

Has India De-industrialised, Prematurely?

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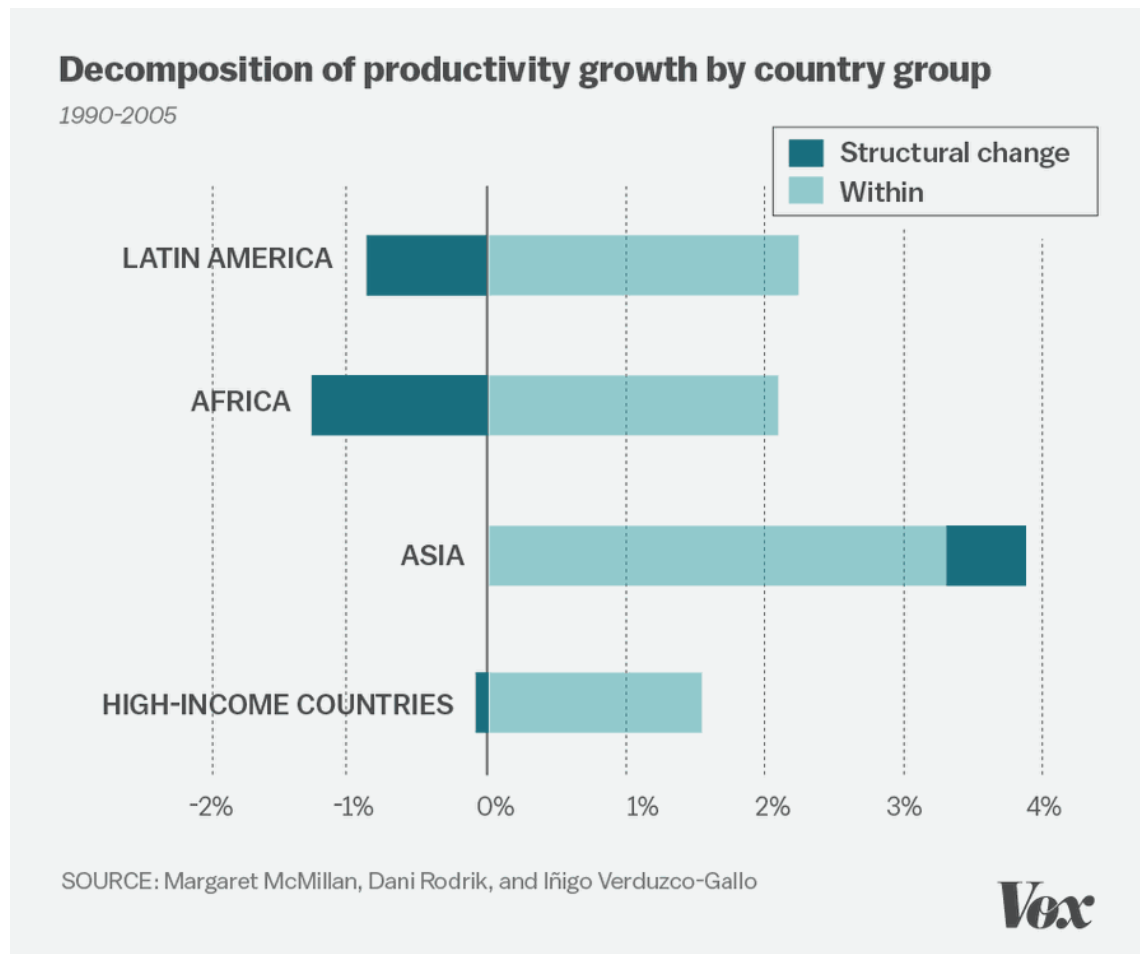
Global Pattern (1)

- De-industrialisation is defined as a decline in manufacturing sector's share in (i) GDP and (ii) total workforce.
- De-industrialisation is a historical fact in advanced economies (AEs), observed since early 1960s in the UK (Ajit Singh, 1987). Reasons? As incomes rise, income elasticity of demand for services increases faster, and (ii) as wages rose in AEs, capital moved out, mfg goods were imported.

Global Pattern (2)

- However, many LDCs got de-industrialised **prematurely** in recent decades – a matter of concern, as Kuznetsian structural transformation—principal source of productivity growth – got retarded (Rodrik; Patnaik).
- Latin America and Africa faced the brunt, after the 1982 debt crisis. Reason? Reportedly, coerced into, or incentivised to follow, liberal reforms under structural adjustment lending by WB-IMF.

