Employment and Consumption Patterns using PLFS 2017-18

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1. Introduction

Understanding employment patterns and consumption inequality is crucial to inform policy in a developing economies like India. This report uses the Periodic Labour Force Survey (PLFS) 2017-18 to examine key indicators of household welfare, labour force participation, and wage inequality. Employing nationally representative data and weighted statistical techniques in STATA, the report provides a clear cut analysis of socioeconomic disparities across states, social groups, and gender. Key focus areas include household consumption across states, employment by activity status, and wage outcomes disaggregated by social and gender identity.

2. Household Consumption Expenditure Across States

Household consumption is a key marker of welfare in any economy. In India, significant interstate variation exists in consumption levels due to a range of economic, geographical, and institutional factors. Using PLFS data, this study calculates weighted averages of monthly household consumption. The table 1 shows that the highest averages are found in union territories such as Chandigarh and Delhi, and coastal areas like Goa. These areas benefit from urban agglomeration, tourism, industrial diversification, and better public services. By contrast, states with predominantly rural populations or those lagging in industrial development show significantly lower consumption.

Urban centres typically enjoy better infrastructure, higher educational attainment, and greater access to employment, contributing to higher consumption. Migration from rural to urban areas also boosts consumption in urban regions. These disparities are not merely statistical ones, they highlight deep structural inequalities in access to opportunity.

3. Decile Distribution of Consumption

To analyze inequality, we divided households into deciles based on their Monthly Per Capita Consumption Expenditure (MPCE). The table 2 shows the decile cutoffs, obtained using weighted quantiles, they reflect the extent of disparity. For instance, the top decile begins at

an expenditure level of 15,000, while the first decile is capped at 3,000. The wide disparity between the top and bottom highlights the skewed distribution of consumption in India.

The lower deciles, representing the bottom 50% of the population, exhibit lower levels of consumption expenditures. This means that a large proportion of the population lives within a narrow band of low consumption. The consumption deciles also relate to access to nutrition, healthcare, and education. Consumption inequality as seen through decile cutoffs can be linked to inequality. The sharp rise in upper cutoffs suggests that wealth is concentrated at the top, indicating a need for redistributive policies such as progressive taxation or targeted subsidies to address inequalities.

4. Employment Patterns (Age 15–59)

The PLFS provides a detailed snapshot of employment by principal activity status. Focusing on the working-age population (15–59), If we see the table 3, our analysis reveals a stark gender disparity: approximately 74% of men are employed compared to just 21% of women. The classification includes own-account workers, employers, unpaid household workers, salaried employees, and casual labour.

Men are predominantly self-employed or engaged in casual labour, reflecting both entrepreneurial activities and vulnerability to informal job markets. Women, on the other hand, face multiple barriers—cultural norms, safety concerns, household responsibilities, and lack of suitable job opportunities—leading to lower participation. Interestingly, while the share of women in unpaid domestic work is high, this is not classified as employment under standard labour definitions, thereby undervaluing their economic contribution.

Our tests of statistical significance show gender differences are consistent across categories, barring a few exceptions. Compared to global standards, India's female labour force participation is remarkably low. International experience suggests that increasing women's participation has positive effects on economic growth and household welfare. This calls for concerted policy efforts including childcare support, flexible working conditions, and gender-sensitive infrastructure.

5. Female Employment by Economic Status

The relationship between economic status and female labour force participation is complex and deeply rooted in the socio-cultural fabric of India. By linking individual employment data with household MPCE deciles, we find a counterintuitive trend: female employment is higher among poorer households (see figure 1). This suggests that economic necessity compels women to engage in the labour market, often in informal, insecure, and low-paying jobs. As household income increases, the burden to earn may lessen, allowing women to withdraw from labour, especially if household norms or expectations restrict their engagement in paid work.

However, when disaggregating by employment type, salaried female employment exhibits a positive correlation with household MPCE (see figure 2). Women from richer households are more likely to be formally educated, have access to networks, and reside in urban areas

where salaried jobs are more prevalent. This dual trend—overall decline in employment but increase in salaried roles with rising MPCE highlights the dual nature of female work and the double burdent on the lower income group females.

