

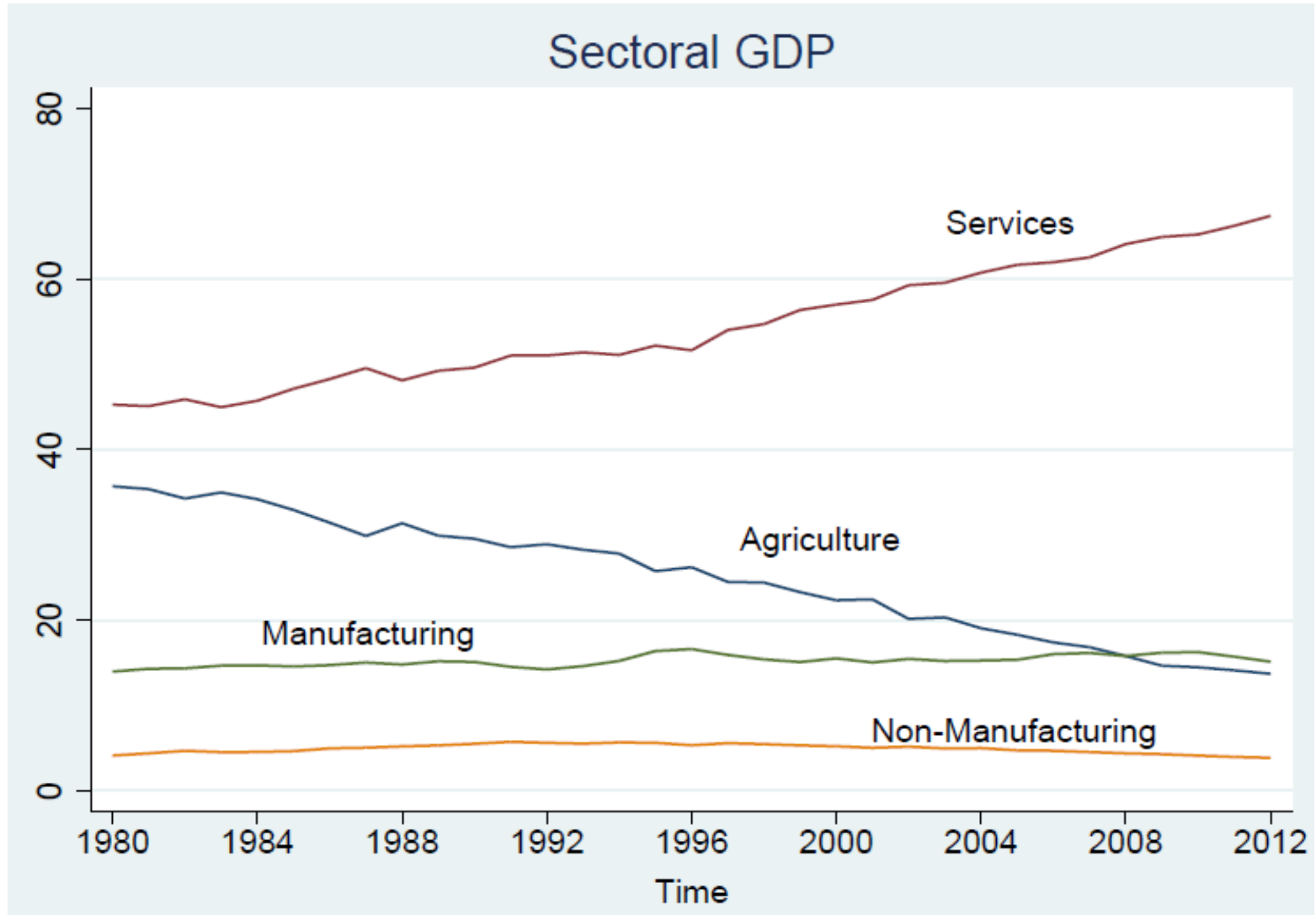
***Creating Jobs in India's
Organised Manufacturing Sector***



***“Come, Make in India. Sell anywhere but
come and manufacture here.”***

Prime Minister, Narendra Modi,
15th August, 2014

Stagnant Contribution of the manufacturing sector to GDP...