Global Evidence



Global Pattern (3)

- Asia escaped the trap, despite the financial crisis in 1997, with China emerging as world's factory – supported by dense supply chains running across East Asia – following the “Flying geese” pattern of industrialisation.
- Latest goose to fly: Vietnam.
- East Asian industrial structures - closely tied to global value chains - where each country adds a small value to the final product, sold in the West.

Where does India Stand? (1)

- Mfg sector's share in GDP and workforce has stood still since 1980.
- Many believe, India's success in IT and outsourcing (more than) compensated for modest industrial performance.
- India was smug: if China was world's factory, India prided that it was the back office (with higher productivity).
- Many believed, India had leapfrogged into a service economy, with closely tied to US service sector (Bhagwati; Blinder etc).

Where does India Stand? (2)

- Perceptions changed gradually after GFC in 2008/9, and slower growth thereafter.
- *Make in India*, or its earlier version, *National Manufacturing Competitiveness Policy 2012* were (feeble) efforts to grapple with modest industrial performance, and growing import dependence.
- Hence the question: **Has India de-industrialised?**
- Recently released **2011 Census Economic tables** allows us to answer the question at a district level, which is what the paper mainly reports.

The Paper Structure

- De-industrialisation described:
 - At National, state-level and district-wise results.
- Organisational changes in mfg employment
- Spatial shifts across industries.
- Yet, stable relative regional ordering discerned.
- Caveat: A data-intensive exercise, only main results are reported, without the too many empirical details.

Data and Methodology (1)

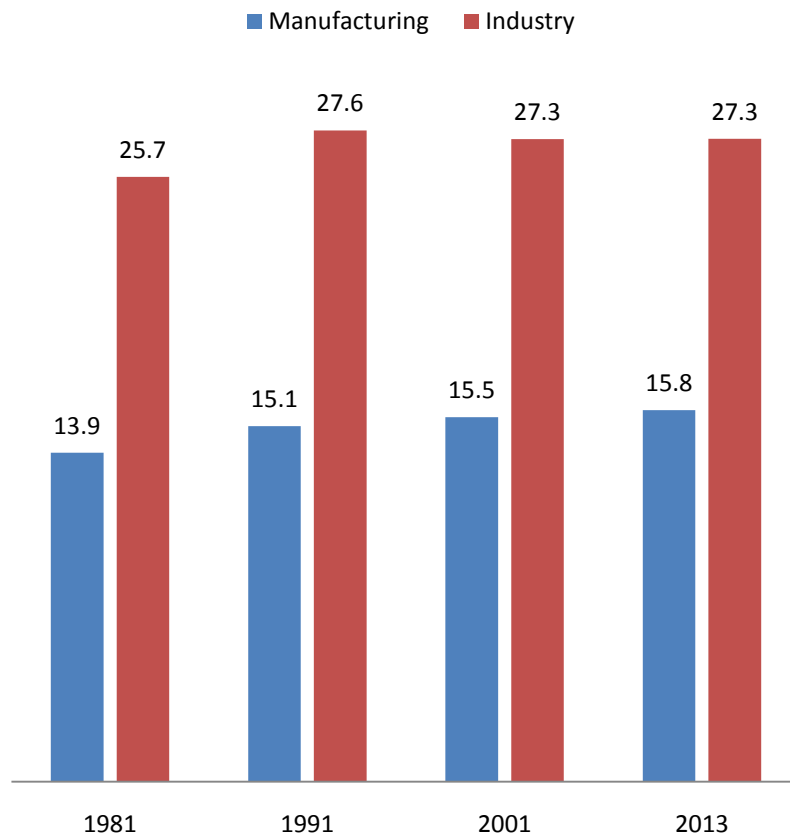
- National level – NAS, NSS/Census, 1991, 2011
- State level – SDP, NSS/Census (major and combined states, e.g., Bihar = Bihar+ Jharkhand);
- We stop at 2014, as later data problematic.
- District level – Only census, employment tables.
- Total employment = (main + marginal) workers

Data and Methodology (2)

- Methods: Census concepts and definitions have not changed, but district boundaries have. We have created concorded districts.
- Analysed data for 362 concorded districts from major states constituting more than 90% of population.
- We have concorded the industry level data at 2-digit level using the KLEMS-NIC concordance table (Das *et al*, 2015)

