Supplementary Materials
(For Online Publication Only)

Public Works Program, Labor Supply, and Monopsony

Tsenguunjav Byambasuren, Nancy H. Chau, and
Vidhya Soundararajan

May 12, 2025

A Additional Results on Markdowns

A.1 Markdowns under Cobb-Douglas Specification

As an alternative to our baseline functional form of the translog production function, we estimate the production function and thus markdowns using Cobb-Douglas specification. Table A.1 presents the mean and median estimates of plant-level markdowns under the assumption of a Cobb-Douglas production function. The estimated markdowns are higher than our baseline estimates, but it verifies the presence of labor market power in India's manufacturing industry.

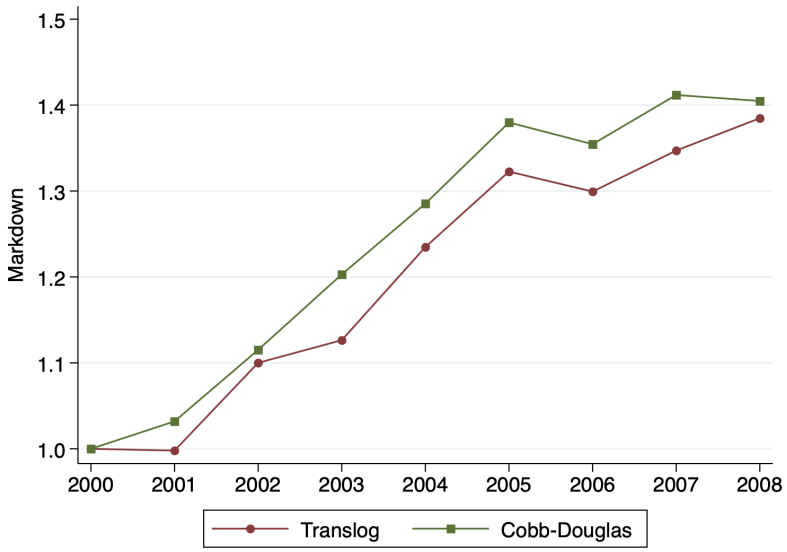
Table A.1: Estimated Plant-Level Markdowns in India's Manufacturing under Cobb-Douglas Specification

Industry Group	Median	Mean	$IQR_{75\text{-}25}$	SD	N
Basic metals	2.425	4.166	4.438	5.203	5396
Food products and beverages	2.212	3.345	2.744	3.899	13731
Paper and paper products	1.887	2.365	1.776	1.774	2690
Rubber and plastics products	1.654	2.241	2.045	1.936	3278
Tobacco products	1.606	5.718	7.275	8.315	2047
Chemicals and chemical products	1.573	2.533	2.223	3.031	10759
Wood and of products of wood and cork, except furniture	1.507	2.307	1.769	2.500	1717
Electrical machinery and apparatus	1.456	2.614	2.002	3.715	4149
Machinery and equipment	1.287	1.917	1.562	2.188	7348
Fabricated metal products, except machinery and equipment	1.147	1.666	1.403	1.655	3894
Textiles	1.044	1.517	1.328	1.612	10594
Furniture	0.999	1.638	1.388	2.025	2565
Other transport equipment	0.955	1.515	1.193	1.904	2194
Leather and related products	0.947	1.432	1.169	1.964	1971
Coke, refined petroleum products, and nuclear fuel	0.923	1.236	1.195	1.247	1083
Other non-metallic mineral products	0.861	1.481	1.514	1.799	9311
Motor vehicles, trailers, and semi-trailers	0.721	1.011	0.841	0.891	3224
Publishing, printing, and reproduction of recorded media	0.702	1.183	1.117	1.455	1440
Medical, precision, and optical instruments, watches and clocks	0.649	1.014	0.841	1.151	2019
Radio, television, and communication equipment and apparatus	0.555	0.935	0.813	1.157	1512
Office, accounting, and computing machinery	0.259	0.595	0.348	1.569	212
Wearing apparel	0.095	0.131	0.109	0.122	1835
Whole sample	**1.310**	**2.240**	**1.955**	**3.144**	**92969**

Notes: Markdowns are estimated for 34,575 unique manufacturing establishments using the ASI data from 2000-2008 under the assumption of a Cobb-Douglas specification for gross output, where 2000 is the financial year between 1 April 1999 and 31 March 2000. The labor inputs are measured by headcount in the production function, estimated separately for each two-digit industry group. Each industry group in manufacturing corresponds to the manufacturing categorization of the National Industry Classification (NIC-1998) at the two-digit level. The distributional statistics are calculated using sampling weights provided in the data.

Figure A.1 illustrates the time evolution of (normalized) aggregate markdowns under the Cobb-Douglas and translog specifications. The markdown trends under two different functional forms are remarkably similar, suggesting that the patterns are not subject to specific function form assumptions.

Figure A.1: Time Evolution of the Aggregate Markdowns under Translog and Cobb-Douglas Specifications



Notes: The plant-level markdowns are constructed using the ASI data from 2000-2008 under the assumptions of translog and Cobb-Douglas production where labor inputs are measured by headcount. The plant-level markdowns are aggregated at the year level using employment shares of the labor market (combination of 4-digit NIC-1998 industry and states).

A.2 Markups

Table A.2 reports the estimated markups. While our markup estimates should be interpreted cautiously (Klette and Griliches, 1996; Bond et al., 2021), we find that manufacturers have about 37 percent (31 percent) of market power in the product market at the mean (median). Compared to markdowns, markups have less variation, with an IQR of 24 percent and a standard deviation of 28 percent.

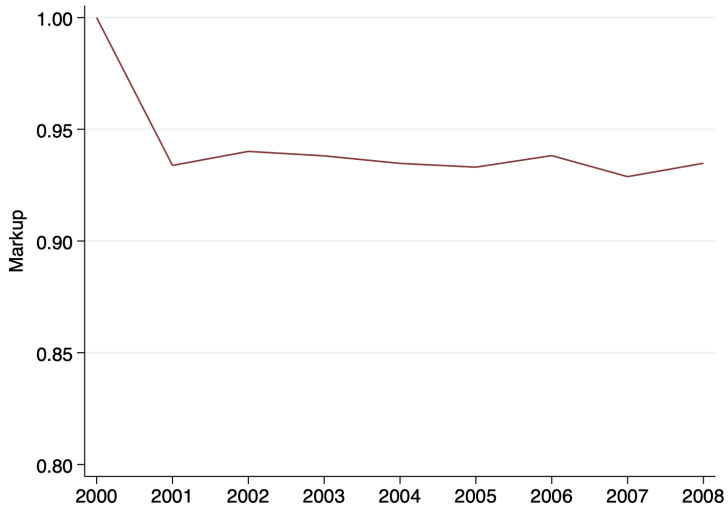
Table A.2: Estimated Plant-Level Markups in India's Manufacturing

Industry Group	Median	Mean	$IQR_{75\text{-}25}$	SD	N
Tobacco products	2.071	2.175	0.621	0.472	2047
Wearing apparel	1.610	1.600	0.181	0.139	1835
Medical, precision, and optical instruments, watches and clocks	1.607	1.647	0.373	0.263	2019
Office, accounting, and computing machinery	1.495	1.504	0.252	0.236	212
Chemicals and chemical products	1.463	1.490	0.219	0.257	10759
Radio, television, and communication equipment and apparatus	1.413	1.443	0.261	0.198	1512
Other non-metallic mineral products	1.408	1.485	0.258	0.266	9311
Publishing, printing, and reproduction of recorded media	1.396	1.429	0.218	0.201	1440
Motor vehicles, trailers, and semi-trailers	1.377	1.394	0.159	0.145	3224
Machinery and equipment	1.352	1.379	0.249	0.181	7348
Electrical machinery and apparatus	1.334	1.358	0.199	0.138	4149
Furniture	1.287	1.318	0.163	0.154	2565
Fabricated metal products, except machinery and equipment	1.270	1.291	0.160	0.250	3894
Paper and paper products	1.264	1.284	0.070	0.086	2690
Rubber and plastics products	1.264	1.287	0.164	0.129	3278
Textiles	1.253	1.284	0.112	0.127	10594
Leather and related products	1.234	1.246	0.120	0.096	1971
Coke, refined petroleum products and nuclear fuel	1.232	1.271	0.121	0.351	1083
Other transport equipment	1.232	1.265	0.206	0.156	2194
Food products and beverages	1.200	1.245	0.174	0.319	13731
Wood and of products of wood and cork, except furniture	1.196	1.229	0.080	0.129	1717
Basic metals	1.160	1.189	0.146	0.103	5396
Whole sample	**1.308**	**1.368**	**0.238**	**0.278**	**92969**

Notes: Markups are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output, where 2000 is the financial year between 1 April 1999 and 31 March 2000. The labor inputs are measured by headcount in the production function, estimated separately for each two-digit industry group. Each industry group in manufacturing corresponds to the manufacturing categorization of the National Industry Classification (NIC-1998) at the two-digit level. The distributional statistics are calculated using sampling weights provided in the data.

Figure A.2 illustrates the trend of aggregate markup as it could be informative, although the markup estimate is biased. We find that aggregate markups presented about a 7% drop between 2000 and 2001 and leveled off since then.

