depends on the local labour market

Women as Household Head: Marginal Effects			
	Self-Employed	Regular Wage	Casual Labour
All women	-0.0001	0.044***	-0.042***
Rural women	0.02*	0.028***	-0.05***
Urban women	-0.08***	0.10***	-0.015**
Note: Estimates show how being a woman household head changes the predicted probability of being self-employed, in regular wage work, or in casual labour relative to non-head women, conditional on the included controls.			

- Further results from our multinomial logit model at the **unit-level** indicate that education reshapes women's employment in a distinctly non-linear manner. The main effect of rising education is a gradual reduction in casualisation and beyond a threshold, a marked shift toward regular wage work
- The probability of being in casual labour declines steadily from 0.21 among non-literate women to 0.12 for women with middle-to-secondary education, suggesting that education first helps women move out of the most precarious segment of the labour market..The more decisive transformation occurs only at higher secondary and above, where the probability of regular wage work rises sharply to 0.44, casual labour falls to just 0.03, and self-employment begins to recede**
- This suggests that education works in two stages: it first de-casualises women's work and only later regularises it. Stronger expansion of stable, salaried employment for women require higher levels of education**

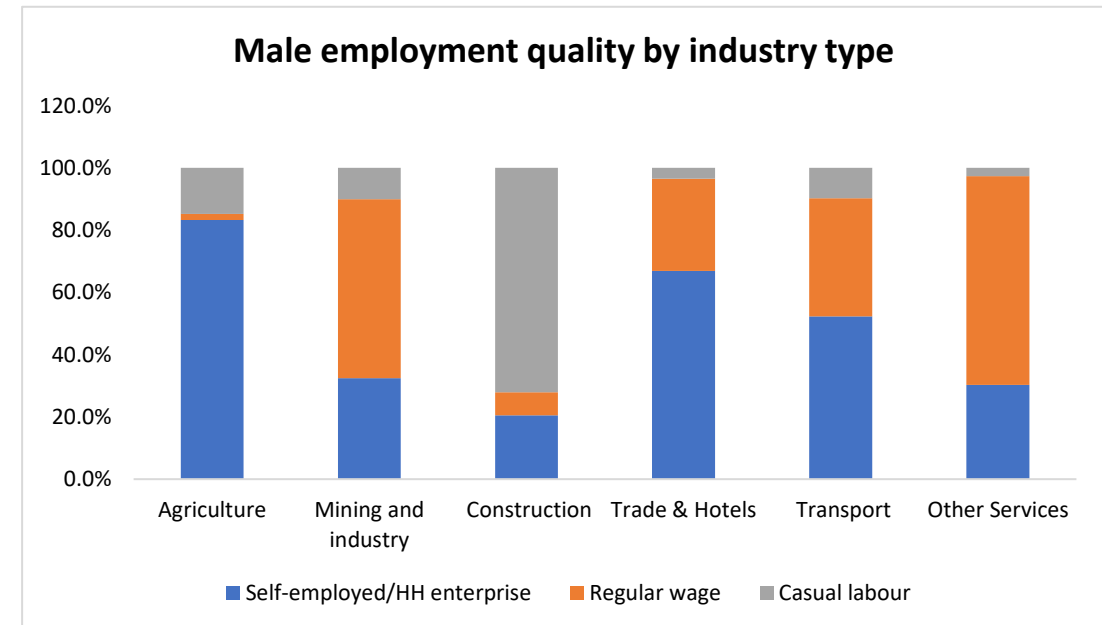
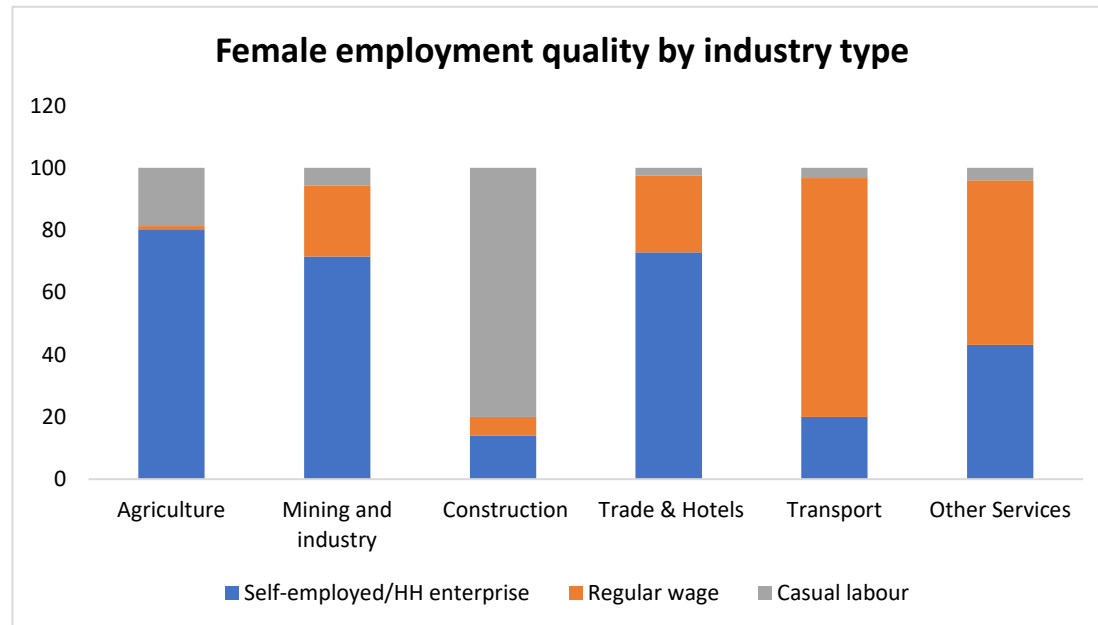
Education and women's employment composition			
	Self Employed	Regular Wage	Casual labour
Not literate	0.68**	0.1**	0.21**
Below middle	0.64**	0.16***	0.19**
Middle to secondary	0.66**	0.2**	0.12**
Higher secondary +	0.51**	0.44***	0.03*
Note: Values are predicted probabilities from a multinomial logit model for each education category. Because education is multi-category, these are shown as margins (levels) rather than dy/dx effects. They represent the estimated employment composition associated with each education group, conditional on other controls.			