National Picture

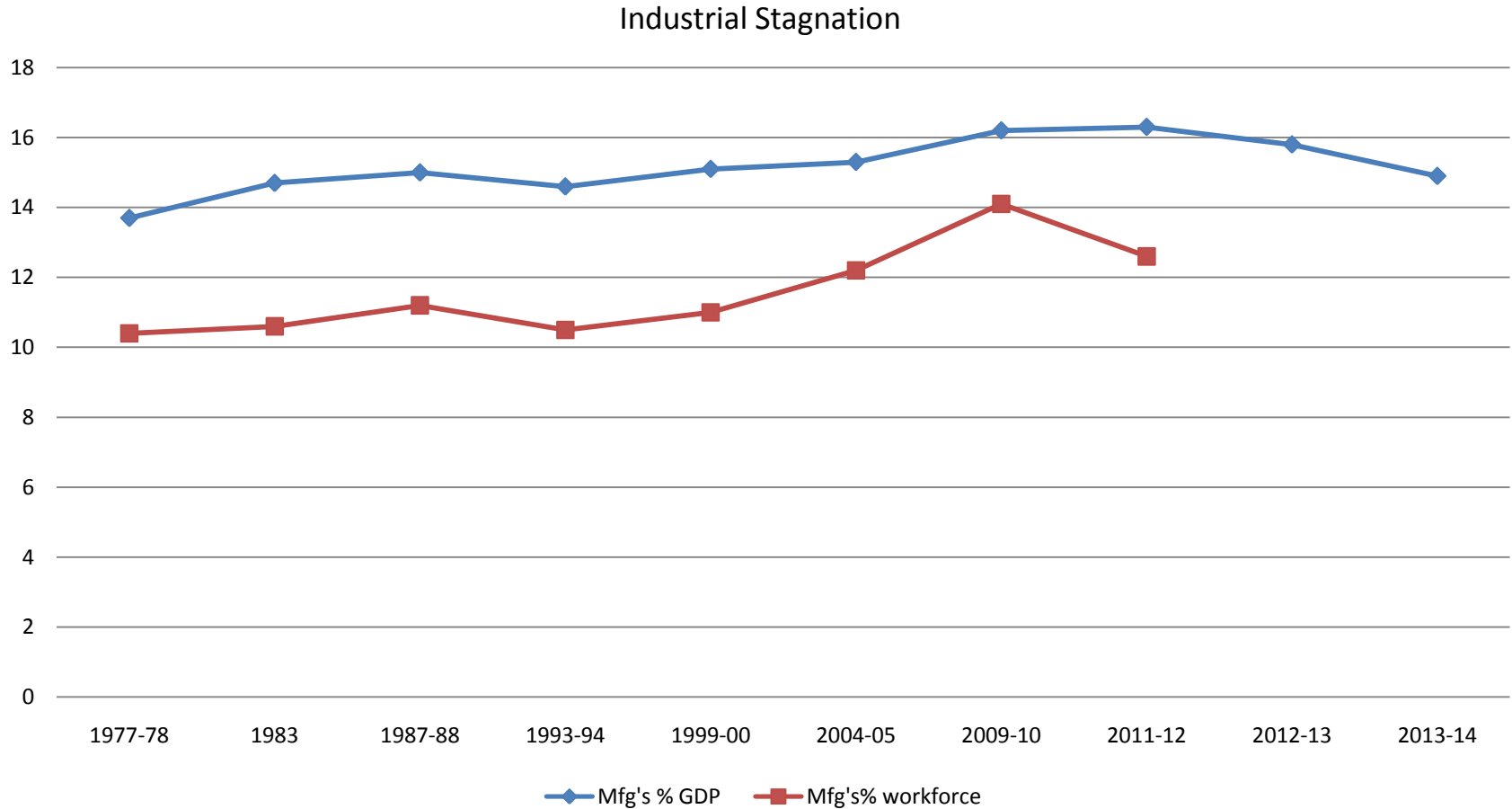
Figure 3: Share of mfg and industry in GDP



Manufacturing and Industry Share in Total Employment



Industrial Stagnation



State and District level Picture (1)

- Between 1991-2011, in 9 out of 15 states, the mfg's share employment has, in fact, gone up.
- Maharashtra, MP, Kerala and Delhi witnessed a decline in mfg employment share.
- In AP and WB employment share has stagnated, but WB's output share has declined.

State and District level Picture (2)