Where were jobs created ?

Sectoral Breakdown of Employment (in millions)

Sector	Organised Sector	Unorganised Sector	Total
1999-2000			
Agriculture	5.47	232.2	237.6
Manufacturing	13.13	30.92	44.05
Non-Manufacturing	6.95	13.89	20.84
Services	28.57	65.62	94.2
Total	54.12	342.63	396.69
2011-12			
Agriculture	18.2	213.7	231.9
Manufacturing	20.7	39.1	59.8
Non-Manufacturing	22.4	33	55.2
Services	40.3	87	127.3
Total	101.6	372.7	474.3

The Dualistic Structure of India's Manufacturing Sector

Employment and Value Added in manufacturing by type of establishment (2010)

	OAME	NDME and DME	Organised
Distribution of employment (%)	57.83	31.65	10.52
Mean workers employed	1.43	4.31	76.13
Distribution of value added (%)	15.82	19.16	65.02
Mean VA/worker in category (OAME=1)	1	1.85	15.37

What Constrained the Growth of Manufacturing

- Inadequate development of physical infrastructure
- Inadequate Access to finance
- Regulatory Bottlenecks for doing business in India
- Labour market rigidities
- Challenges of land acquisition
- Dilatory procedures for environmental clearances

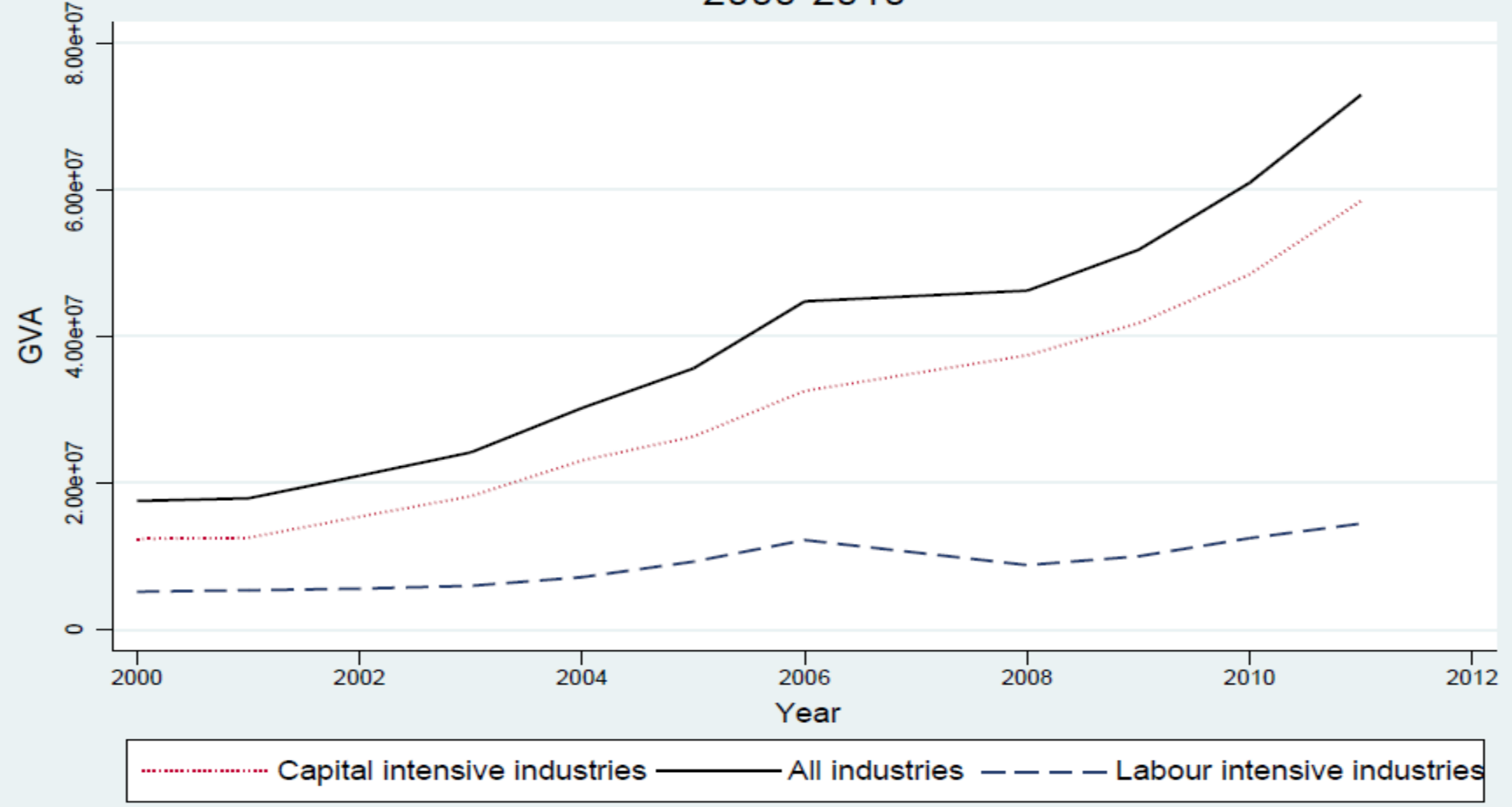
Data

- ASI Database covers firms that are registered under the Factories Act (firms employing 10 or more workers using power, or 20 or more workers without using power).
- NIC 2004 classification at 3 digit level.
- State level analysis for the period from 1998-99 to 2010-11.