Figure A.2: Time Evolution of the Aggregate Markup



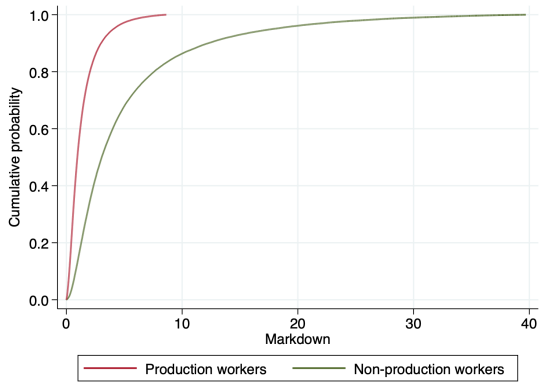
Notes: The plant-level markups are constructed using the ASI data from 2000-2008 under the assumption of translog production and aggregated at the year level using employment shares of the labor market (combination of 4-digit NIC-1998 industry and states).

A.3 Additional Results on Markdowns for Heterogeneous Workers

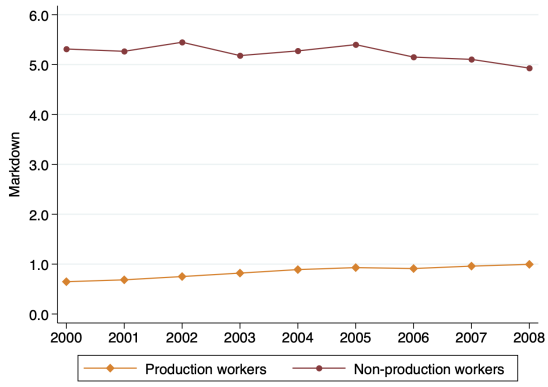
Figure A.3a illustrates the distribution of markdowns for production and non-production workers measured by headcount, our baseline measure of labor input, clearly showing that non-production workers stochastically dominate production workers regarding markdowns. Then, we aggregate the plant-level markdowns at the year level and plot the trends of markdowns for these workers in Figure A.3b. The production workers' markdowns present an upward trend, while markdowns for non-production workers were stable between 2000 and 2008.

Figure A.3: Markdowns for Production and Non-Production Workers

(a) Cumulative Probability Distribution



(b) Aggregate Markdown Trends

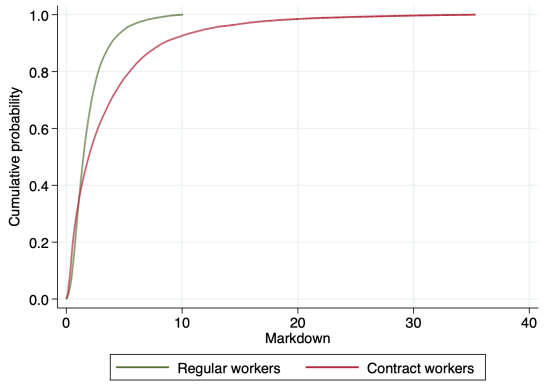


Notes: Panel (a) plots the cumulative distribution function (CDF) of markdowns for production (non-managers or low-skilled) and non-production (managers or high-skilled) workers in India's manufacturing. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of translog production where heterogeneous labor inputs. The production function is estimated separately for each two-digit industry group, and labor inputs are measured by headcount. In panel (b), the plant-level markdowns are aggregated at the year level using employment shares of the labor market (combination of 4-digit NIC-1998 industry and states).

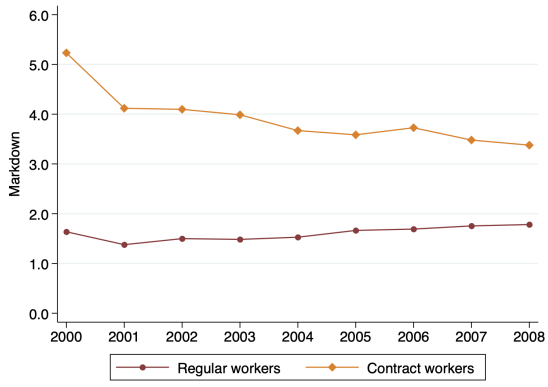
On the other hand, markdowns for contract workers stochastically dominate markdowns for regular workers along the distribution (Figure A.4a). In terms of evolution over time, as shown in Figure A.4b, aggregate markdowns for contract workers depict a downward trend, while markdowns for regular workers have been growing over the study period.

Figure A.4: Markdowns for Regular and Contract Workers

(a) Cumulative Probability Distribution



(b) Aggregate Markdown Trends



Notes: Panel (a) plots the cumulative distribution function (CDF) of markdowns for regular and contract workers in India's manufacturing. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of translog production where heterogeneous labor inputs. The production function is estimated separately for each two-digit industry group, and labor inputs are measured by the headcount of workers hired directly (regular workers) and employed through contractors (contract workers). In panel (b), the plant-level markdowns are aggregated at the year level using employment shares of the labor market (combination of 4-digit NIC-1998 industry and states).

B Labor Market Reforms and Wage Markdowns

This section evaluates the empirical relationship between reforms in labor laws and labor market power in India's manufacturing industry.

B.1 Empirical Specification

We estimate the following equation

$$\text{Markdown}_{st} = \alpha + \beta \text{Reform}_{st} + \pi_s + \mu_t + \varepsilon_{st}, \tag{B.1}$$

where Markdown_{st} is the aggregate markdown for state s in year $t \in [2000, 2008]$ and Reform_{st} is the reforms of labor laws in state s on the intensive margin. The plant-level markdowns are aggregated at the state-by-year level using employment weights. Since the labor reforms are defined at the state level, we include state fixed effects, π_s, and year fixed effects, μ_t. The standard errors are clustered at the state level (Bertrand et al., 2004).

B.2 Data

The data on reforms of labor laws are obtained from Dasgupta (2021), who refined state-level measures of labor regulations proposed by Besley and Burgess (2004) and extended the data between 1947 and 2017. The labor acts are categorized into three broad groups: (i) pro-worker, (ii) pro-employer, and (iii) neutral. In addition to these three individual indicators, two aggregate indicators have been proposed. First, the composite index or score of the Besley-Burgess index is defined as follows

$$\text{BB score} = 1 \times \text{No. pro-worker acts} - 1 \times \text{No. pro-employer acts} + 0 \times \text{No. neutral acts}, \tag{B.2}$$

where the components are the three individual indicators on the intensive margin. Given the definition of the BB score, it measures how friendly the labor regulations are for workers. So, if the state has more pro-employer acts than pro-worker acts, the BB score takes a negative value. The second aggregate indicator counts the total number of acts without considering whether the change is pro-workers, pro-employers, or neutral. Therefore, five indicators determine the state and the development of labor regulations in India. There have been reforms of labor regulations in 19 states of India. However, we dropped West Bengal from this analysis as an outlier since its cumulative score of the Besley-Burgess index is about six times larger than the score for other states.

B.3 Results

Table B.1 presents the results from estimating the association between aggregate markdowns and labor market reforms using equation (B.1). The cumulative score of the Besley-Burgess (BB) index measures the friendliness of the labor market to workers. Intuitively, we find that our aggregate markdown, a measure of employer power, is negatively associated with the cumulative score of the BB index. However, the relationship is statistically significant at the 5% level (Column (1)). The labor market acts in favor of workers or pro-worker acts that protect workers in the labor market are associated with lower employer power; however, the relationship is essentially zero (Column (2)). The pro-employer acts, however, are associated with higher employer power, and the positive relationship is also statistically significant at the 5% level (Column (3)). Consistent with the expectation, the neutral acts are not correlated with the markdowns (Column (4)). We also fail to find a significant relationship between the total acts and aggregate markdowns (Column (5)), potentially indicating a heterogeneity of the relationship.

Table B.1: Relationship between State-Level Markdowns and Labor Market Reforms

	Dependent variable: State-level markdowns				
	(1)	(2)	(3)	(4)	(5)
Cumulative score	-0.018**				
	(0.008)				
Cumulative pro-worker acts		-0.009			
		(0.041)			
Cumulative pro-employer acts			0.020**		
			(0.007)		
Cumulative neutral acts				-0.007	
				(0.017)	
Cumulative total acts					0.010
					(0.010)
Observations	153	153	153	153	153
R^2	0.87	0.87	0.87	0.87	0.87

Notes: The table presents the relationship between aggregate markdowns and labor market reforms measured by cumulative Besley-Burgess (BB) indicators at the state level. The plant-level markdowns are aggregated at the state level using employment weights. All regressions control for state and year fixed effects. The standard errors clustered by states are in parenthesis. Significance: $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$.

In Table B.2, we further examine the relationship by splitting the labor market reforms in the current year from the cumulative changes by the previous year. The results are generally the same as those in Table B.1 in the signs, statistical significance, and the magnitude of the relationship. Overall, these findings suggest that the aggregate markdowns are generally consistent with changes in the labor market laws based on the signs of the estimated coefficients, validating our estimated measure of labor market power. The relationships tend to be weakly significant, and it could be due

to the ineffectiveness of the reforms, an interesting question that is not our focus in this paper.

Table B.2: Relationship between State-Level Markdowns and Current and Previous Labor Market Reforms

	Dependent variable: State-level markdowns				
	(1)	(2)	(3)	(4)	(5)
BB Score	-0.021**				
	(0.008)				
Cumulative score (1-year lagged)	-0.016*				
	(0.009)				
Pro-worker acts		-0.023			
		(0.038)			
Cumulative pro-worker acts (1-year lagged)		-0.002			
		(0.040)			
Pro-employer acts			0.021***		
			(0.006)		
Cumulative pro-employer acts (1-year lagged)			0.019**		
			(0.009)		
Neutral acts				-0.025	
				(0.018)	
Cumulative neutral acts (1-year lagged)				-0.001	
				(0.016)	
Total acts					0.005
					(0.011)
Cumulative total acts (1-year lagged)					0.012
					(0.010)
Observations	153	153	153	153	153
R^2	0.87	0.87	0.87	0.87	0.87

Notes: The table presents the relationship between aggregate markdowns and labor market reforms measured by cumulative Besley-Burgess (BB) indicators at the state level. The plant-level markdowns are aggregated at the state level using employment weights. All regressions control for state and year fixed effects. The standard errors clustered by states are in parenthesis. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

C Additional Results on Heterogeneous Effects and Mechanisms

Section 7.2 discusses our baseline results on heterogeneous effects to examine the mechanisms. This appendix provides additional results to investigate the mechanisms further by analyzing the impact on worker flows.