To increase quality employment for women, it is important to both expand formal sector opportunities and address barriers such as transport, safety, and household responsibilities. Skill development, career counselling, and employer incentives can also help ensure women across income brackets can participate meaningfully in the workforce.

6. Wage Rate Computation

Given the diversity in employment types, we compute daily wages for salaried, casual, and self-employed workers separately to capture a realistic picture of income flows. For salaried workers, monthly income which is given as regular earnings 1 in plfs data is divided by 30 to estimate daily wage. For casual workers, we aggregate earnings from each day of the past week for both principle and subsidary activities (activity 1 and activity 2) and divide by seven. Self-employed earnings are calculated by deviding regular earnings 2 by 30.

The combined daily wage metric, which prioritizes salaried income when multiple employment types are reported, allows for a unified analysis.

7. Social Group and Wage Disparities

India's caste system continues to influence labour market outcomes. We analyze average daily wages across four major social groups: Scheduled Tribes (ST), Scheduled Castes (SC), Other Backward Classes (OBC), and Others (general category). The analysis shows that ST and SC workers earn significantly less than their counterparts in OBC and general categories (see figure 3).

Addressing this wage gap requires targeted policy interventions, including skill training, job reservations, and proactive inclusion in high-paying sectors like IT, finance, and manufacturing. Affirmative action policies must be complemented with robust implementation and monitoring to ensure actual change. In addition, caste sensitization and anti-discrimination laws at the workplace must be enforced.

8. Gender Wage Gap Analysis

The gender wage gap in India is both wide and persistent. We used a series of OLS regressions with log daily wage as the dependent variable and included variables such as age, education level, district, occupation and month of the survey to controll for seasonal variations. The results showed (see table 4) that women earn, on average, 57% less than men, even after accounting for observable factors. The initial gap of 62.5% reduces only slightly with controls, indicating that much of the difference remains unexplained and may be attributed to discrimination and structural barriers.

Addressing the wage gap requires both legal enforcement of equal pay and structural transformation in hiring practices. Incentives for firms to hire women, regular gender audits,

and transparent promotion policies can be crucial steps. Additionally, empowering women through skill development and financial literacy can help bridge this enduring gap.

9. Impact of Wage Transparency Policy: A DID Approach

We test the effectiveness of a wage transparency policy implemented in January 2018 using a Difference-in-Differences (DID) estimation technique. The hypothesis is that making wages transparent in the formal sector would narrow the gender wage gap by enabling female workers to negotiate better or expose discriminatory pay practices.

Our regression framework includes a binary indicator for the post-policy period, a female dummy, and an interaction term between the two. The dependent variable is the log of daily wage. Control variables include age and education. Results show that the interaction term is statistically insignificant, indicating no strong evidence that the policy impacted the gender wage gap.

Several reasons may explain this. First, awareness of the policy may be low among both workers and employers. Second, transparency alone may not suffice without enforcement or cultural change within organizations. Third, women may lack bargaining power even when wage information is available. This underscores the need for complementary measures such as legal aid, workplace grievance redressal mechanisms, and awareness campaigns.

Estimation Equation

$$\log(\text{Wage}_{it}) = \beta_0 + \beta_1 \text{Post}_t + \beta_2 \text{Female}_i + \beta_3 (\text{Post}_t \times \text{Female}_i) + X_{it}'\gamma + \epsilon_{it}$$

Where:

- Wage_{it} is the daily wage of individual i at time t.
- Post_t is a binary variable that equals 1 if the observation is after January 2018.
- Female_i is a dummy variable equal to 1 for female individuals.
- X_{it} is a vector of control variables (age, education).
- β_3 captures the DID effect—the differential change in female wages post-policy.

Identifying Assumptions

1. **Parallel Trends Assumption:** In the absence of the policy, the wage trajectories of men and women would have moved in parallel.
2. **No Simultaneous Interventions:** No other significant reforms affecting gender pay were implemented concurrently.
3. **Exogenous Policy Timing:** The policy was introduced independently of individual wage trends or labour market shocks.