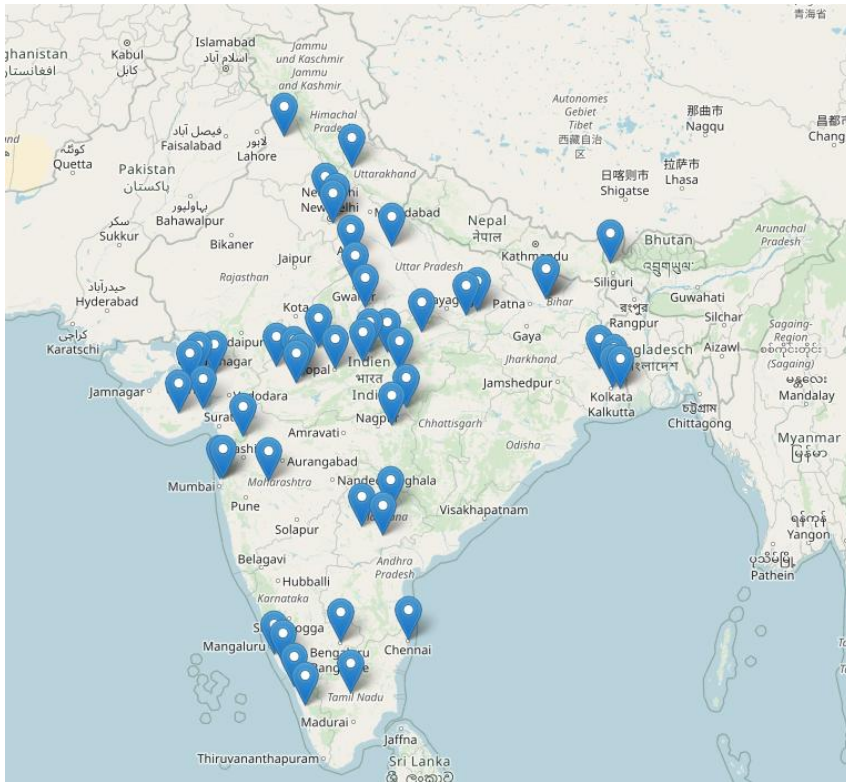
- At district level, in 44.5 % of districts share of mfg workers increased by at least 1% point; 21% of districts have witnessed a decline of at least 1% point; rest have stagnated.
- the situation has worsened in the last decade with 227 out of 362 districts showing a decline by more than 1% points (63%) and only 19 showing an increase in share by 1%.
- Stark case of de-industrialisation in employment share: **Varanasi, Dhanbad, and Jabalpur.**

State and District level Picture (3)

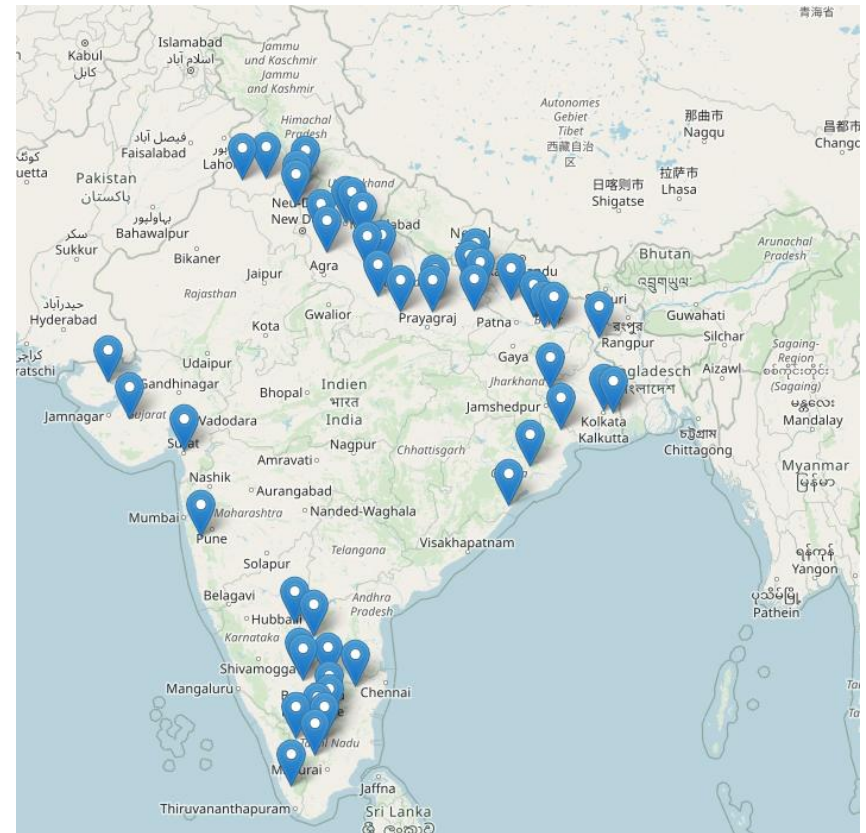
- Case of industrial boom – **Rajkot, Surat, and Coimbatore.**
- Interpretation: Decline of traditional/craft based locations, and growth of “modern” industrial clusters.
- Perhaps, spatial specialisation emerging, with less regulation and local level protectionism.
- Re-location of factories from cities like Bombay and Delhi into the interiors after the reforms.