Key Trends

Labour Intensive Industries grew slower than Capital Intensive Industries

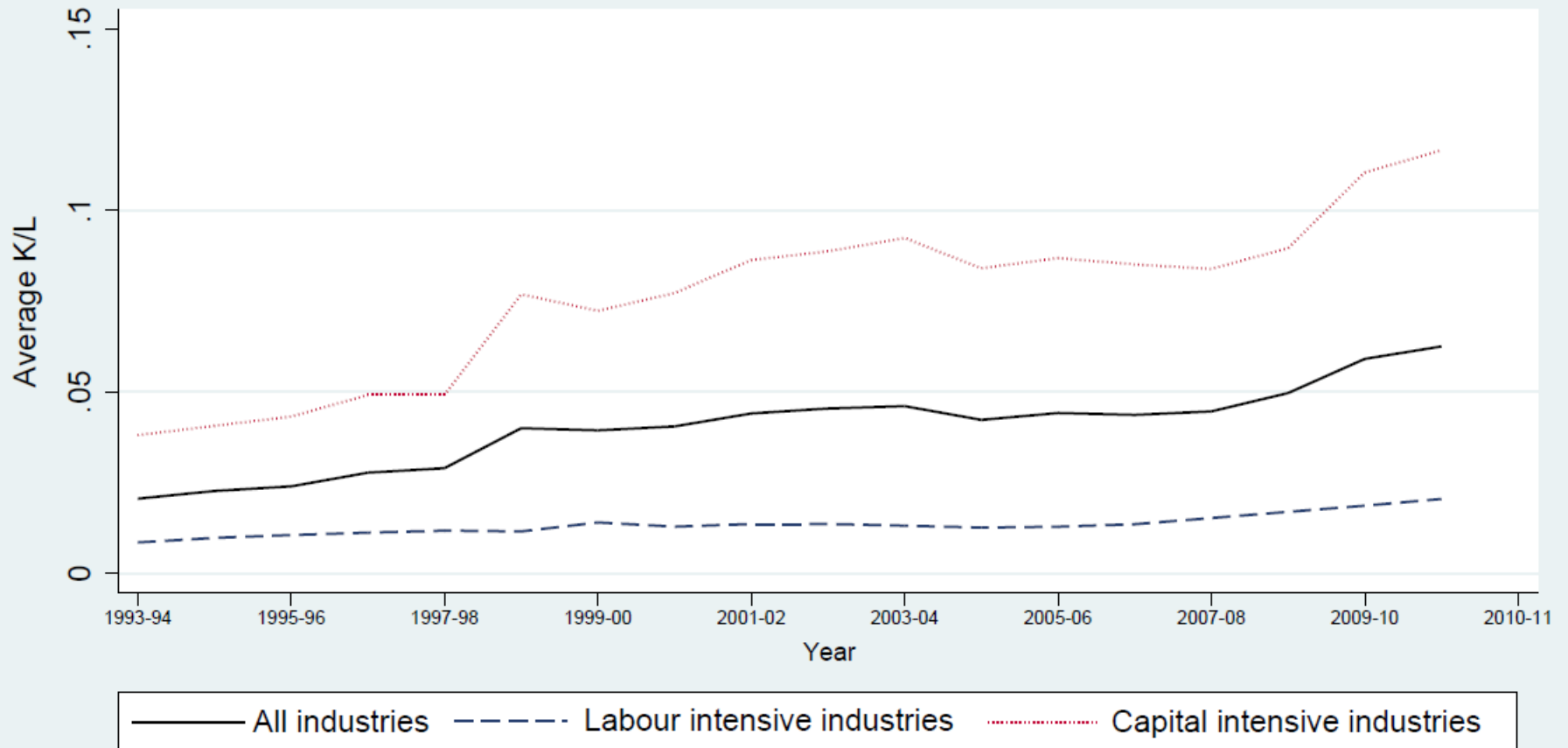
Yearly GVA
2000-2010



Capital Intensity of Production has been rising

Average K/L - All India

1994-2010



Regional Concentration of Industries

State	Share in total employment		Share in total GVA	
	2000-01	2010-11	2000-01	2010-11
Andhra Pradesh	10.2	11.4	8.3	6.2
Assam	1.3	1.4	0.9	0.9
Bihar	0.8	0.8	0.6	0.5
Chhattisgarh	1.4	1.2	1.9	1.7
Gujarat	10.2	9.4	13.3	12.9
Haryana	4.3	3.8	3.6	4.0
Himachal Pradesh	1.2	0.5	2.5	0.9
Jharkhand	1.5	2.2	2.7	2.8
Karnataka	6.2	5.9	5.9	5.7
Kerala	3.0	3.9	1.2	2.3
Madhya Pradesh	2.4	3.2	2.5	4.2
Maharashtra	13.4	14.7	20.4	21.1
Odisha	2.2	1.6	2.6	1.7
Punjab	4.8	4.5	2.8	2.9
Rajasthan	3.4	2.9	2.6	3.6
Tamil Nadu	15.3	14.2	10.4	11.4
Uttar Pradesh	6.4	6.8	6.2	7.0
Uttarakhand	2.3	0.5	3.5	0.6
West Bengal	5.0	7.1	3.0	4.0

Classification of states on the basis of key characteristics

- Labour Market Regulations (LMR)
- Product Market Regulations (PMR)
- Enforcement of Environmental Regulations (EER)
- Infrastructure Availability

Methodology

We exploit variation in state characteristics to understand the heterogeneity in performance of states using the following specification:

$$y_{ist} = \alpha_{is} + \beta T + \delta(\text{State Regulatory Parameter}_s) * T \\ + \gamma(\text{State Infrastructure Indicator}_s) * T + \mu(\text{other controls}) + \varepsilon_{ist}$$

$$y_{ist} = \alpha_{is} + \beta T + \delta(\text{State Regulatory Parameter}_s) * T \\ + \gamma(\text{State Infrastructure Indicator}_s) * T \\ + \theta(\text{State Regulatory Parameter} * \text{Industry Characteristic}) * T \\ + \mu(\text{other controls}) + \varepsilon_{ist}$$

Key Results

- There is a negative relationship between employment growth and labour market regulations.
- Labour intensive industries did not perform better in states with more flexible labour regulations.
- Given that employers are increasingly getting around these regulations by hiring contractual labour, we must not over emphasize the role of labour market regulations in constraining manufacturing.
- Manufacturing sector grew faster in states with a more liberal business environment and more developed infrastructure.
- The stringency of environmental enforcement does appear to have affected the growth of manufacturing activity at the state level.

