

# Towards a New Growth Model

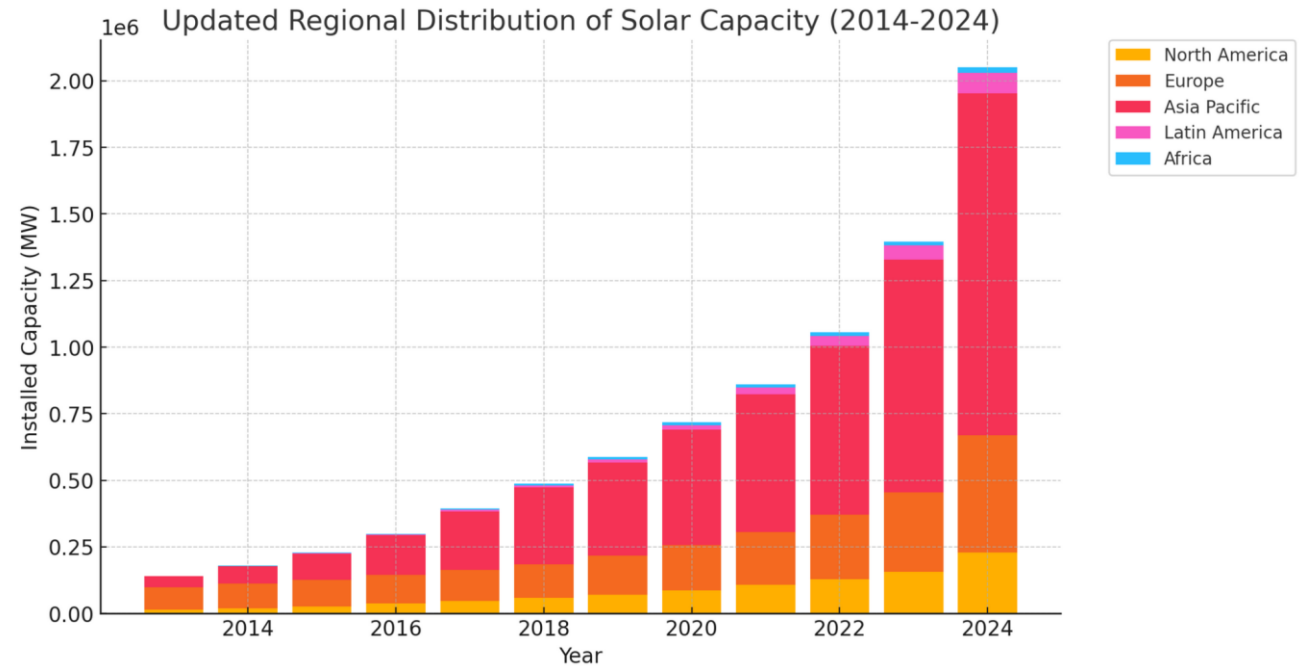
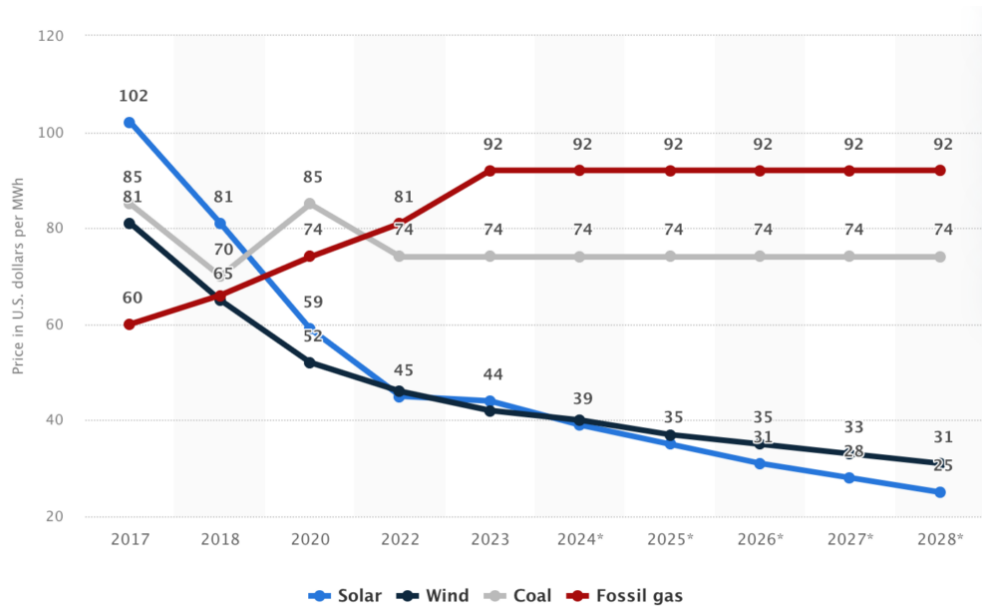
Dani Rodrik