C.1 Effects on Worker Flows

Since we find that the creation of non-manufacturing jobs in rural areas under the NREGA crowds out employment at certain firms in the manufacturing industry, i.e., a reduction in the number of workers, we examine the effects on worker flows or turnover at manufacturing firms.

The annual ASI Volume I data used in the baseline analysis does not contain information on workers' flow at the firm over time. Fortunately, the ASI Volume II data reports the stock and flow of regular workers directly employed (i.e., not contract workers) in each month throughout the financial year, such as the number of workers in employment on the first and last day of the month, hiring or addition of workers during the month, and separation of workers during the month due to death or retirement and other reasons. Using this monthly data from the ASI Volume II, we compute the annual workers' flow (net change, addition, and separation) and match the data with ASI Volume I data, which is panel but different from the version used in our baseline analysis. Thus, we re-estimate the wage markdowns using this new ASI data that spans between 2001 and 2008 to determine if the data is comparable to that used in our baseline analysis. As shown in Table C.1, the median and average markdowns estimated over 2002-2008[37] are 1.387 and 1.899, respectively, generally consistent with our baseline estimates in Table 2. The markdown estimates are slightly higher than the baseline estimates, which is intuitive due to the growing trend between 2000 and 2008, as shown in Figure 3.

Table C.1: Estimated Plant-Level Markdowns in India's Manufacturing using Different ASI data

	(1) Median	(2) Mean	(3) $IQR_{75\text{-}25}$	(4) SD	(5) N
Markdowns	1.387	1.899	1.664	1.628	65310

Notes: The table presents plant-level markdowns estimated using the volume I of ASI data matched with volume II between 2002-2008. The production function was estimated under the assumption of translog specification with headcount as a measure of labor input.

[37]The year 2001 has been excluded since the production function uses the lagged information as an instrument to identify the production parameters.

We first estimate the treatment effects on worker flows during a year. The results in Table C.2 suggest that the impacts are essentially zero at the baseline. As shown in Column (5), the firm's age is intuitively associated with greater separation of workers due to death or retirement. We focus on separations due to reasons other than death and retirement, which are not directly related to the program under investigation. Although statistically insignificant, total separation and separation of workers due to non-death and non-retirement reasons increased in response to the introduction of NREGA jobs.

Table C.2: Effects of NREGA on Flow of Regular Workers

	(1) Net hiring	(2) Hiring	(3) Total separation	(4) Separation due to death or retirement	(5) Separation due to other causes
Post-NREGA	0.041	0.086	0.041	-0.016	0.076
	(0.079)	(0.078)	(0.062)	(0.030)	(0.067)
Firm age	0.004	-0.000	0.003	0.004**	-0.000
	(0.003)	(0.004)	(0.003)	(0.002)	(0.003)
Firm age^2	-0.000	-0.000	-0.000	-0.000*	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Rainfall	-0.569	0.023	0.502	0.030	0.434
	(0.535)	(0.526)	(0.451)	(0.222)	(0.488)
Observations	33100	47749	47943	47943	47943
R^2	0.64	0.70	0.76	0.72	0.73

Notes: Based on the ASI data (volumes I and II) from 2002-2008 on which markdown has been estimated. The dependent variable in Columns (1)-(5) is the net hiring (addition minus separation), hiring or addition, total separation, separation due to death or retirement, and separation due to other causes, respectively. These outcomes are in log terms, and a constant 1 has been added before taking logs. All regressions include an unreported constant term and baseline fixed effects. Standard errors clustered at the district level are in parentheses. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

Since the baseline effects are not statistically significant, we estimate the heterogeneous effects by labor productivity. Panel A of Table C.3 presents the results. At firms with low labor productivity, the gross and net hiring decrease, while the separation of workers due to causes other than death or retirement and the total separation increase. However, these effects are still not statistically significant and are not precisely estimated under this heterogeneity.

In Section 7.2, we also estimate heterogeneous effects along the wage distribution and show that the employment, wage, and MRPL impacts are concentrated among low-paying firms (Table 9). So, we also estimate the heterogeneous effects along the wage distribution and present the results in Panel B of Table C.3. The program still leads workers to separate from low-paying firms due to causes unrelated to death or retirement; however, the program negatively affects the total separation. Despite these, we find that such firms reduce their hiring in total and on the net, and these effects are statistically significant at the 5% level.

Overall, these findings from heterogeneity by firm's initial labor productivity and wage distribution inform that employment reduction that we identified at low-labor productivity and low-paying firms are mainly driven by reductions in additional hiring and thus in net hiring. It indicates a compositional change in the manufacturing firms' employment, contributing to a change in wage markdown over their workers.

Table C.3: Heterogeneous Effects of NREGA on Flow of Regular Workers by Labor Productivity

	(1) Net hiring	(2) Hiring	(3) Total separation	(4) Separation due to death or retirement	(5) Separation due to other causes
	Panel A. Heterogeneity by labor productivity				
Post-NREGA × Below median	-0.110	-0.129	0.002	-0.059	0.048
	(0.075)	(0.107)	(0.070)	(0.043)	(0.078)
Below median	0.069	0.046	0.040	-0.010	0.041
	(0.063)	(0.065)	(0.057)	(0.034)	(0.060)
Post-NREGA	0.087	0.139*	0.040	0.008	0.057
	(0.084)	(0.083)	(0.071)	(0.030)	(0.078)
Observations	33100	47749	47943	47943	47943
R^2	0.64	0.70	0.76	0.72	0.73
	Panel B. Heterogeneity along wage distribution				
Post-NREGA × Low-wage firm	-0.185**	-0.229**	-0.013	-0.053	0.029
	(0.089)	(0.102)	(0.089)	(0.038)	(0.093)
Low-wage dummy	-0.000	0.102	0.122**	-0.004	0.113*
	(0.067)	(0.066)	(0.059)	(0.020)	(0.058)
Post-NREGA	0.099	0.139	0.024	-0.001	0.048
	(0.090)	(0.090)	(0.071)	(0.035)	(0.077)
Observations	31781	46302	46495	46495	46495
R^2	0.64	0.69	0.75	0.72	0.73

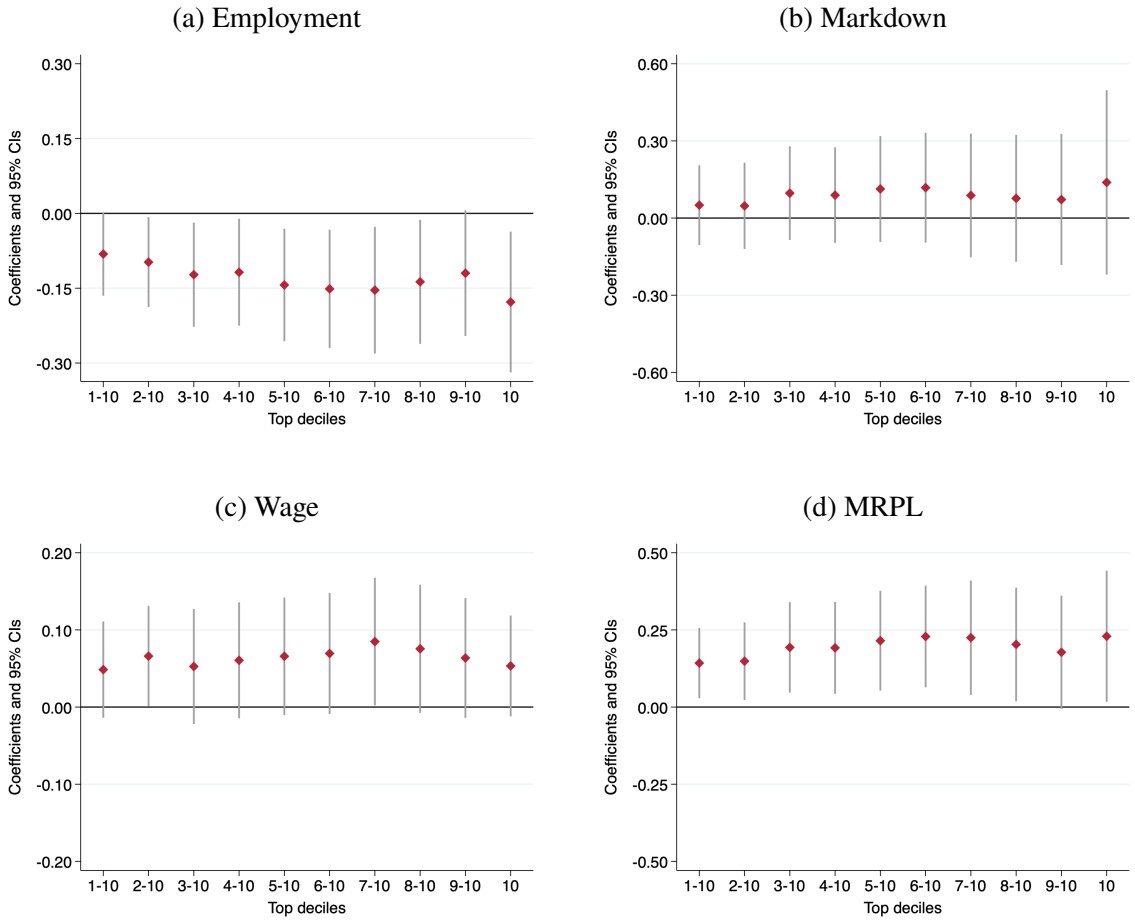
Notes: Based on the ASI data (volumes I and II) from 2002-2008 on which markdown has been estimated. In panel A, the key explanatory variable in each column is the NREGA treatment variable interacted with a dummy, indicating whether the firm's labor productivity is below the median. In panel B, the key explanatory variable in each column is the NREGA treatment variable interacted with a dummy, indicating whether the firm's initial labor average wage per worker is in the bottom 3 deciles of the wage distribution. The dependent variable in Columns (1)-(5) is the net hiring (addition minus separation), hiring or addition, total separation, separation due to death or retirement, and separation due to other causes, respectively. These outcomes are in log terms, and a constant 1 has been added before taking logs. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors clustered at the district level are in parentheses. Significance: $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$.