Rigid LMR and PMR hurt output growth

VARIABLES	(1) logGVA	(2) logGVA	(4) logGVA	(4) logGVA
Log share of state s in industry i's VA in initial year*time	-0.023*** (-9.336)	-0.024*** (-9.746)	-0.021*** (-8.695)	-0.023*** (-9.342)
Log initial per capita income * time	0.054*** (4.542)	0.052*** (4.391)	0.051*** (4.292)	0.048*** (4.258)
LMR*time	0.029*** (5.958)		0.021*** (4.267)	0.027*** (5.727)
PMR*time	-0.031** (-2.155)	-0.029* (-1.850)	-0.042** (-2.114)	
EER*time		-0.006 (-0.853)	-0.003 (-0.446)	
Roads*time				0.019*** (2.880)
Constant	3.338*** (70.375)	3.430*** (71.667)	3.495*** (69.150)	3.338*** (70.401)
Observations	9,415	8,814	8,446	9,415
R-squared	0.346	0.360	0.347	0.346
Number of panelvar	760	706	676	760

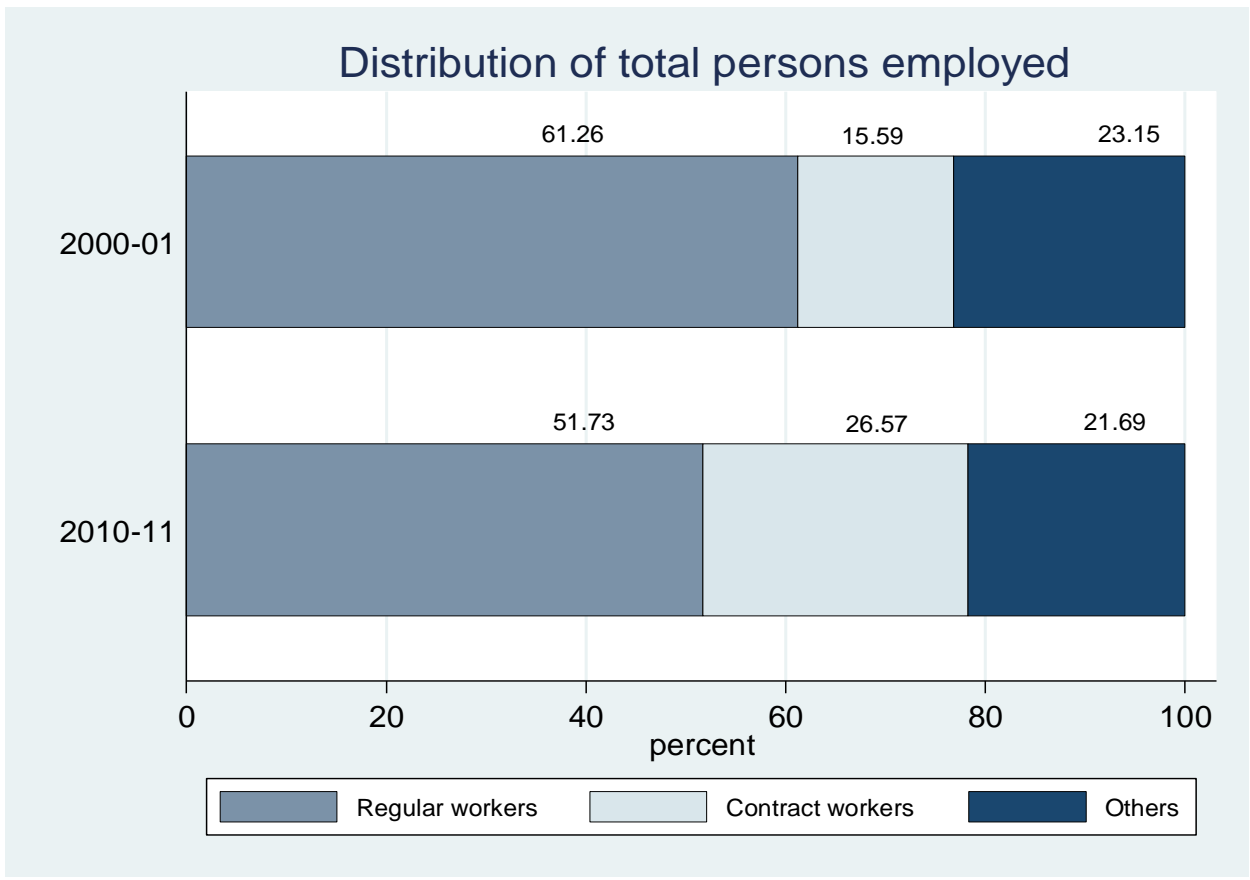
Rigid LMR and PMR hurt employment growth