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# Key points

- Trump is a major shock to world economy
- But the need to update growth strategies predate Trump
- Three new problems
  - the challenges of the green transition
  - the erosion of middle classes and disappearance of good jobs
  - the weakening of industrialization as growth strategy
- Low growth and shrinking middle class are both linked to failures of structural change in the post-industrial age
- Need a new model of structural change, focused on “good jobs”
- Two new axes of structural change
  - green transition
  - labor-absorbing services
    - especially important for the middle class and for inclusive growth
- While growth ceiling is now lower, inclusive and healthier growth remains possible

# The renewables success story



Source: <https://350.org/climate-cost-of-living/?r=US&c=NA>

Source: <https://www.solarinsure.com/how-much-solar-energy-does-the-world-generate>

Bill McKibben: “The first thing that’s happened in ... 40 years ... that scales to at least begin taking a serious bite out of the trouble we’re in.”

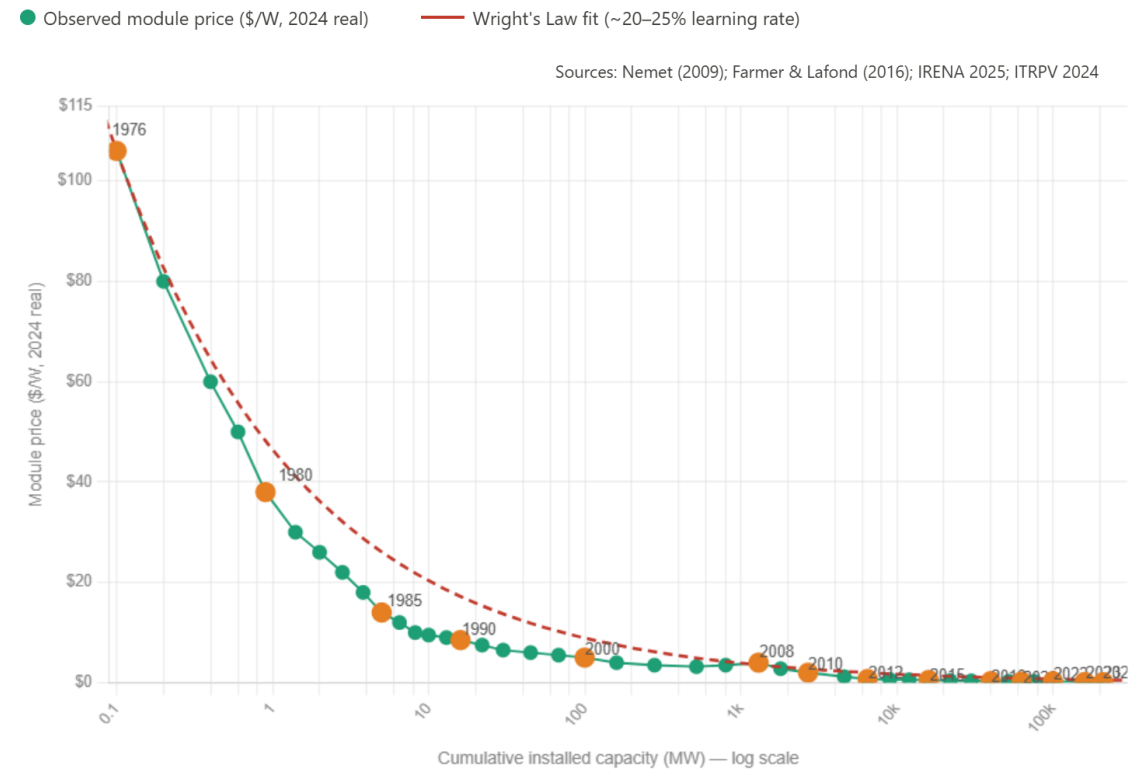
# How did we get this green technological miracle?