- ❑ We estimated a multinomial logit at the **unit-level** to examine whether household social background is associated with the quality composition of women’s employment, taking the “Others” group as the reference category. The results suggest a clear pattern of labour-market segmentation: **relative to women from the Others group, women from ST, SC, and OBC households are all significantly less likely to be in self-employment and significantly more likely to be in casual labour, with the casual-labour premium strongest for SC women (+14.5%), followed by ST women (+12.1%)**
- ❑ At the same time, SC women are the only group with a statistically significant regular-wage premium (+5.4%), indicating a more polarized employment structure better access to regular jobs for some, but greater overall exposure to precarious work

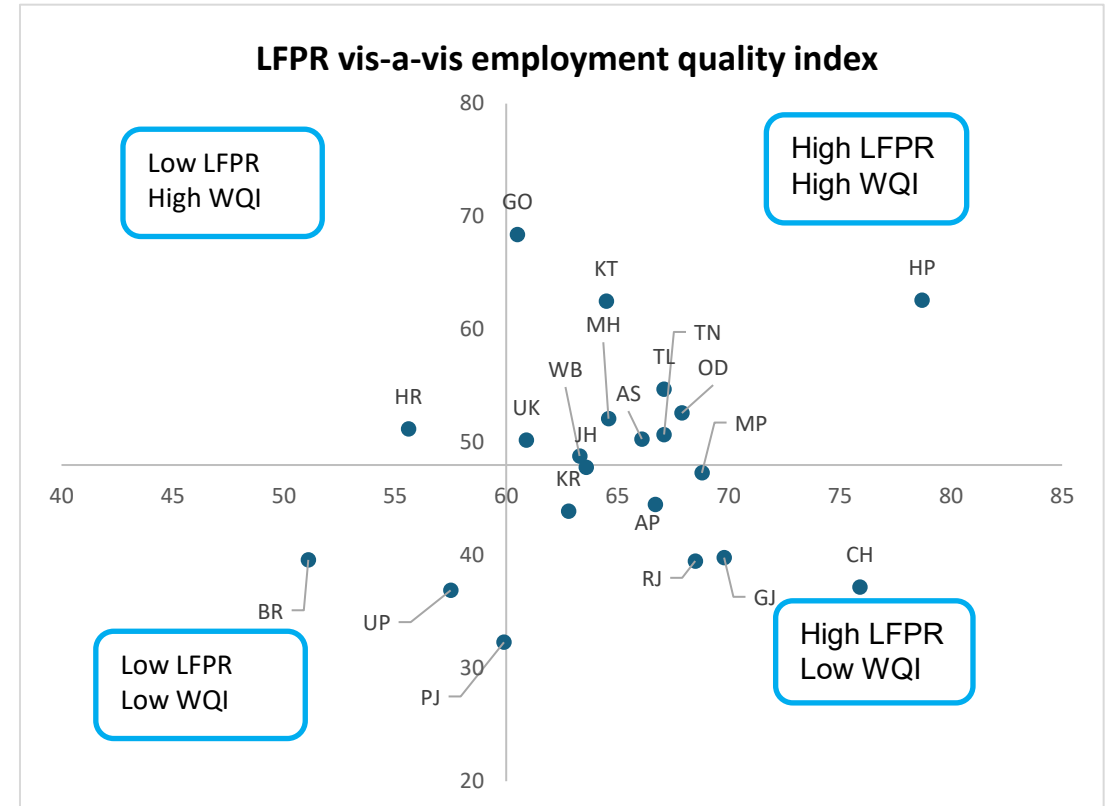
Household Social Background and the Quality Mix of Women’s Employment			
Average marginal effects (multinomial logit); base social group = Others;			
Social group	Self-Employment	Regular Wage	Casual Labour
ST	-0.108***	-0.013	0.121***
SC	-0.199***	0.054***	0.145***
OBC	-0.036***	-0.009	0.044***
Note 1: Reported coefficients are average marginal effects (AMEs) from a multinomial logit model.			
Note 2 : For factor levels, dy/dx is the discrete change in predicted probability relative to the base group 'Others'.			
Note 3 : Positive values indicate a higher predicted probability of being in that employment category; negative values indicate a lower probability.			

...

- ❑ Industry wise employment quality reveals that for both male and female, casual labour is concentrated in construction followed by agriculture
- ❑ Interestingly, in case of Mining and Industry, the share of female employment in regular wage is very low while it is significantly high in case of men
- ❑ **Further, in transport, female employment under regular wage is very high when compared to men**



- ❑ To assess whether higher labour force participation across major states is also accompanied by better quality of employment, we used LFPR for the 15–59 age group and constructed a Work Quality Index (WQI) using three employment-protection indicators from PLFS: written job contract, paid leave, and social-security benefit.
- ❑ **WQI = [(100 – % without written job contract) + (100 – % not eligible for paid leave) + (100 – % without social-security benefit)] / 3**
- ❑ Thus, a higher WQI indicates better employment quality. The results show that states such as Karnataka, Tamil Nadu, Odisha have high employment quality as well as high labour force participation rate
- ❑ States such as UP, Bihar and Punjab display lower participation as well as lower worker's quality index
- ❑ Furthermore, states such as Rajasthan, Chhattisgarh have higher participation but lower quality and hence there is a need to provide more social security benefits to the workers