D Additional Robustness Checks

D.1 Robustness of Heterogeneous Effects by Minimum Wage Enforcement

In Section 7.2, we discuss our baseline effects of NREGA on labor market conditions in manufacturing heterogeneous by minimum wage level and enforcement of minimum wage.

Figure D.1: Robustness: Heterogeneous Effects of NREGA by Minimum Wage and Its Enforcement using Quartiles of Wage-to-Minimum Wage Ratio

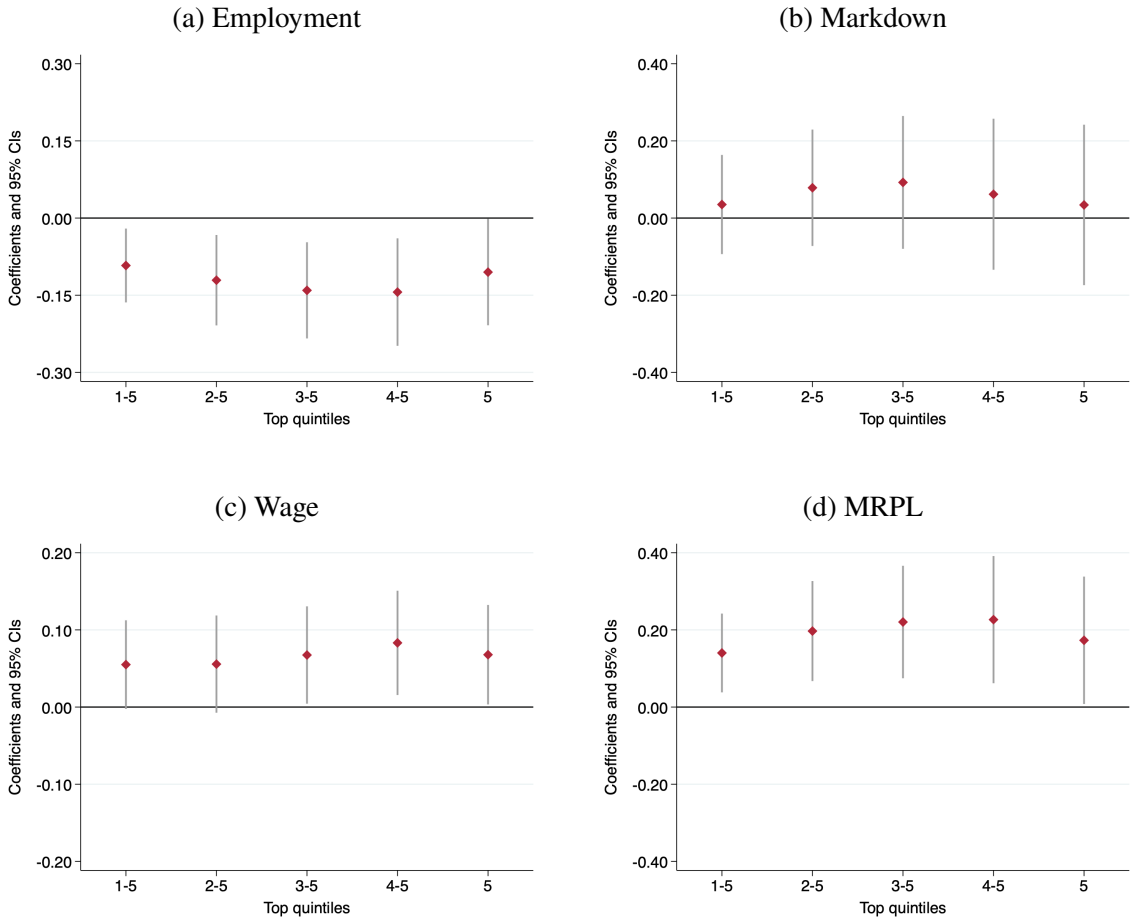


Notes: The figure presents the effects of NREGA on labor market outcomes at manufacturing firms heterogeneous by minimum wage and its enforcement. The key explanatory variable is the NREGA treatment variable interacted with a dummy, indicating whether the firm's initial average wage-to-minimum wage ratio is in the bottom quartile. The dependent variable in panels (a)-(d) is the log employment (labor headcount plus one), wage markdowns, log wage, and log MRPL, respectively. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output with headcount as a measure of labor input. Each point estimate comes from separate regressions on samples that consist of firms in the different deciles of the minimum wage enforcement (inspections per worker) distribution. For example, the sample of firms labeled "1-10" refers to those in the 1st through the 10th deciles of the distribution, i.e., all firms, and the sample labeled "2-10" refers to a sub-sample of firms in the 2nd through the 10th deciles. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors are clustered by districts, and 95% confidence intervals are presented.

Figure D.1 checks the robustness of our baseline results by using firms in the bottom quartile of

the wage-to-minimum wage ratio distribution as firms with low ratios, while the baseline analysis uses firms in the bottom 3 deciles. The sample on which each specification is estimated is the same as the baseline analysis, i.e., firms in different deciles of enforcement distribution.

Figure D.2: Robustness: Heterogeneous Effects of NREGA by Minimum Wage and Its Enforcement using Quintiles of Minimum Wage Enforcement



Notes: The figure presents the effects of NREGA on labor market outcomes at manufacturing firms heterogeneous by minimum wage and its enforcement. The key explanatory variable is the NREGA treatment variable interacted with a dummy, indicating whether the firm's initial average wage-to-minimum wage ratio is in the bottom 3 deciles. The dependent variable in panels (a)-(d) is the log employment (labor headcount plus one), wage markdowns, log wage, and log MRPL, respectively. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output with headcount as a measure of labor input. Each point estimate comes from separate regressions on samples that consist of firms in the different quintiles of the minimum wage enforcement (inspections per worker) distribution. For example, the sample of firms labeled "1-5" refers to those in the 1st through the 5th quintiles of the distribution, i.e., all firms, and the sample labeled "2-5" refers to a sub-sample of firms in the 2nd through the 5th quintiles. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors are clustered by districts, and 95% confidence intervals are presented.

In Figure D.2, however, we change the sample of firms in states with different minimum wage enforcement to quintiles instead of using deciles. We employ our baseline definition of low wage-to-minimum wage based on the bottom 3 deciles in these regressions. The results in this section

suggest that our results on the heterogeneous effects by minimum wage and its enforcement are robust.

D.2 Robustness of Main Results to Using Manufacturing Mandays

In Section 8.3, we check the robustness of our main findings using total mandays worked at manufacturing firms. The ASI data provides information on mandays by separating manufacturing from non-manufacturing mandays. Since information on non-manufacturing mandays is severely limited and the plants covered in the ASI data are manufacturing firms, we are particularly interested in manufacturing mandays worked. This appendix thus examines the robustness of our main results using manufacturing mandays as an additional measure of employment. The labor market effects of NREGA heterogeneous by labor productivity, shown in Table D.1, indicate that the findings are substantially robust.

Table D.1: Robustness: Heterogeneous Effects of NREGA by Labor Productivity using Manufacturing Mandays

	(1) Employment	(2) Markdown	(3) MRPL
	Panel A. Below median		
Post-NREGA	-0.073***	0.080***	0.084***
	(0.024)	(0.023)	(0.021)
Observations	33782	33782	31041
R^2	0.97	0.83	0.90
	Panel B. Above median		
Post-NREGA	0.023	-0.005	-0.024
	(0.027)	(0.031)	(0.027)
Observations	35612	35612	34654
R^2	0.96	0.88	0.85

Notes: The table presents the heterogeneous effects of NREGA on labor market outcomes at manufacturers with low (top panel) and high (bottom panel) labor productivity. The sample in the top (bottom) panel consists of firms whose labor productivity measured by sales revenue per labor is below (above) the median in the most recent period before the first phase of NREGA. The dependent variable in Columns (1)-(3) is the log employment (labor headcount plus one), wage markdowns, and log MRPL, respectively. The employment and labor input in production function estimation and the calculation of markdown and MRPL is measured by manufacturing mandays worked. The plant-level markdowns are estimated using the ASI data from 2001-2008 under the assumption of a translog specification for gross output. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors clustered at the district level are in parentheses. Significance: $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$.

Table D.2 presents the treatment effects on labor market conditions for production and non-production workers heterogeneous by labor productivity. The effects are concentrated among production workers at firms with low labor productivity, consistent with our results using labor head-

count and total mandays worked.