Districts losing/gaining employment

Bottom 50 districts 1991-2011



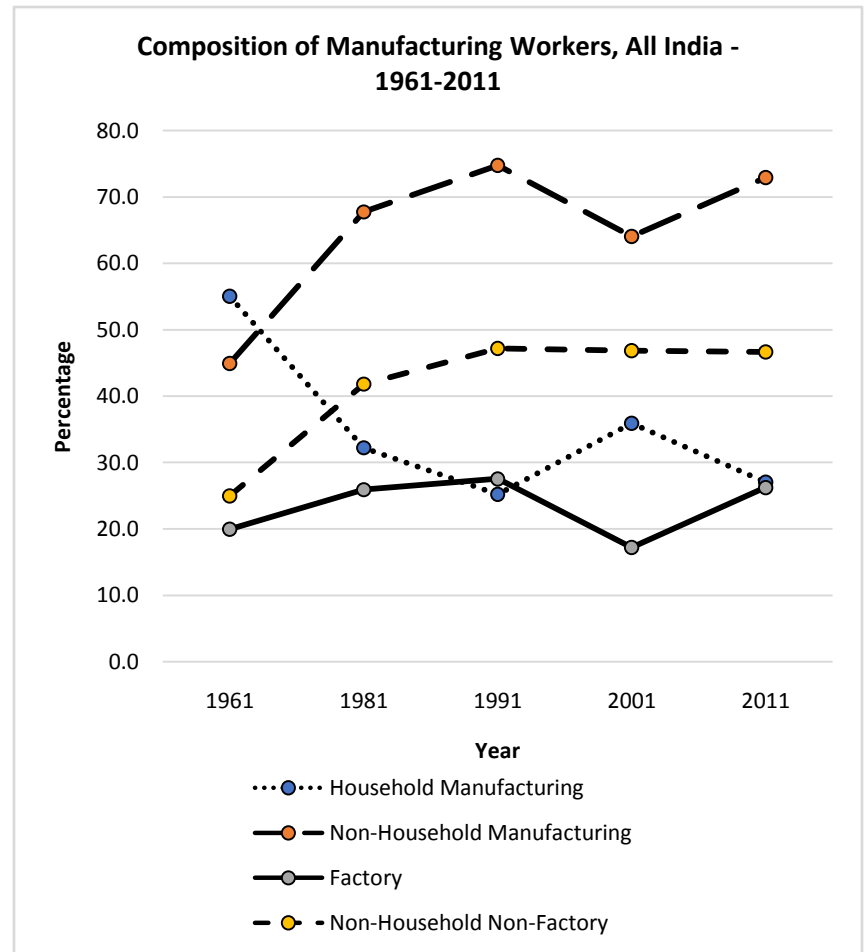
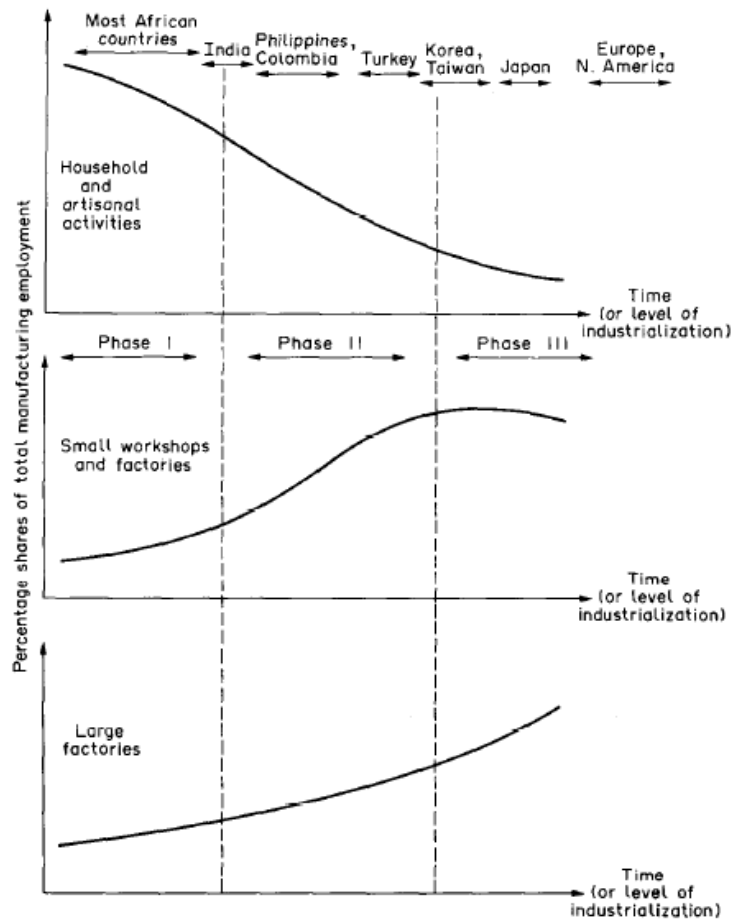
Top 50 districts 1991-2011