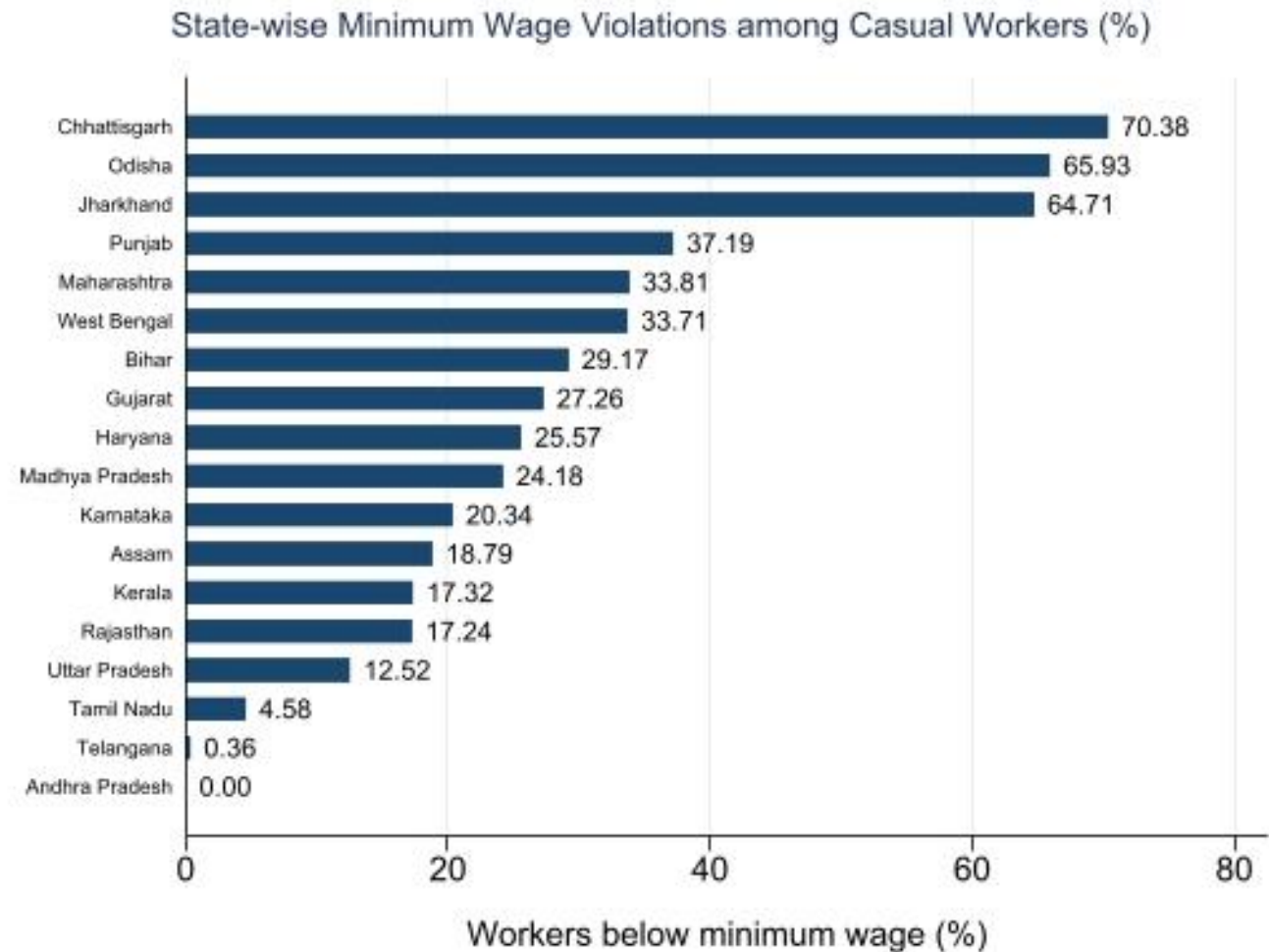
Part 3

Q: Are Casual Workers Underpaid?

A: Yes. The states need to strictly implement the Minimum Wages Act

Where do casual workers earn below minimum wages the most?