Table D.2: Robustness: Heterogeneous Effects of NREGA on Production and Non-Production Workers by Labor Productivity using Manufacturing Mandays

	Production workers			Non-production workers		
	(1) Employment	(2) Markdown	(3) MRPL	(4) Employment	(5) Markdown	(6) MRPL
	Panel A. Below median					
Post-NREGA	-0.100***	0.104***	0.107***	-0.032	0.028	0.067***
	(0.026)	(0.028)	(0.026)	(0.028)	(0.195)	(0.025)
Observations	27827	27827	27827	27827	27827	27827
R^2	0.97	0.83	0.90	0.93	0.84	0.89
	Panel B. Above median					
Post-NREGA	0.004	-0.018	-0.024	0.015	-0.010	-0.040
	(0.031)	(0.045)	(0.039)	(0.030)	(0.207)	(0.025)
Observations	29242	29242	29242	29242	29242	29242
R^2	0.95	0.85	0.84	0.93	0.81	0.85

Notes: The table presents the heterogeneous effects of NREGA on labor market outcomes for production and non-production workers at manufacturers with low (top panel) and high (bottom panel) labor productivity. The sample in the top (bottom) panel consists of firms whose labor productivity measured by sales revenue per labor is below (above) the median in the most recent period before the first phase of NREGA. The dependent variable in Columns (1)-(3) is the log employment (labor headcount plus one), wage markdowns, and log MRPL for production workers, respectively. The dependent variable in Columns (4)-(6) is the same outcomes for non-production workers. The employment and labor input in production function estimation and the calculation of markdown and MRPL is measured by manufacturing mandays worked. The plant-level markdowns are estimated using the ASI data from 2001-2008 under the assumption of a translog specification for gross output with production (non-managers or low-skilled) and non-production (managers or high-skilled) workers. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors clustered at the district level are in parentheses. Significance: $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$.

Furthermore, we evaluate the labor market conditions of workers who differ by employment contracts in response to the NREGA using manufacturing mandays as an employment measure. Our baseline results show that the shock mainly affected the regular workers at firms with low labor productivity. However, the estimation results presented in Table D.3 suggest that the program similarly affected the regular and contract workers. However, the statistical significance of the estimated coefficients is more substantial, and the effects are more precisely estimated for regular workers, which is generally robust to our baseline results.

Table D.3: Robustness: Heterogeneous Effects of NREGA on Regular and Contract Workers by Labor Productivity using Manufacturing Mandays

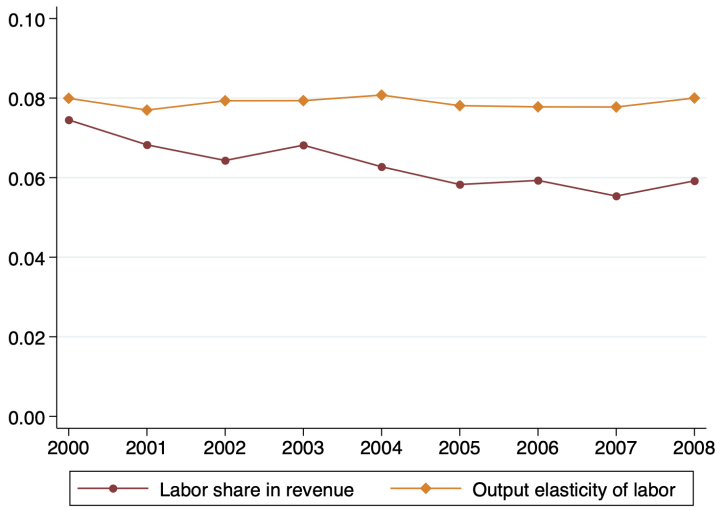
	Regular workers			Contract workers		
	(1) Employment	(2) Markdown	(3) MRPL	(4) Employment	(5) Markdown	(6) MRPL
	Panel A. Below median					
Post-NREGA	-0.121**	0.208***	0.158***	-0.121*	0.318**	0.125*
	(0.055)	(0.073)	(0.052)	(0.071)	(0.158)	(0.072)
Observations	8025	8025	5996	8025	8025	8025
R^2	0.98	0.84	0.91	0.92	0.87	0.93
	Panel B. Above median					
Post-NREGA	-0.007	0.183**	0.075**	0.105*	0.114	-0.057
	(0.032)	(0.077)	(0.034)	(0.061)	(0.217)	(0.048)
Observations	9111	9111	8738	9111	9111	9111
R^2	0.96	0.88	0.86	0.87	0.79	0.86

Notes: The table presents the heterogeneous effects of NREGA on labor market outcomes for regular and contract workers at manufacturers with low (top panel) and high (bottom panel) labor productivity. The sample in the top (bottom) panel consists of firms whose labor productivity measured by sales revenue per labor, is below (above) the median in the most recent period before the first phase of NREGA. The dependent variable in Columns (1)-(3) is the log employment (labor headcount plus one), wage markdowns, and log MRPL for regular workers, respectively. The dependent variable in Columns (4)-(6) is the same outcome for contract workers. The employment and labor input in production function estimation and the calculation of markdown and MRPL is measured by manufacturing mandays worked. The plant-level markdowns are estimated using the ASI data from 2001-2008 under the assumption of a translog specification for gross output with regular and contract workers. Regular workers are employed directly, while contract workers are hired through contractors. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors clustered at the district level are in parentheses. Significance: $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$.