10. Conclusion

This report highlights deep-rooted inequalities in India's labour market, reinforced by gender, caste, and regional disparities. While household consumption exhibits regional divergence, employment patterns are heavily gendered. Female labour participation is both necessity-driven and constrained by social structures. Wage inequality is stark, with policy interventions like wage transparency showing little short-term impact.

To foster inclusive growth, India must address structural bottlenecks in education, healthcare, and social protection. Female empowerment, equitable access to education, and better labour market regulation are necessary. Redistributive policies can help alleviate consumption inequality, while investment in rural infrastructure can bridge regional disparities. The findings of this report reaffirm that policy must be evidence-based and inclusive while addressing historical discrmination and social injustice.

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Table 1: Top 5 States by Mean Household Consumption (Monthly)

	mean
CHANDIGARH	17014.61
DELHI	14517.24
GOA	13507.59
LAKSHADWEEP	14418.77
ANDAMAN and NICOBAR ISLANDS	14979.91

Table 2: Decile-wise Cutoff Table (Max Value in Each Decile as Decile Cutoff)

Decile	Cutoff
1	3000
2	4000
3	5000
4	5500
5	6000
6	7500
7	9000
8	10500
9	15000
10	150000

Table 3: Proportion Employed by Principal Status (Age 15–59)

	Proportion
Male	
Own Account worker (11)	0.293
Employer (12)	0.016
House Hold(21)	0.062
Salaried (31)	0.187
Casual Public (41)	0.003
Casual Other (51)	0.183
Total Employed	0.744
Female	
Self-employed (11)	0.038
Employer (12)	0.001
House Hold(21)	0.063
Salaried (31)	0.051
Casual Public (41)	0.003
Casual Other (51)	0.056
Total Employed	0.213
Total	
Self-employed (11)	0.126
Employer (12)	0.006
Household (21)	0.042
Salaried(31)	0.154
Casual Public (41)	0.002
Casual other (51)	0.094
Total Employed	0.423

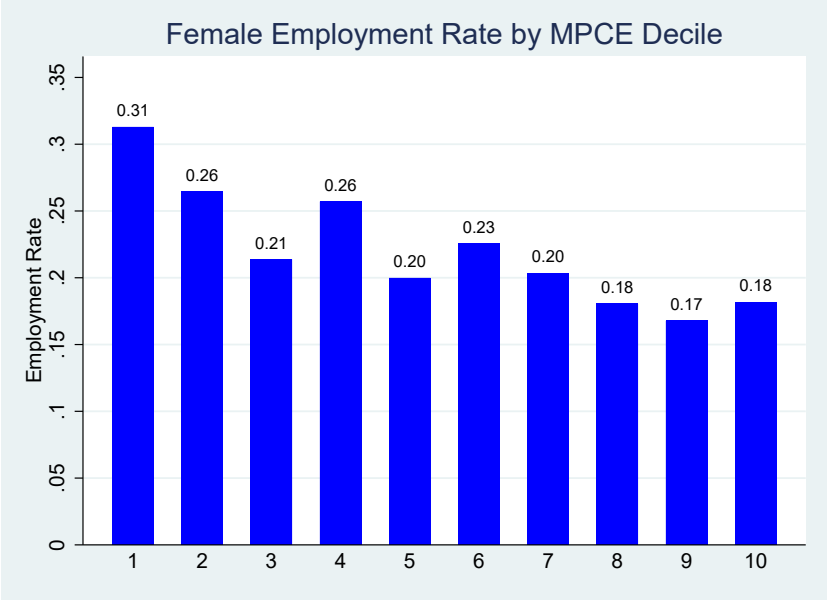

Figure 1: Female Employment By Deciles(Figure 1)