- China's industrial policy + learning curve + technological externalities

- government support of renewables =>
- capacity increase =>
- learning by doing + local spillovers =>
- cost reduction =>
- price reduction =>
- market expansion =>
- capacity expansion =>
- ...

- Banares-Sanchez et al. (2026) find substantial spatial spillovers: cities w/out subsidies but contiguous to those with subsidies experienced increase in solar patenting, revenue, exports (Appendix Table E.7).

## The learning curve for solar



1976 price  
~\$106/W  
(2024 real USD)

2024 price  
~\$0.13/W  
(global avg. ASP)

Learning rate  
~20–25%  
price drop per doubling of capacity

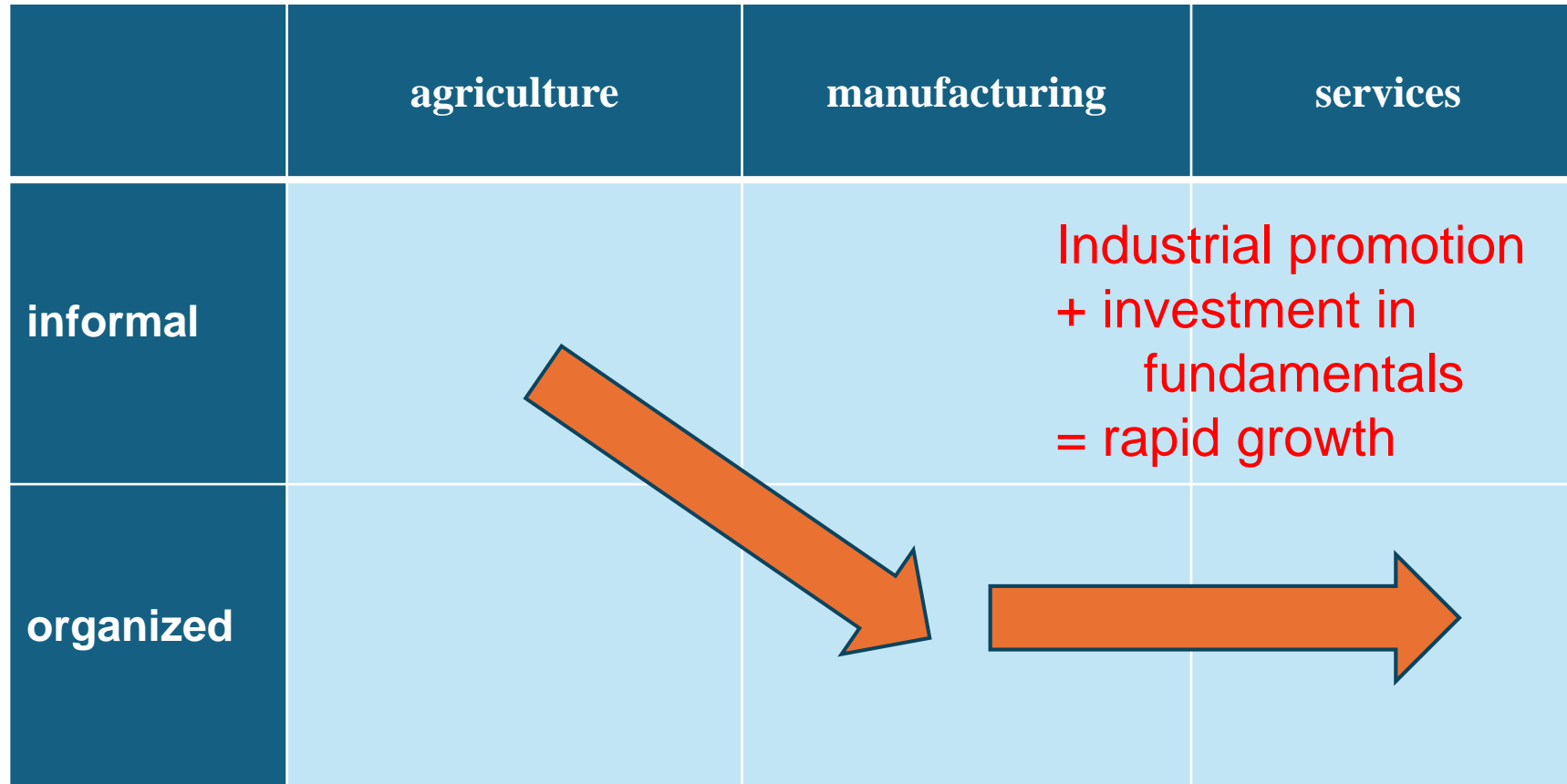
# Key features of Chinese experimentalism with green industrial policies