E Additional Figures and Tables

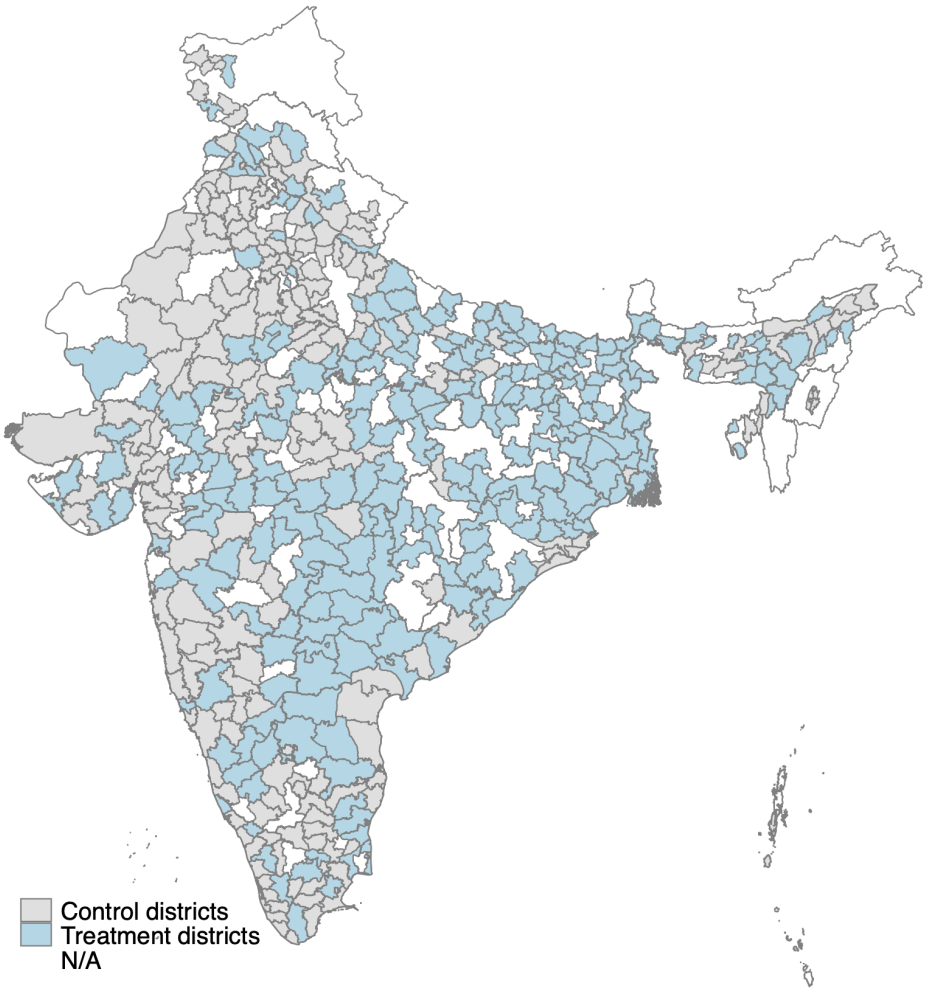
E.1 Additional Figures

Figure E.1: Time Evolution of Labor Share and Output Elasticity of Labor



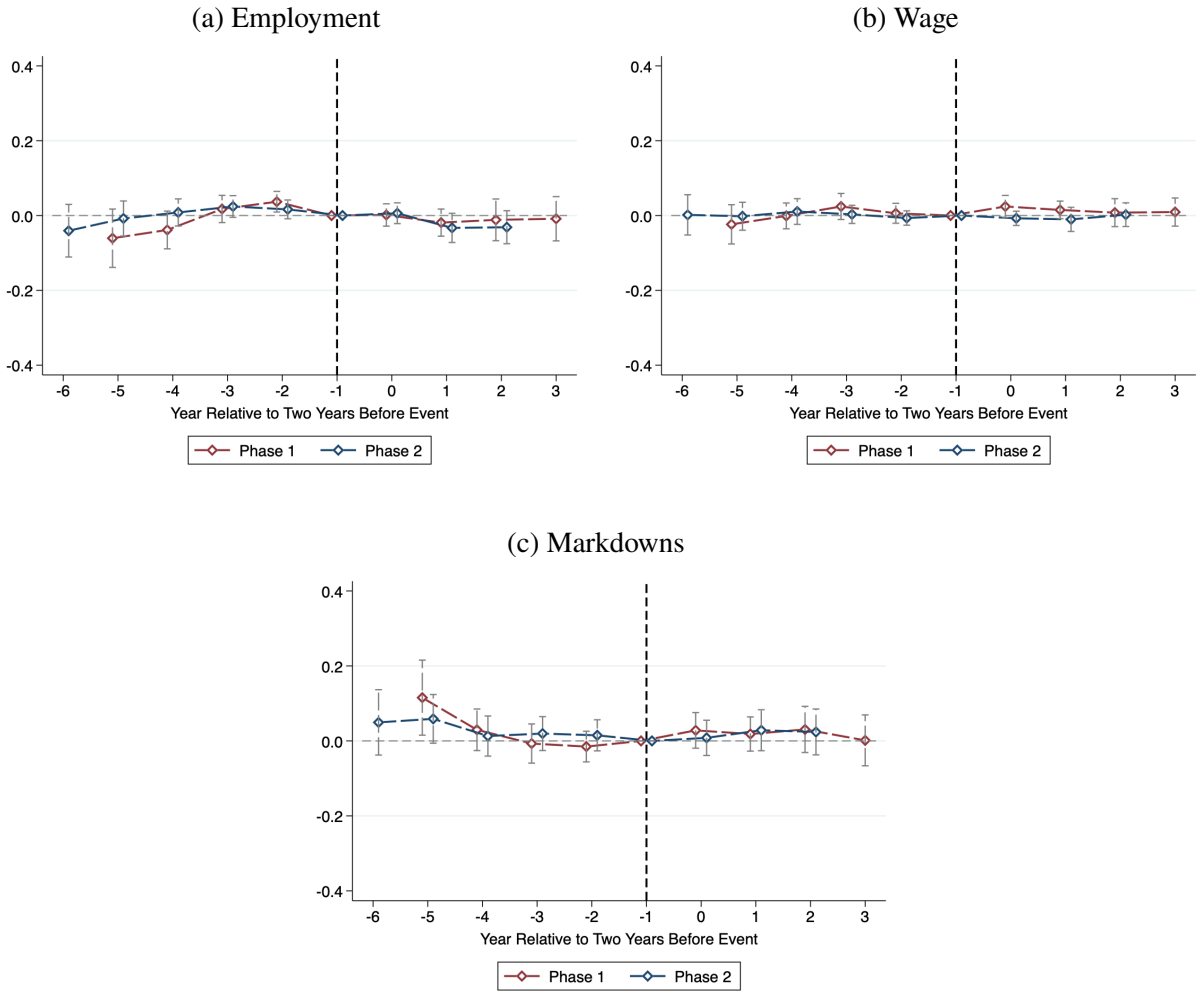
Notes: The figure shows the trends of labor share in revenue and output elasticity of labor. The plant-level measures are aggregated at the year level using employment shares of the labor market (combination of 4-digit NIC-1998 industry and states).

Figure E.2: Treatment and Control Groups



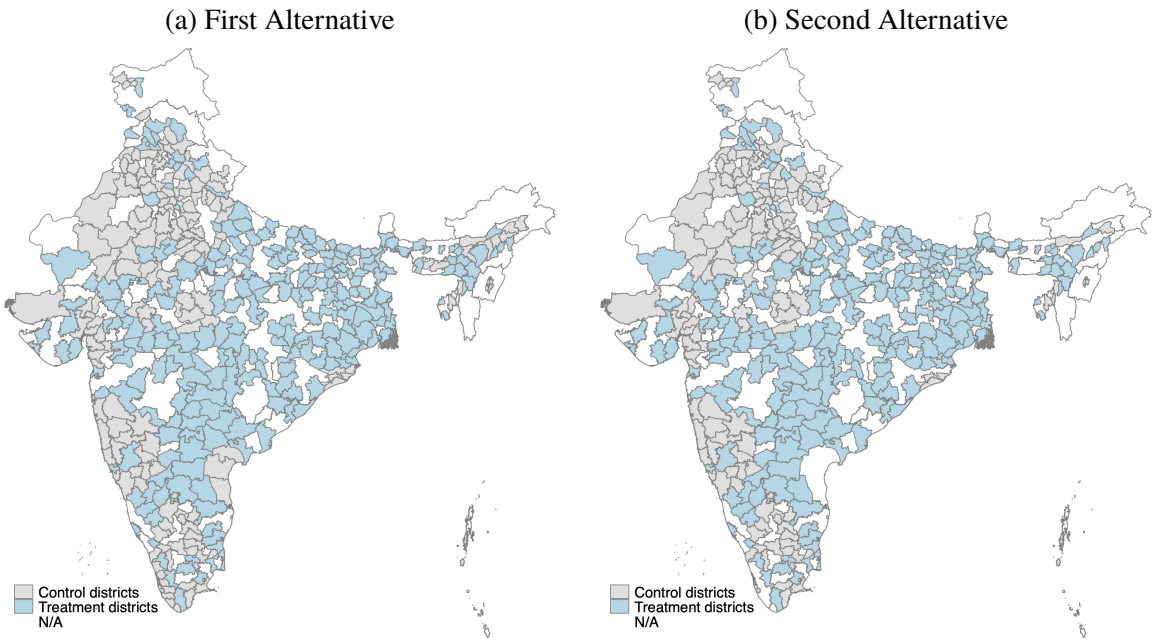
Notes: Based on the sample in which plant-level markdown has been estimated. Treatment districts are districts where the first two phases of the NREGA program have been implemented. Control districts are districts where the third phase of the NREGA program has been implemented. The districts with "N/A" are the ones where plant-level markdown was not estimated using the "production" approach.

Figure E.3: Robustness: Test of No Anticipation Effect Assumption



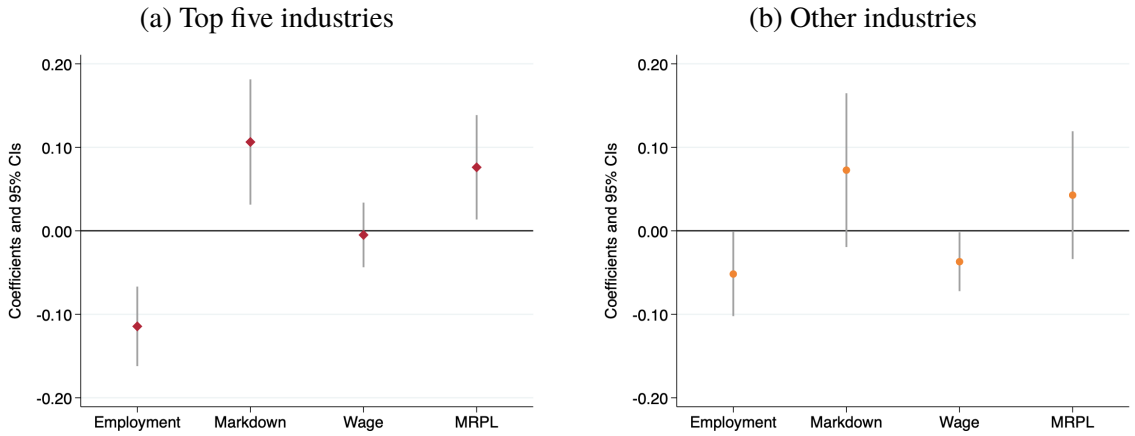
Notes: The figure reports the event study estimates from TWFE regressions checking the robustness of results from testing the no anticipation effect assumption in log employment (headcount plus on, panel (a)), log wage (panel (b)), and wage markdowns (panel (c)). The horizontal axis shows the year relative to two years before treatment, with 0 indicating two years before the treatment. The vertical axis displays the estimated treatment effects by event time. All regressions control for an unreported constant term and baseline controls and fixed effects. Standard errors are clustered by districts, and 95% confidence intervals are shown.

Figure E.4: Alternative Treatment and Control Groups



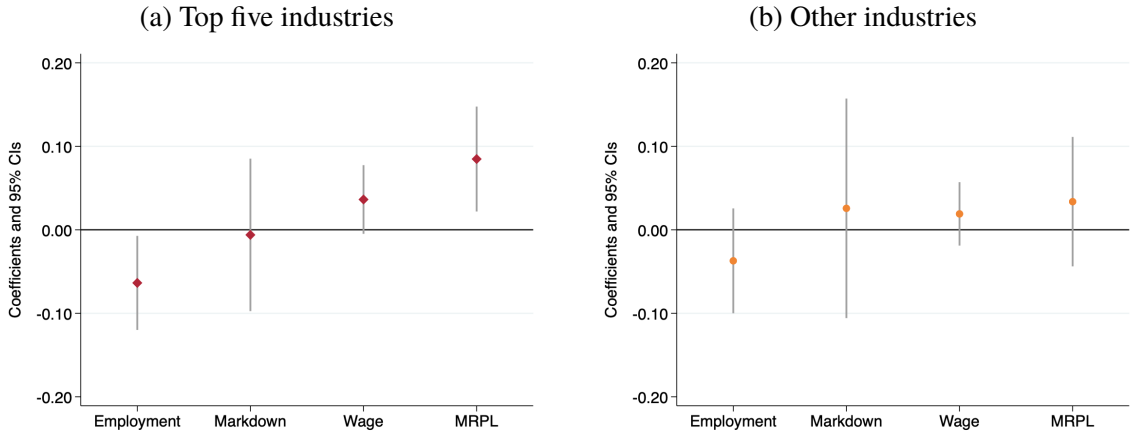
Notes: Based on the sample in which plant-level markdown has been estimated. Treatment districts are districts where the first two phases of the NREGA program have been implemented. Control districts in panel (a) are districts where the third phase of the NREGA program has been implemented, except for 44 districts surrounded by treatment districts. Control districts in panel (b) further exclude another 29 phase-3 districts surrounded by treatment districts.