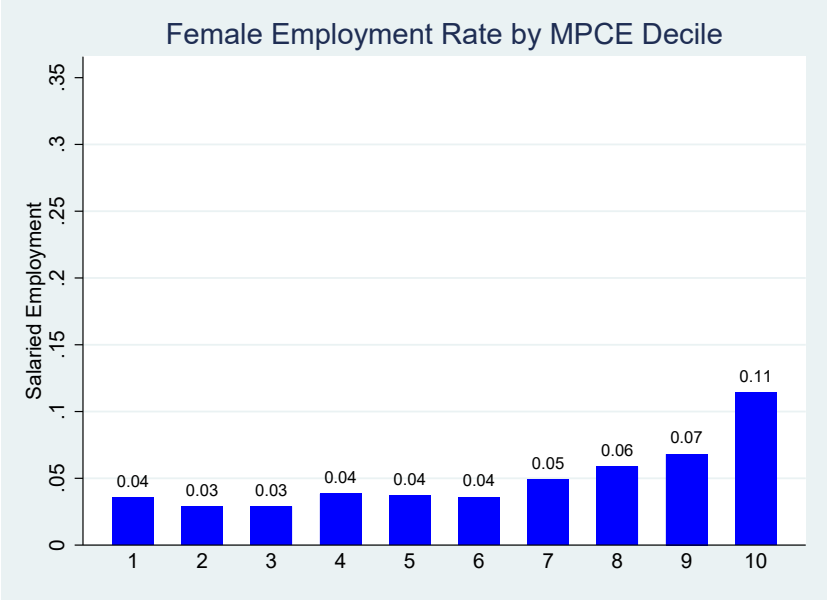

Figure 2: Female Salaried Employment by Deciles, Figure 2)

Table 4: Gender Wage Gap Regressions

	(1) log_wage	(2) log_wage	(3) log_wage	(4) log_wage
Female	-0.625***	-0.624***	-0.639***	-0.576***
	(0.00711)	(0.00631)	(0.00615)	(0.00661)
age	0.00742***	0.0136***	0.0143***	0.0146***
	(0.000250)	(0.000226)	(0.000220)	(0.000214)
Literate without formal schooling: EGS/NFEC/AEC		0.0334	-0.0311	-0.0747
		(0.0840)	(0.0815)	(0.0769)
Literate without formal schooling: TLC		0.112	0.110	0.0147
		(0.169)	(0.164)	(0.153)
Literate without formal schooling: Others		0.0587	0.0852*	0.0622
		(0.0522)	(0.0508)	(0.0474)
Below primary		0.0960***	0.0622***	0.0308***
		(0.0117)	(0.0114)	(0.0108)
Primary		0.181***	0.157***	0.0995***
		(0.00880)	(0.00857)	(0.00814)
Middle		0.284***	0.261***	0.176***
		(0.00763)	(0.00745)	(0.00716)
Secondary		0.452***	0.420***	0.283***
		(0.00836)	(0.00815)	(0.00791)
Higher Secondary		0.587***	0.565***	0.373***
		(0.00908)	(0.00886)	(0.00874)
Diploma/Certificate Course		0.953***	0.907***	0.552***
		(0.0167)	(0.0163)	(0.0160)
Graduate		1.013***	0.985***	0.610***
		(0.00855)	(0.00834)	(0.00921)
Post graduate and above		1.342***	1.321***	0.858***
		(0.0116)	(0.0113)	(0.0125)
Observations	89135	89135	89135	88212

Standard errors in parentheses

All models control for additional covariates as indicated.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Gender Wage Gap Regression

	(1) log_wage
post_policy	0.0223***
	(0.00737)
female	-0.478***
	(0.0133)
did	-0.00764
	(0.0161)
age	0.0223***
	(0.000298)
Not Literate	Base
Literate without formal schooling: EGS/NFEC/AEC	0.468***
	(0.164)
Literate without formal schooling: TLC	0.137
	(0.335)
Literate without formal schooling: Others	0.216*
	(0.123)
Below primary	0.0964***
	(0.0214)
Primary	0.192***
	(0.0159)
Middle	0.326***
	(0.0137)
Secondary	0.498***
	(0.0141)
Higher Secondary	0.667***
	(0.0143)
Diploma/Certificate Course	1.008***
	(0.0198)
Graduate	1.094***
	(0.0132)
Post graduate and above	1.363***
	(0.0150)
Constant	4.574***
	(0.0173)
Observations	40531

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 3: Daily Wage Rate by Social Group, Figure 3)