- A national project
  - With broad (quantitative targets)
- Experimentation with policies
  - Demonstration zones
- Multiple policies (beyond subsidies)
  - directed credit, public investment in R&D and infrastructure, public VC, government procurement, demonstration programs, regulation
- Close collaboration with business and other levels of government
  - mutually supportive (and occasionally competing) roles of national, provincial, and municipal government
- Feedback loops
  - monitoring
- Iteration-revision
  - industry consolidation, phasing out of subsidies when needed

# Re-centering (good) jobs, which conventional economics significantly downplays

- Life satisfaction (utility)
  - impact of jobs (and their quality) go beyond effect on incomes/budget constraints
  - jobs as source of personal esteem, social recognition, dignity
  - job loss is associated with very large (and persistent) drops in life satisfaction
    - equivalent to multiples of income and that cannot be offset by monetary transfers (Suppa 2021)
- Societal externalities
  - job loss (due to trade, automation, or fiscal austerity) produces economic, social, political externalities
  - higher crime, broken families, increased mortality, support for authoritarian populists
- Social justice
  - inequality is usually considered from perspective of distributive justice: who gets what?
  - “contributive justice” is as important: “the opportunity to win the social recognition and esteem that go with producing what others need and value” (Michael Sandel)

# What worked in the past: East Asia and advanced economies



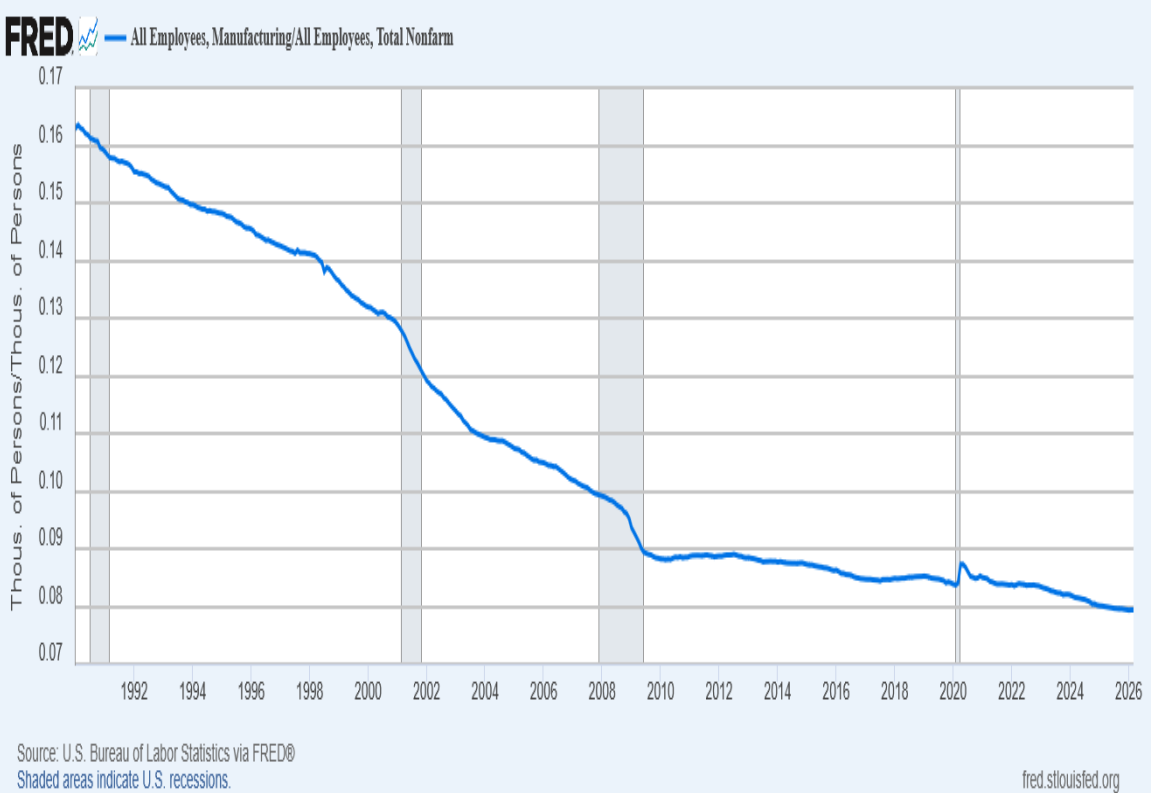
# Why manufacturing was a powerful lever