- ❑ Substantial interstate disparity are observed in minimum wage compliance among casual workers
- ❑ Chhattisgarh (~70%), Odisha (~66%), and Jharkhand (~65%) exhibit the highest incidence of workers earning below the statutory minimum wage
- ❑ Maharashtra and West Bengal also have nearly one-third of casual workers receiving wages below the mandated minimum wage



- ❑ To estimate the extend of minimum wage violations among casual workers in India, the study employs a logistic regression model using the **unit-level data** merged with the state-wise minimum wage rates as of 2022 obtained from Chief Labour Commissioner (Central), Ministry of Labour and Employment, GoI
- ❑ The weighted estimates indicate that ~25% of casual workers in India earned wages below the statutory minimum wage, suggesting a significant gaps in wage enforcement and labor protection
- ❑ **Female workers constitute ~45% of all underpaid casual workers despite representing only ~25% of the casual workforce, while male workers account for ~55% of unpaid workers while forming ~75% of the workforce, indicates substantial gender disparity in minimum wage compliance**
- ❑ Logit model specification:

$$P(Y_i = 1|X_i) = \frac{\exp(\alpha + X_i'\beta)}{1 + \exp(\alpha + X_i'\beta)}$$

$$Y_i = \begin{cases} 1, & \text{if actual daily wage} < \text{state minimum wage} \\ 0, & \text{otherwise} \end{cases}$$

Part 4

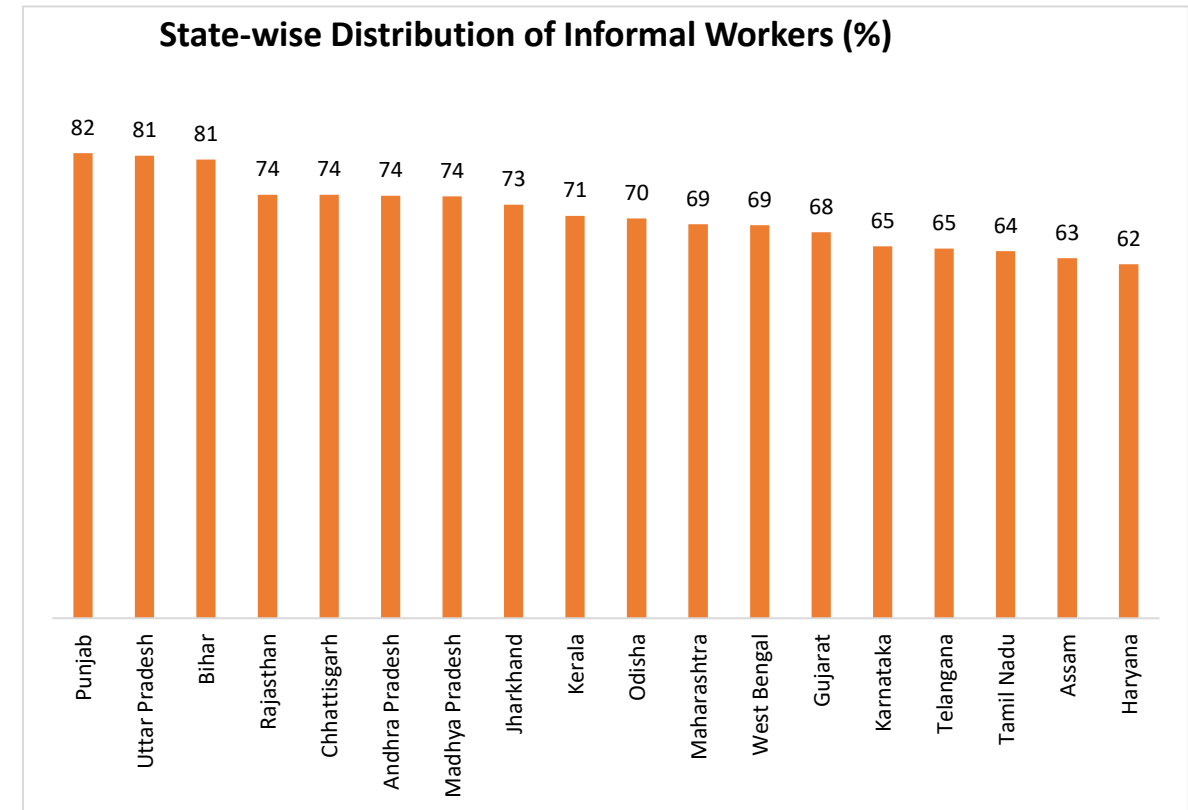
Drivers of Informality

- According to the National Commission for Enterprises in the Unorganized Sector (NCEUS, 2007), informal workers (also referred to as unorganized or unprotected workers) are those engaged in employment without adequate labor protections and social security coverage
- In India, ~ 80% to 90% of the workforce is engaged in informal employment, making it the dominant form of labor market structure
- **The classification of workers into formal and informal categories at the unit-level is based on the definitions provided by NCEUS, NSSO, and ILO**