Organisational Changes (1)

- Historically, industrialisation meant (i) rising urban share, (ii) decline in household (HH)mfg, (iii) eventual domination of factory employment – all of it securing scale economies and hence, rise in labour productivity (Anderson, 1982).
- India's path seems different: Between 1991-11, share of different forms of manufacturing employment have remained constant.
- A steady rise in share of HH mfg in urban India.

Stylised Facts, India Experience

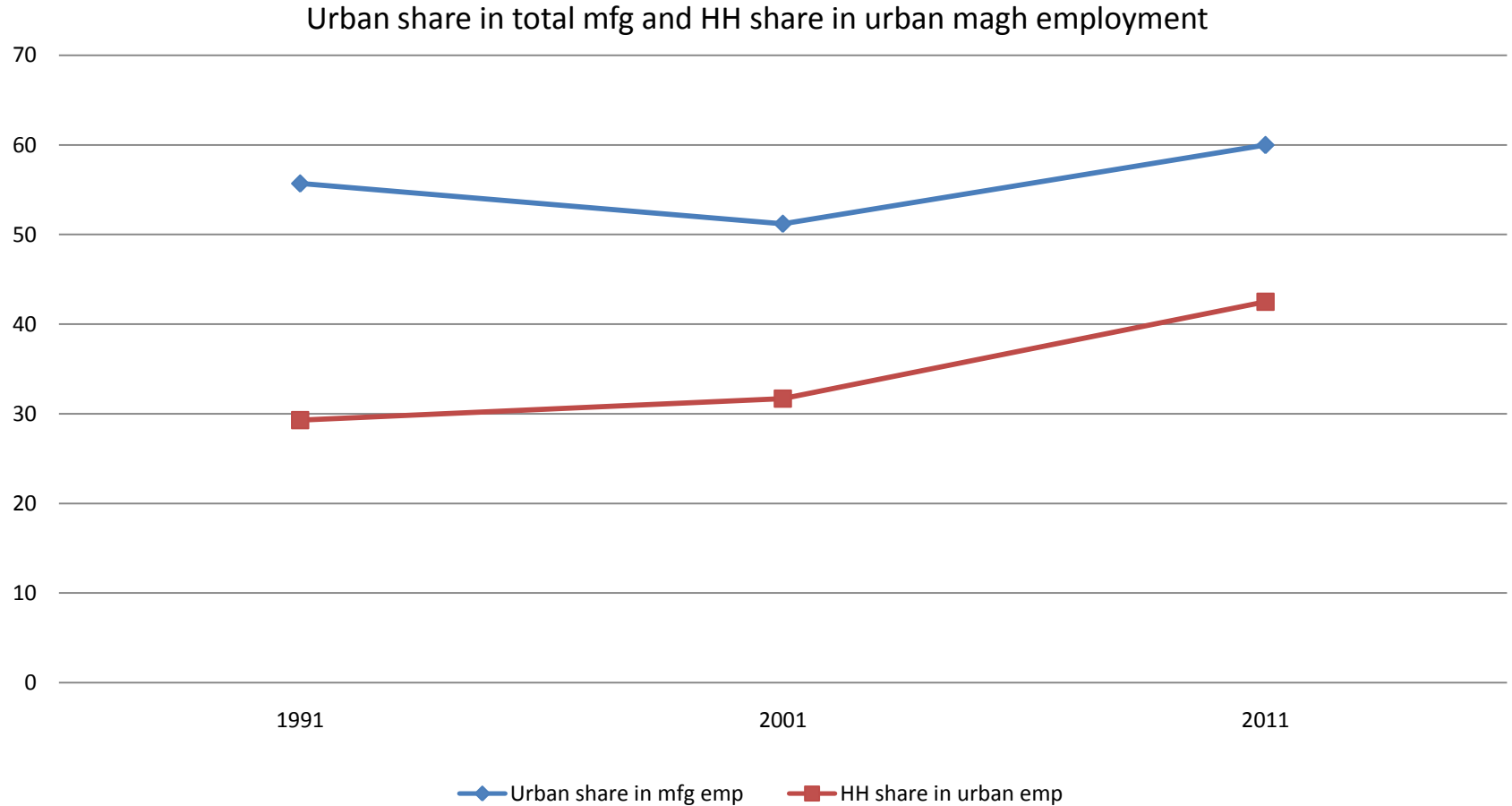


Organisational Changes (2)

- Explanation: Spread of electricity, infrastructure, state support.
- Rising HH mfg employment in urban India perhaps reflects (i) weight of surplus labour, and (ii) survival strategies of the poor, to maintain a toe hold in urban locations for education, skills etc, in the expectation of finding regular formal sector jobs.

