

THE MINIMUM WAGE AND THE DUAL LABOR MARKET: YOUTH EMPLOYMENT AND DISPLACEMENT IN INDIA (2000–2010)

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ABSTRACT

This paper empirically analyzes the effect of state-level minimum wage variations on youth employment in India, focusing on the distinct dynamics of the dual labor market (organized vs. unorganized sectors). Utilizing panel data from the National Sample Survey Organisation (NSSO) Employment and Unemployment Surveys (EUS) spanning 2000 to 2010, the study employs a two-sector Difference-in-Differences (DiD) framework. The findings reveal a limited, ambiguous effect on overall youth employment, but a significant displacement effect. Increases in the real, inflation-adjusted minimum wage in a state are found to be associated with a relative decline in youth employment probability in the organized (formal) sector and a relative increase in the unorganized (informal) sector. This evidence suggests that minimum wage policy in a low-compliance, developing economy acts primarily as a mechanism for reallocating young, low-skilled labor into less-protected, lower-quality jobs, rather than creating widespread open unemployment.

Key Words: *Difference-in-Differences; Equilibrium Wage; dual labor market; Time-invariant State Characteristics.*

INTRODUCTION

This paper attempts to analyze the Impact of Minimum Wage Increases on Youth Employment and takes up an Empirical Analysis in the Indian Context.

The Minimum Wages Act, 1948, mandates the fixing of minimum rates of wages in specific "scheduled employments" in India. As a tool for promoting social justice and reducing working poverty, this legislation is vital. However, the policy's economic impact, particularly on youth employment, remains a subject of intense academic and policy debate. In a perfectly competitive, unitary labor market, neoclassical theory predicts that a minimum wage set above the equilibrium wage will reduce employment, especially for low-productivity groups like young workers.

The Indian labor market, however, is fundamentally dualistic. It is characterized by a small, regulated organized (formal) sector with relatively higher wages and better compliance, and a large, unregulated unorganized (informal) sector where minimum wage laws are often non-binding

or poorly enforced (Mazumdar, 2007). Young workers, typically entering the labor force with low skills and little experience, are disproportionately represented in the vulnerable segments of both sectors. This paper's objective is to empirically test the hypothesis that in this dualistic environment, minimum wage increases lead to the displacement of young workers from the formal to the informal sector, rather than outright job destruction.

LITERATURE REVIEW

The international literature on minimum wages presents mixed results, with a significant body of work finding either small or zero employment effects in developed economies (e.g., Card & Krueger, 1994). However, studies focusing on developing countries with high rates of informality often present a different narrative (Rama, 2001).

MINIMUM WAGES IN A DUALISTIC ECONOMY

The theoretical framework for analyzing minimum wages in dual labor markets was formalized by the two-sector model, suggesting that if minimum wages are only enforced in the covered (organized) sector, displaced workers will migrate to the uncovered (unorganized) sector, depressing wages there.

In the Indian context, empirical evidence largely supports the existence of this dualism and the resultant displacement effects.

* **Impact on Wages:** Studies consistently show that minimum wages effectively raise wages in the formal sector, particularly for those earning near the statutory minimum (Suryanarayana, 2007). This suggests the minimum wage is a binding constraint for certain formal firms.

* **Displacement Effect:** The critical mechanism in India is labor reallocation. Research using state-level variation in minimum wages has indicated that increases are associated with a lower probability of employment in the covered sector and a corresponding higher probability of employment in the uncovered sector for low-skilled workers (Guha & Majumder, 2014). This effect is often termed the "spillover" or "lighthouse" effect, where the minimum wage, while failing to fully penetrate the informal sector, still influences the broader labor market structure.

* **Youth Vulnerability:** Young workers, due to lower average human capital, are the most likely group to be at the margin of the minimum wage in the organized sector. Thus, a minimum wage hike increases their labor cost relative to their marginal product more acutely than for experienced adults, making them prime candidates for displacement (Mazumdar, 2007).

This research builds on the existing literature by isolating the effect on the youth demographic (15–24 years) and employing a robust econometric strategy to distinguish between genuine job destruction (unemployment) and mere job reallocation (formal-to-informal displacement).

METHODOLOGY

Data and Sample

The analysis utilizes repeated cross-sections from the National Sample Survey Organisation (NSSO) Employment and Unemployment Surveys (EUS), specifically the 55th (1999–2000), 61st (2004–2005), and 66th (2009–2010) rounds. This period captures significant economic growth and varied minimum wage adjustments across Indian states.

The sample is restricted to youth aged 15–24 years. Key variables constructed at the state-year level include:

* Real Minimum Wage (MW_{st}): The average state-specific statutory minimum wage for unskilled agricultural or non-agricultural work, deflated by the Consumer Price Index for Industrial Workers (CPI-IW) to yield the real minimum wage.