Operational classification of informal workers used in the study



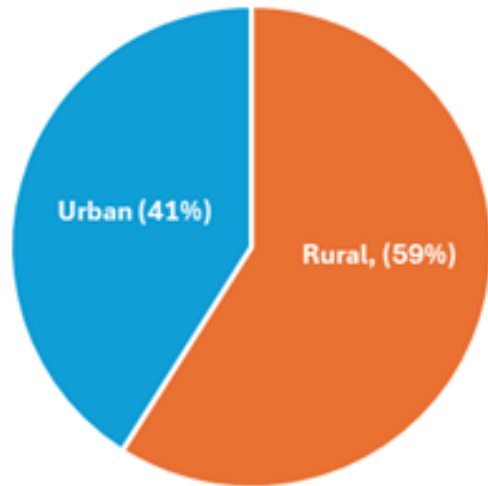
- ❑ Punjab records the highest share of informal workers at 82%, followed by Uttar Pradesh and Bihar at 81% each
- ❑ Rajasthan, Chhattisgarh, Andhra Pradesh and Madhya Pradesh also exhibit high levels of informal employment, with nearly 74% of workers engaged in informal jobs
- ❑ Higher levels of informality in several northern and central states may be associated with the dominance of agriculture, casual labor and low-productivity employment activities
- ❑ States with relatively diversified industrial and service-sector activities such as Haryana, Tamil Nadu, Telangana, and Karnataka exhibit comparatively lower levels of informal employment
- ❑ **Despite regional differences, informal employment remains the predominant form of employment across all states, highlighting the need for greater workforce formalization and expansion of social security coverage**



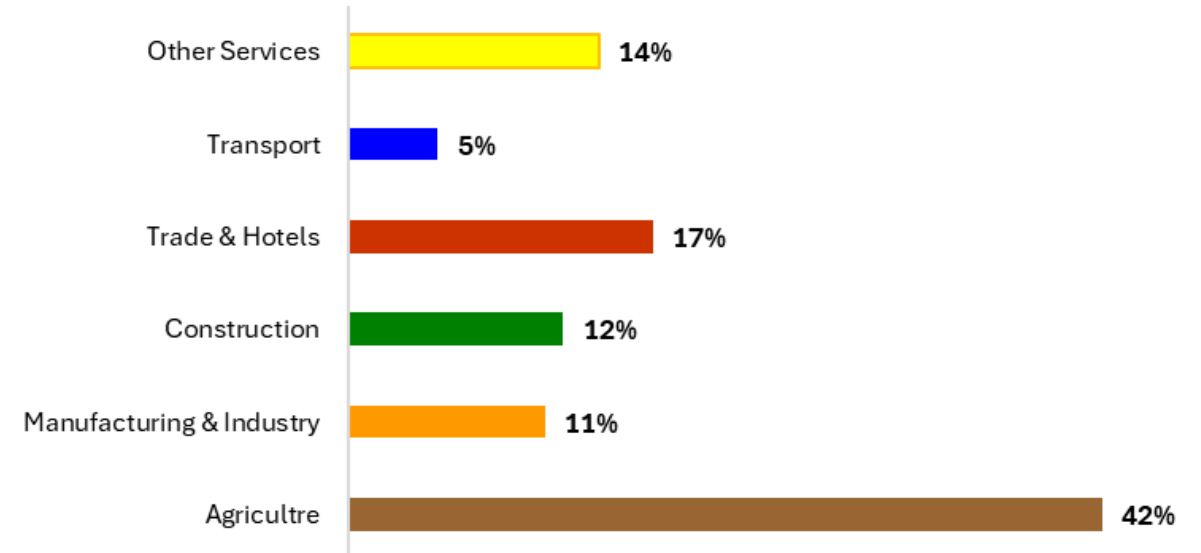
Where are India's informal workers concentrated?