VARIABLES	(1) Log TPE	(2) Log TPE	(3) Log TPE	(4) Log TPE
Log of GVA	0.412*** (29.763)	0.403*** (27.765)	0.410*** (29.565)	0.411*** (29.509)
Log share of state s in industry i's VA in initial Year*time	-0.003*** (-2.729)	-0.003** (-2.060)	-0.003** (-2.557)	-0.003** (-2.459)
Log initial per capita income*time	0.011* (1.850)	0.009 (1.580)	0.012** (2.037)	0.023*** (3.796)
LMR*time	0.014*** (5.358)	0.012*** (4.338)	0.014*** (5.597)	0.018*** (6.872)
PMR*time	-0.008* (-1.654)	-0.010** (-2.002)		
EER*time		0.003 (0.703)		
Roads*time			0.009** (2.571)	
T&D losses*time				0.001*** (3.097)
Constant	6.564*** (119.200)	6.662*** (111.488)	6.569*** (118.190)	6.565*** (117.952)
Observations	9,409	8,440	9,409	9,409
R-squared	0.602	0.593	0.602	0.603
Number of panelvar	760	676	760	760

Labour intensive industries did not perform better in states with more flexible labour regulations.

VARIABLES	(1) logTPE	(2) logTPE	(3) logTPE
Log of GVA	0.433*** (29.093)	0.431*** (28.938)	0.433*** (28.996)
LMR*time	0.016** (2.269)	0.015** (2.198)	0.018** (2.511)
Log of labour intensity*time	0.009*** (5.015)	0.009*** (5.108)	0.009*** (5.032)
LMR*Log of labour intensity*Time	-0.001 (-0.297)	-0.001 (-0.315)	-0.001 (-0.347)
Roads*time		0.010*** (3.150)	
T&Dlosses *time			0.001** (2.246)
Constant	6.485*** (110.009)	6.493*** (109.485)	6.485*** (109.344)
Observations	9,408	9,408	9,408
R-squared	0.606	0.608	0.607
Number of panelvar	760	760	760

Do LMR really bite or are firms coming around these by hiring contract workers?



Growth rate of contract workers far exceeds growth rate of regular workers

State/Industry Characteristic	Workers	Trend Growth Rate (2000-10)
Flexible States	Regular Workers	5.83
	Contract Workers	16.21
Inflexible States	Regular Workers	1.40
	Contract Workers	11.67
Labour Intensive Industries in Flexible States	Regular Workers	6.37
	Contract Workers	15.00
Labour Intensive Industries in Inflexible States	Regular Workers	2.96
	Contract Workers	11.08

Tying the results to policy debate

- Policy impetus from the central government alone cannot accelerate growth of the manufacturing sector. The creation of a more favourable investment climate at the state level is imperative.
- Two critical areas where urgent action is required and results are least controversial are infrastructure and regulatory bottlenecks.
- Results on labour market regulations attract most attention:
 - Firms have responded to inflexibilities in the labour market by substituting contract labour for permanent workforce and adopting capital intensive techniques of production.
 - India's labour regulations cover only the organized sector, there are no regulations for decent conditions of work and no provision for social security of any kind for the workers in the unorganized sector.

Thank You