- Important state and district level observations with respect to organisational changes-The share of household manufacturing in West Bengal was 26.6% in 1991 and it increased to 41% in 2011 (household workers increased by 1.25 million in absolute terms between 1991 and 2011).
- Notably, if one looks closely, in 1991 both West Bengal and Tamil Nadu had roughly 26% of its manufacturing workforce in the household sector, but in 2011, after two decades the share of household manufacturing workers in Tamil Nadu has fallen to 21% and contrastingly, this share for West Bengal has increased to 41%. Even Rajasthan which is not as developed as other states, started off at roughly similar share of household workers like West Bengal in 1991 but it still managed to keep its share household workers below the 1991 level (28%) in 2011 (27%).
- The share of household workers still remains high in states like Orissa (45%), Bihar (41%), Uttar Pradesh (39%) and Madhya Pradesh (37%). This is in contradiction to states like Gujarat, Maharashtra and Tamil Nadu.
- Widespread variations at the district level- in districts like Dakshin Kannad, Karnataka; Malda, Purulia and Howrah in West Bengal the share of household workers has increased significantly. Whereas in the districts like Giridih in Bihar, Nalgonda in Andhra Pradesh the share of non-HH workers has increased considerably.
- Therefore, the extent of change in the structure of manufacturing employment greatly differs across states and districts within the same country.