Figure E.5: Heterogeneous Effects of NREGA by Labor Intensity in Top-Five and Other Industries



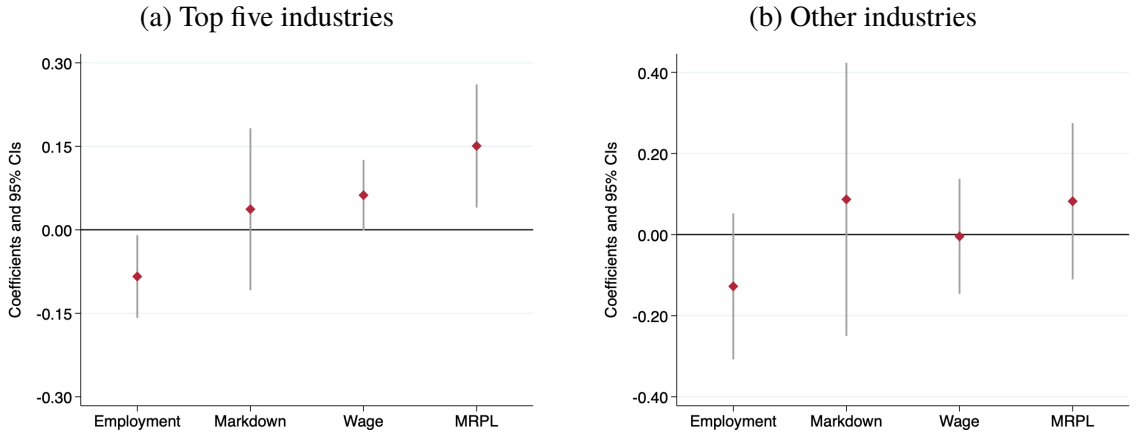
Notes: The figure depicts the effects of NREGA on labor market outcomes heterogeneous by labor intensity (labor-to-capital ratio) at manufacturing firms in the top five and other industries. The top-five industries in panel (a) are those with the highest sales revenue in the pre-NREGA period, 2006, and include (i) chemicals and chemical products, (ii) basic metals, (iii) textiles, (iv) motor vehicles, trailers, and semi-trailers, and (v) food products and beverages. Other industries in panel (b) include those remaining two-digit NIC industries. The key explanatory variable plotted is the NREGA treatment variable interacted with a dummy, indicating whether the firm's labor intensity measure is above the median, i.e., the firm is labor intensive. The dependent variables shown in the horizontal axis include the log employment (labor headcount plus one), wage markdowns, log wage, and log MRPL. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output with headcount as a measure of labor input. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors are clustered by districts, and 95% confidence intervals are presented.

Figure E.6: Heterogeneous Effects of NREGA along the Wage Distribution in Top-Five and Other Industries



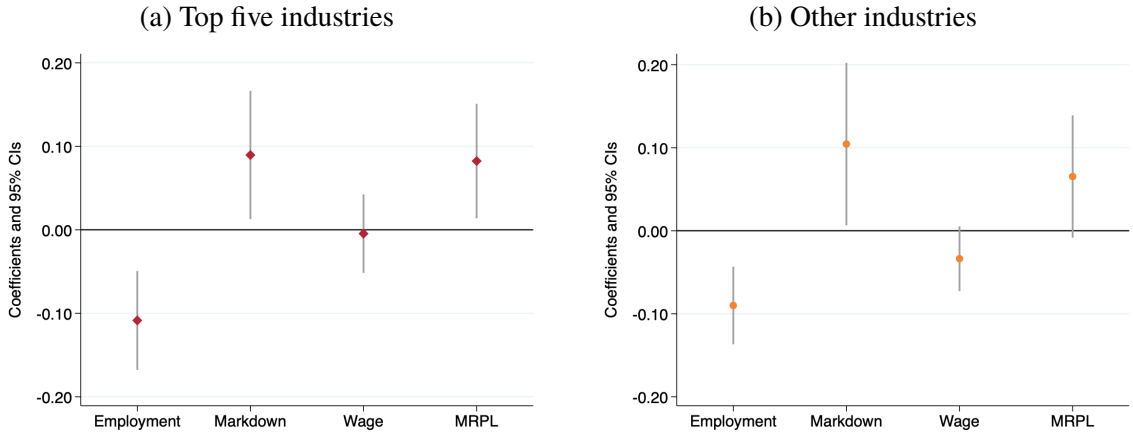
Notes: The figure depicts the heterogeneous effects of NREGA on labor market outcomes at manufacturing firms in the top five and other industries along the wage distribution. The top-five industries in panel (a) are those with the highest sales revenue in the pre-NREGA period, 2006, and include (i) chemicals and chemical products, (ii) basic metals, (iii) textiles, (iv) motor vehicles, trailers, and semi-trailers, and (v) food products and beverages. Other industries in panel (b) include those remaining two-digit NIC industries. The key explanatory variable plotted is the NREGA treatment variable interacted with a dummy, indicating whether the firm's initial average wage per worker is in the bottom 3 deciles. The dependent variables shown in the horizontal axis include the log employment (labor headcount plus one), wage markdowns, log wage, and log MRPL. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output with headcount as a measure of labor input. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors are clustered by districts, and 95% confidence intervals are presented.

Figure E.7: Heterogeneous Effects of NREGA along the Distribution of Wage-to-Minimum Wage Ratio in Top-Five and Other Industries



Notes: The figure depicts the heterogeneous effects of NREGA on labor market outcomes at manufacturing firms in the top five and other industries along the distribution of wage-to-minimum wage ratio. The top-five industries in panel (a) are those with the highest sales revenue in the pre-NREGA period, 2006, and include (i) chemicals and chemical products, (ii) basic metals, (iii) textiles, (iv) motor vehicles, trailers, and semi-trailers, and (v) food products and beverages. Other industries in panel (b) include those remaining two-digit NIC industries. The key explanatory variable plotted is the NREGA treatment variable interacted with a dummy, indicating whether the firm's initial average wage-to-minimum wage ratio is in the bottom 3 deciles. The dependent variables shown in the horizontal axis include the log employment (labor headcount plus one), wage markdowns, log wage, and log MRPL. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output with headcount as a measure of labor input. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors are clustered by districts, and 95% confidence intervals are presented.

Figure E.8: Heterogeneous Effects of NREGA by Labor Productivity in Top-Five and Other Industries (based on the Number of Workers)



Notes: The figure depicts the effects of NREGA on labor market outcomes heterogeneous by labor productivity at manufacturing firms in the top five and other industries. The top-five industries in panel (a) are those with the highest number of workers in the pre-NREGA period, 2006, and include (i) chemicals and chemical products, (ii) basic metals, (iii) textiles, (iv) motor vehicles, trailers, and semi-trailers, and (v) food products and beverages. Other industries in panel (b) include those remaining two-digit NIC industries. The key explanatory variable plotted is the NREGA treatment variable interacted with a dummy, indicating whether the firm's labor productivity (sales revenue per labor) is below the median. The dependent variables shown in the horizontal axis include the log employment (labor headcount plus one), wage markdowns, log wage, and log MRPL. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output with headcount as a measure of labor input. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors are clustered by districts, and 95% confidence intervals are presented.

E.2 Additional Tables

Table E.1: Average Effect of NREGA on Employment

	Dependent variable: Employment				
	(1)	(2)	(3)	(4)	(5)
Post-NREGA	-0.018	-0.018	-0.006	-0.012	-0.022
	(0.019)	(0.019)	(0.016)	(0.020)	(0.020)
Firm age		0.006***	0.005***	0.005***	0.005***
		(0.001)	(0.001)	(0.001)	(0.001)
Firm age^2		-0.000***	-0.000***	-0.000***	-0.000***
		(0.000)	(0.000)	(0.000)	(0.000)
Rainfall		0.002	-0.057	0.010	0.046
		(0.103)	(0.103)	(0.135)	(0.164)
Observations	73997	72924	72924	72923	72394
R^2	0.96	0.96	0.96	0.96	0.97
Firm FE	✓	✓	✓	✓	✓
Year FE	✓	✓			
Industry-Year FE			✓	✓	
State-Year FE				✓	
State-Industry-Year FE					✓

Notes: The table presents the OLS results from estimating the effect of NREGA on log employment (labor headcount plus one) in manufacturing between 2000 and 2008. All regressions include an unreported constant term. Standard errors clustered at the district level are in parentheses. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

Table E.2: Average Effect of NREGA on Markdown

	Dependent variable: Plant-level markdowns				
	(1)	(2)	(3)	(4)	(5)
Post-NREGA	0.057**	0.058**	0.035	0.012	0.011
	(0.026)	(0.026)	(0.025)	(0.019)	(0.021)
Firm age		-0.004***	-0.003***	-0.003***	-0.003***
		(0.001)	(0.001)	(0.001)	(0.001)
Firm age^2		0.000***	0.000***	0.000***	0.000***
		(0.000)	(0.000)	(0.000)	(0.000)
Rainfall		-0.244	-0.196	0.023	-0.121
		(0.174)	(0.177)	(0.178)	(0.194)
Observations	73997	72924	72924	72923	72394
R^2	0.86	0.86	0.86	0.86	0.88
Firm FE	✓	✓	✓	✓	✓
Year FE	✓	✓			
Industry-Year FE			✓	✓	
State-Year FE				✓	
State-Industry-Year FE					✓

Notes: The table presents the OLS results from estimating the effect of NREGA on plant-level markdowns estimated under the assumption of a translog production function in manufacturing between 2000 and 2008. All regressions include an unreported constant term. Standard errors clustered at the district level are in parentheses. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