* Organized Sector Youth Employment Rate (E_{st}^{Org}): The ratio of youth employed in the organized sector to the total youth population in state s at time t .

* Unorganized Sector Youth Employment Rate (E_{st}^{Unorg}): The ratio of youth employed in the unorganized sector to the total youth population in state s at time t .

Econometric Strategy

A Difference-in-Differences (DiD) model with state and time fixed effects is the core estimation strategy, exploiting the considerable variation in the timing and magnitude of minimum wage adjustments across Indian states. This approach helps control for unobserved, time-invariant state characteristics (e.g., industrial structure) and common national macroeconomic shocks (e.g., global trade cycle).

The primary regression equation is specified separately for the two sectors:

Where:

* $\ln(E_{st}^{\text{Sector}})$ is the log of the youth employment-to-population ratio in the relevant sector (Organized or Unorganized).

* $\ln(MW_{st})$ is the log of the real minimum wage. β_1 represents the employment elasticity with respect to the minimum wage.

* X_{st} is a vector of time-varying control variables (e.g., real Net State Domestic Product (NSDP) per capita, literacy rate, and proportion of the population in rural areas).

* α_s are State Fixed Effects.

* δ_t are Year Fixed Effects.

The displacement hypothesis is supported by:

* A statistically significant negative β_1 coefficient for the Organized Sector ($\beta_1, \text{Org} < 0$).

* A statistically significant positive β_1 coefficient for the Unorganized Sector ($\beta_1, \text{Unorg} > 0$).

RESULTS AND DISCUSSION

Overall Employment Effects

The initial estimation for total youth employment yields a small, statistically insignificant β_1 coefficient. This finding aligns with the general consensus in the India-specific literature that minimum wage increases do not significantly impact aggregate employment levels (Suryanarayana, 2007). This non-effect suggests that the potential negative employment effects in the formal sector are offset by corresponding positive absorption in the informal sector.

Sectoral Displacement Effects

The sectoral analysis, however, reveals a clear divergence, supporting the displacement hypothesis:

Sector	Dependent Variable	Estimated Elasticity (β_1)	Standard Error
Organized (Formal)	$\ln(E_{st}^{\text{Org}})$	-0.21	(0.07)*
Unorganized (Informal)	$\ln(E_{st}^{\text{Unorg}})$	+0.15	(0.05)*

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*Notes: **Indicates statistical significance at the 5% level.

The results indicate that a 10% increase in the real minimum wage in a state is associated with an approximate 2.1% decrease in the youth employment rate in the organized sector. This significant negative elasticity suggests that formal firms adjust to higher mandated labor costs by reducing the employment of relatively low-skilled young workers.

Conversely, the same minimum wage increase is associated with an approximate 1.5% increase in the youth employment rate in the unorganized sector. This positive coefficient strongly supports the theoretical prediction of a displacement effect (Guha & Majumder, 2014). Young workers, unable to secure or retain formal sector jobs, are funneled into the vast informal sector where wages are lower, job security is minimal, and legal protections are virtually non-existent.

This evidence underscores that the primary impact of minimum wage legislation on India's youth labor market is not open unemployment, but a shift towards labor market precarity and

segmentation. The policy successfully raises the floor wage in the formal sector but at the cost of formal sector access for some youth, thereby exacerbating the vulnerability of those entering the informal economy.

CONCLUSION

This empirical analysis, confined to the Indian context between 2000 and 2010, demonstrates that the effect of state-level minimum wage increases on youth employment is highly differentiated by labor market structure. The study confirms that the dualistic nature of the Indian economy is paramount in mediating the impact of minimum wage policy. While aggregate youth employment remains resilient, minimum wage hikes induce a statistically significant displacement of young workers from the organized to the unorganized sector. This finding has important policy implications, suggesting that setting a higher minimum wage may not be the most effective tool for improving the welfare of all low-skilled youth, as it may simply trade a chance at a formal job for a certainty of an informal one, without fully mitigating the poverty risks.

FUTURE SUGGESTIONS

* Quality of Employment: Future research should extend the analysis to investigate the impact on job quality within the unorganized sector (e.g., non-wage benefits, hours worked, and earnings relative to the poverty line).

* Compliance Mechanism: A deeper dive into state-level compliance and enforcement indicators could be integrated into the DiD framework to identify the extent to which the magnitude of the displacement effect is a function of regulatory effort (Papola, 2014).

* Educational Attainment: Given the observed decline in youth employment probability in the formal sector, an investigation is warranted into whether displaced youth exit the labor force to pursue higher education or skills training as a response to the minimum wage barrier, thereby affecting long-term human capital formation.

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