Urban share in Mfg Employment

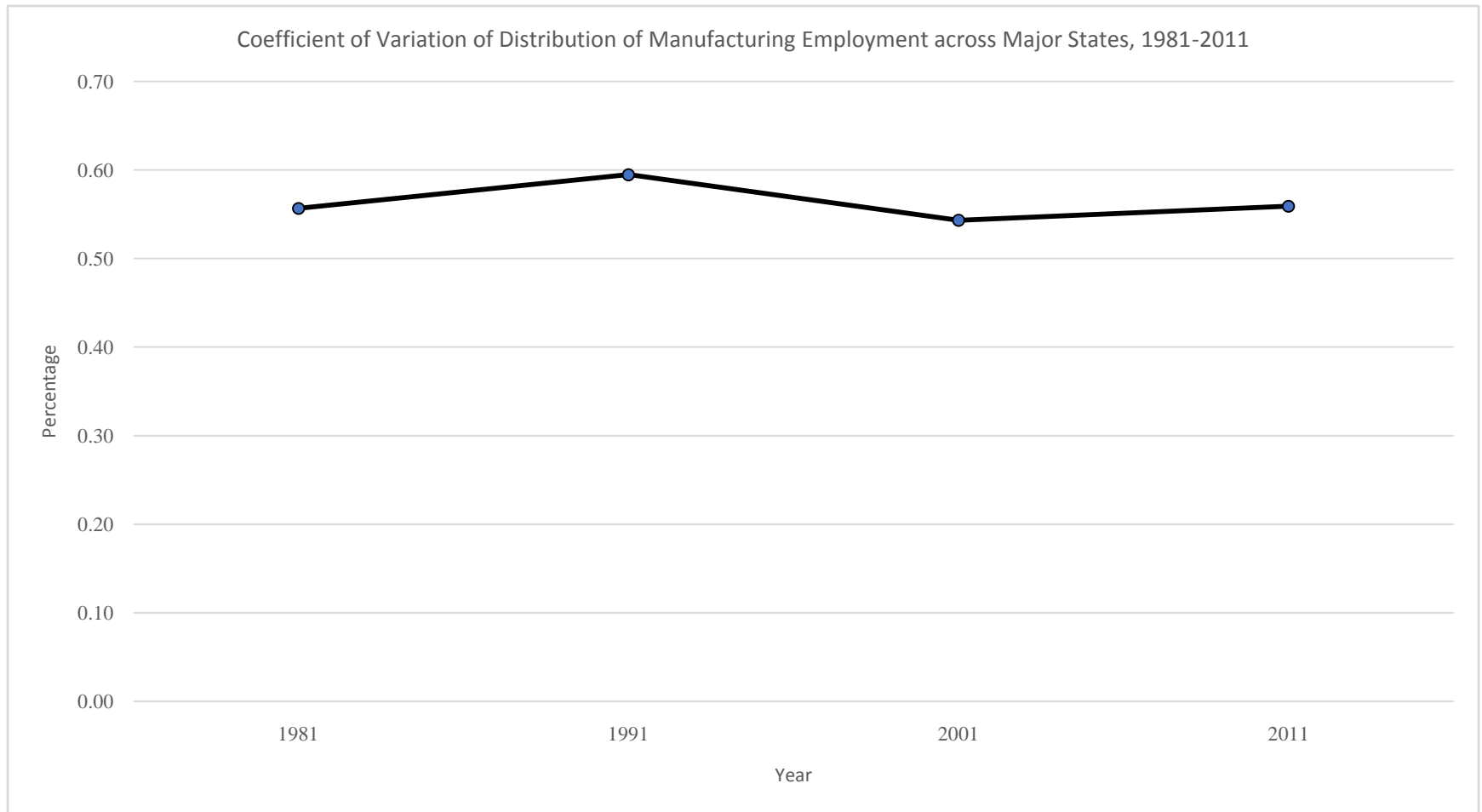


Industry-level Changes

- Textiles, Textile Products and Leather and Footwear; Food and Beverages and Tobacco; and Machinery n.e.c., Recycling are industries account for 2/3rd of total mfg employment.
- Share of metal and metal products declined from 15.5% in 1991 to 13% in 2011. This is not even half of what is in many East Asian Economies **back in 1980s**, reflecting low land productivity and modest public investment.
 - Fact- South Korea had 28% and Taiwan had 33% of mfg. workers working in this industry group in 1980s.
- Employment concentrated in a few states, and a few districts.

- 5 states- TN, UP, Gujarat, WB and Maharashtra consistently account for major share of employment in virtually all industry groups.
- District-wise analysis brings important facts- For e.g.- Varanasi lost close to eighty thousand workers in this industry in the last decade and in absolute terms it went below 1991 level.
- On the other hand, Bareilly added close to ninety thousand workers in the Textiles, Textile Products and Leather and Footwear industry in the last two decades (more than fifty thousand of this was in the last decade).
- The fact that in the last decade, Varanasi (in eastern Uttar Pradesh) lost close to eighty thousand workers and Bareilly (in western Uttar Pradesh) added more than fifty thousand workers in the same Textiles, Textile Products and Leather and Footwear industry both being in the same state of Uttar Pradesh, gives very crucial insights into the already existing unequal patterns of employment in the manufacturing sector.

Yet ...Stability in Distribution



Stability in Distribution Output and Employment

Share in total GDP		
Year	Top 3 states	Bottom 3 states
1970-71	47.0	2.2
1980-81	49.3	1.4
1990-91	44.4	1.1
2000-01	43.7	2.0
2005-06	45.9	2.5
2011-12	41.6	2.1

Share in Total Employment		
Year	Top 50 districts	Bottom 50 districts
1991	46.2	1.7
2001	41.4	2.2
2011	44.5	1.9

Stability in Distribution

- The state level rank correlation between 1981-2011 is 0.9- no change in state wise rankings., As noted earlier for output (Nagaraj, 2016). There is no sign of correction of the "historical imbalances"
- The distribution at the district level has hardly changed too. However, districts like Bareilly, Moradabad and Aligarh in UP show significant upward movement in ranking. But examples like this are extremely few.

Conclusions (1)

- India has not de-industrialised.
- Industrialisation has stagnated, retarding structural transformation – most known source of productivity growth.
- Regionally, majority of states show a slight rise in industrial employment share.
- Out of 362 districts, 44.5% have gained employment share by more than 1%, 21% of districts lost by at least 1% point.

Conclusions (2)

- Maharashtra, the most industrialised state has lost employment share (due to re-location); West Bengal lost output share, but not employment.
- Share of mfg. employment in WB has been stagnant (remains marginally below 1991 level with a considerable decline in the last decade).
- Historically, rising share of factory mfg and decline in HH mfg, contributed to tech progress, and productivity.

Conclusions (3)

- This process has got thwarted in India: shares of factory and HH mfg employment have remained constant.
- But, HH mfg employment is rising in urban India – perhaps it is a survival or coping strategy for urban poor.
- Light manufactures – food, textile, clothing – are still dominant industries with rising share. Metal and metal products industry was low, and in 2011 it was below its level in 1991.

Conclusions (4)

- However, the foregoing changes do not change relative positions (rankings) of states and districts.
- Interpretation: decentralised/disaggregated changes do not alter the aggregate picture of stability or stagnation. Probably the micro-level changes contribute to greater specialisation; they are very feeble to cause ripples in the aggregate.

Thank You

for your attention