- ❑ Informal workers remain predominantly rural in nature, with nearly 59% concentration in the rural areas, while urban areas account for around 41% of the informal workforce
- ❑ The Industry composition of informal workers indicates that agriculture remains the largest source of informal employment, accounting for nearly 42% of the informal workforce, followed by trade and hotels (17%) and other service activities (14%)

Sectoral Classification (%)



Industry Composition (%)



- ❑ Using the unit-level data, our logistic regression analysis results show that **female workers are ~4.8% more likely to be informal workers compared to male workers**, indicating relatively lower access to formal and socially protected employment among women
- ❑ **The urban workers are ~4% less likely to be informal workers compared to rural workers**
- ❑ Worker associated with Islam are ~8% more likely to be informal workers, whereas workers belonging to Christianity are ~3% less likely to be engaged in informal employment
- ❑ Workers belonging to SC communities are ~3% more likely to be informal workers, while workers belonging to OBC community are ~2% more likely to be engaged in informal employment compared to the other category
- ❑ **Industry-wise analysis shows that workers engaged in manufacturing are ~32% less likely to be engaged in the informal sector, while workers employed in trade and hotel activities are ~16% less likely to be informal workers compared to agricultural workers**
- ❑ **Similarly, workers engaged in the service sector are ~31% less likely to be informal workers, whereas construction sector workers are ~4.5% more likely to be engaged in informal employment**

Variables	Marginal Effect
Female (Ref. Male)	0.048***
Urban (Ref. Rural)	(-) 0.039***
Religion (Ref. Category Hindu)	
Islam	0.081***
Christianity	(-) 0.026***
Sikhism	0.023***
Others#	0.015**
Caste (Ref. Category Others)	
ST	(-) 0.013***
SC	0.026***
OBC	0.018***
Industry (Ref Category Agriculture)	
Manufacturing & Industry	(-) 0.317***
Construction	0.045***
Trade & Hotels	(-) 0.046***
Transport	(-) 0.159***
Other Services	(-) 0.306***
#Others includes Jainism, Buddhism, Zoroastrianism, & others	
*p<0.10 **p<0.05 ***p<0.01	

Part 5

How Training impacts Employment

- ❑ We estimate a logit model at the **unit-level** data to examine whether participation in training is associated with a lower probability of being informally employed
- ❑ **The results indicate that training is associated with a 4.8% reduction in the probability of being informally employed.** In other words, individuals who received training are less likely to be in informal employment compared with otherwise similar individuals who did not receive training
- ❑ Our results from source of training indicates that government training plays a significant role in improving self employment among female. **Our results show that government funding is associated with 5.8% rise in the probability of self employment** compared to the reference category “others” implying other sources of training
- ❑ Further, “own funding” is associated with a 3% rise in probability of regular wage...Casual labour does not delineate any significant impact due to source of funding

Impact on Training on informal employment: Logit model Results						
Outcome	dy/dx	Std. Error	z-stat	p-value	95% CI Lower	95% CI Upper
Informat employment	-0.0481	0.0166	-2.89	0.004	-0.0807	-0.0154
Note: Dependent variable: formal_employed, where 1 = formally employed and 0 = informal/not formally employed.						
dy/dx reports average marginal effects. For factor variables, it is the discrete change from the base category.						
Training variable: 'Any training' is compared against the base category of no training.						
Significance stars: *** p<0.01, ** p<0.05, * p<0.10.						

Funding Source of Training and Women's Employment Type			
Average Marginal Effects (base funding category: Others)			
Funding source (vs Others)	Self-Employed	Regular Wage	Casual Labour
Government funding	0.058*	0.065	0.006
Own funding	-0.011	0.03*	0.007
Note: dy/dx for factor levels is the discrete change in predicted probability relative to base category "Others"			

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