Table E.3: Average Effects of NREGA on Wages and MRPL

	Dependent variable: Wage or MRPL				
	(1)	(2)	(3)	(4)	(5)
	Panel A. Wage				
Post-NREGA	-0.007	-0.007	-0.001	-0.004	0.000
	(0.015)	(0.015)	(0.014)	(0.015)	(0.014)
Firm age		0.002***	0.002**	0.002**	0.002**
		(0.001)	(0.001)	(0.001)	(0.001)
Firm age^2		-0.000***	-0.000***	-0.000**	-0.000**
		(0.000)	(0.000)	(0.000)	(0.000)
Rainfall		0.133*	0.111	-0.081	-0.050
		(0.072)	(0.071)	(0.106)	(0.110)
Observations	70094	69125	69125	69124	68584
R^2	0.90	0.90	0.91	0.91	0.91
	Panel B. MRPL				
Post-NREGA	0.028*	0.028	0.014	0.001	-0.001
	(0.017)	(0.017)	(0.018)	(0.021)	(0.020)
Firm age		-0.002	-0.002*	-0.002*	-0.002**
		(0.001)	(0.001)	(0.001)	(0.001)
Firm age^2		0.000	0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)	(0.000)
Rainfall		-0.055	-0.015	-0.244	-0.344*
		(0.134)	(0.139)	(0.186)	(0.200)
Observations	70094	69125	69125	69124	68584
R^2	0.87	0.87	0.88	0.88	0.89
Firm FE	✓	✓	✓	✓	✓
Year FE	✓	✓			
Industry-Year FE			✓	✓	
State-Year FE				✓	
State-Industry-Year FE					✓

Notes: The table presents the OLS results from estimating the effect of NREGA on log wage (top panel) and log MRPL (bottom panel) in manufacturing between 2000 and 2008. The MRPL was computed by multiplying wage with plant-level markdowns estimated under the assumption of a translog production function. All regressions include an unreported constant term. Standard errors clustered at the district level are in parentheses. Significance: $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$.

Table E.4: Heterogeneous Effect of NREGA on Employment by Labor Productivity

	Dependent variable: Employment				
	(1)	(2)	(3)	(4)	(5)
Post-NREGA × Below median	-0.125***	-0.128***	-0.098***	-0.100***	-0.101***
	(0.023)	(0.022)	(0.019)	(0.019)	(0.019)
Below median	0.038**	0.037**	0.029*	0.031**	0.023
	(0.017)	(0.017)	(0.015)	(0.016)	(0.014)
Post-NREGA	0.046**	0.047**	0.044**	0.035	0.025
	(0.022)	(0.022)	(0.020)	(0.022)	(0.022)
Observations	73511	72454	72454	72453	71921
R^2	0.96	0.96	0.96	0.96	0.97
Firm FE	✓	✓	✓	✓	✓
Year FE	✓	✓			
Controls		✓	✓	✓	✓
Industry-Year FE			✓	✓	
State-Year FE				✓	
State-Industry-Year FE					✓

Notes: The table presents the OLS estimates on the heterogeneous effect of NREGA on log employment (labor headcount plus one) in manufacturing by labor productivity (sales revenue per labor) between 2000 and 2008. All regressions include an unreported constant term and baseline controls. Standard errors clustered at the district level are in parentheses. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

Table E.5: Heterogeneous Effect of NREGA on Markdown by Labor Productivity

	Dependent variable: Plant-level markdowns				
	(1)	(2)	(3)	(4)	(5)
Post-NREGA × Below median	0.088***	0.087***	0.108***	0.092***	0.094***
	(0.029)	(0.029)	(0.028)	(0.030)	(0.030)
Below median	-0.034*	-0.035*	-0.024	-0.020	-0.009
	(0.020)	(0.020)	(0.019)	(0.018)	(0.018)
Post-NREGA	0.012	0.014	-0.019	-0.031	-0.031
	(0.034)	(0.034)	(0.033)	(0.026)	(0.026)
Observations	73511	72454	72454	72453	71921
R^2	0.86	0.86	0.86	0.86	0.88
Firm FE	✓	✓	✓	✓	✓
Year FE	✓	✓			
Controls		✓	✓	✓	✓
Industry-Year FE			✓	✓	
State-Year FE				✓	
State-Industry-Year FE					✓

Notes: The table presents the OLS estimates on the heterogeneous effect of NREGA on markdowns in manufacturing by labor productivity (sales revenue per labor). The plant-level markdown was estimated under the assumption of a translog production function between 2000 and 2008. All regressions include an unreported constant term and baseline controls. Standard errors clustered at the district level are in parentheses. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

Table E.6: Heterogeneous Effect of NREGA on Wages and MRPL by Labor Productivity

	Dependent variable: Wage or MRPL				
	(1)	(2)	(3)	(4)	(5)
	Panel A. Wage				
Post-NREGA × Below median	-0.032**	-0.031**	-0.021	-0.014	-0.018
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Below median	-0.020**	-0.019**	-0.020**	-0.019**	-0.018*
	(0.010)	(0.010)	(0.010)	(0.009)	(0.010)
Post-NREGA	0.009	0.009	0.009	0.002	0.008
	(0.019)	(0.019)	(0.018)	(0.019)	(0.018)
Observations	69648	68695	68695	68694	68151
R^2	0.90	0.90	0.91	0.91	0.91
	Panel B. MRPL				
Post-NREGA × Below median	0.074***	0.077***	0.104***	0.096***	0.074***
	(0.025)	(0.025)	(0.022)	(0.022)	(0.025)
Below median	-0.024	-0.023	-0.019	-0.013	-0.002
	(0.015)	(0.016)	(0.015)	(0.016)	(0.017)
Post-NREGA	-0.007	-0.010	-0.037*	-0.041*	-0.033
	(0.021)	(0.022)	(0.021)	(0.023)	(0.024)
Observations	69648	68695	68695	68694	68151
R^2	0.87	0.87	0.88	0.88	0.89
Firm FE	✓	✓	✓	✓	✓
Year FE	✓	✓			
Controls		✓	✓	✓	✓
Industry-Year FE			✓	✓	
State-Year FE				✓	
State-Industry-Year FE					✓

Notes: The table presents the OLS estimates on the heterogeneous effect of NREGA on log wage (top panel) and log MRPL (bottom panel) in manufacturing by labor productivity (sales revenue per labor) between 2000 and 2008. The marginal revenue product of labor (MRPL) was computed by multiplying wage with plant-level markdowns estimated under the assumption of a translog production function. All regressions include an unreported constant term and baseline controls. Standard errors clustered at the district level are in parentheses. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

Table E.7: Effects of NREGA using Establishments similar to Muralidharan et al. (2023)

	Full sample		Markdown sample			
	(1) Employment	(2) Wage	(3) Employment	(4) Markdown	(5) Wage	(6) MRPL
	Panel A. Baseline					
Post-NREGA	0.012	0.052	0.031	0.019	0.029	-0.021
	(0.060)	(0.033)	(0.045)	(0.068)	(0.047)	(0.055)
Observations	9391	7601	1445	1445	1397	1397
R^2	0.95	0.83	0.96	0.92	0.91	0.90
	Panel B. Heterogeneous by labor productivity					
Post-NREGA × Below median	-0.158***	0.052	-0.094	0.164	0.114	-0.081
	(0.052)	(0.049)	(0.091)	(0.114)	(0.089)	(0.048)
Below median	0.017	0.002	0.108	0.100*	0.154*	-0.082
	(0.050)	(0.051)	(0.090)	(0.050)	(0.077)	(0.057)
Post-NREGA	0.052	0.022	0.084	-0.073	-0.085	0.073
	(0.077)	(0.030)	(0.060)	(0.071)	(0.063)	(0.057)
Observations	7412	6087	1423	1423	1375	1375
R^2	0.96	0.84	0.96	0.92	0.90	0.91

Notes: The table presents the effects of NREGA on labor market outcomes on full and markdown samples based on establishments similar to Muralidharan et al. (2023), i.e., private firms in Andhra Pradesh. These regressions, however, are based on manufacturing firms between 2000 and 2008, while Muralidharan et al. (2023) covered all non-agricultural sectors in 2013. The left panel employs the full ASI sample, while the right panel uses the ASI sample on which the markdown was estimated. Panel A shows the baseline effects, while panel B displays the impacts heterogeneous by labor productivity (sales revenue per labor). The key explanatory variable in panel B is the NREGA treatment variable interacted with a dummy, indicating whether the firm's initial labor productivity is below the national median. The dependent variables include the log employment (labor headcount plus one), wage markdowns, log wage, and log MRPL. The plant-level markdowns are estimated using the ASI data from 2000-2008 under the assumption of a translog specification for gross output with headcount as a measure of labor input. All regressions include an unreported constant term and baseline controls and fixed effects. Standard errors clustered at the district level are in parentheses. Significance: *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$.

References

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. 2004. "How Much Should We Trust Differences-In-Differences Estimates?" *The Quarterly Journal of Economics*, 119(1): 249–275.

Besley, Timothy, and Robin Burgess. 2004. "Can Labor Regulation Hinder Economic Performance? Evidence from India." *The Quarterly Journal of Economics*, 119(1): 91–134.

Bond, Steve, Arshia Hashemi, Greg Kaplan, and Piotr Zoch. 2021. "Some Unpleasant Markup Arithmetic: Production Function Elasticities and Their Estimation from Production Data." *Journal of Monetary Economics*, 121 1–14.

Dasgupta, Bhaskar. 2021. "Towards a Comprehensive Index of Labour Law Reform and Ranking of States." *Arthaniti: Journal of Economic Theory and Practice*, 1–25.

Klette, Tor Jakob, and Zvi Griliches. 1996. "The Inconsistency of Common Scale Estimators when Output Prices Are Unobserved and Endogenous." *Journal of Applied Econometrics*, 11(4): 343–361.