1. Productivity dynamics in modern manufacturing
    - unconditional convergence
  2. Labor absorption capacity
    - intensive in low-skill labor (traditionally)
  3. Tradability
    - can expand without turning terms of trade against itself
- 
- Specialization in narrow range of export-oriented manufactures eased policy challenges of economy-wide reform and enabled rapid growth through structural change despite slow improvement in fundamentals (human capital and institutions)
  - helped create a broad middle class, sustaining democracy

# Today's manufacturing is different

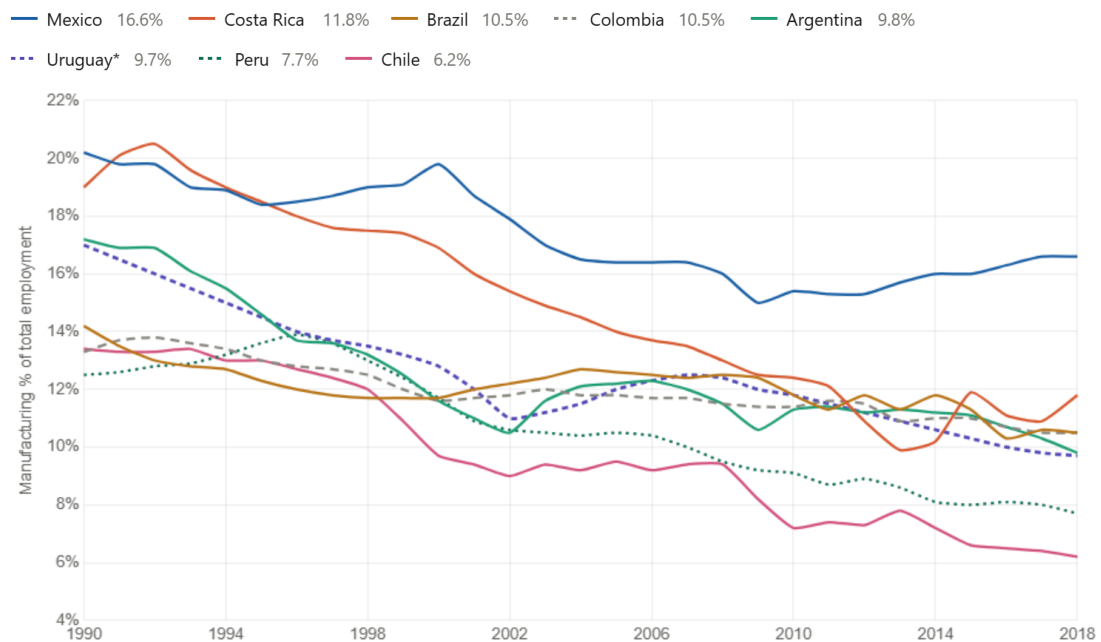
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    - unconditional convergence
  - ~~2. Labor absorption capacity~~
    - ~~• intensive in low-skill labor (traditionally)~~
  3. Tradability
    - can expand without turning terms of trade against itself
- Changes in technology and globalization
  - Increased skill and capital intensity requirements of competing successfully and joining GVCs
  - Manufacturing increasingly looks like an “enclave” sector

# De-industrialization is a global phenomenon

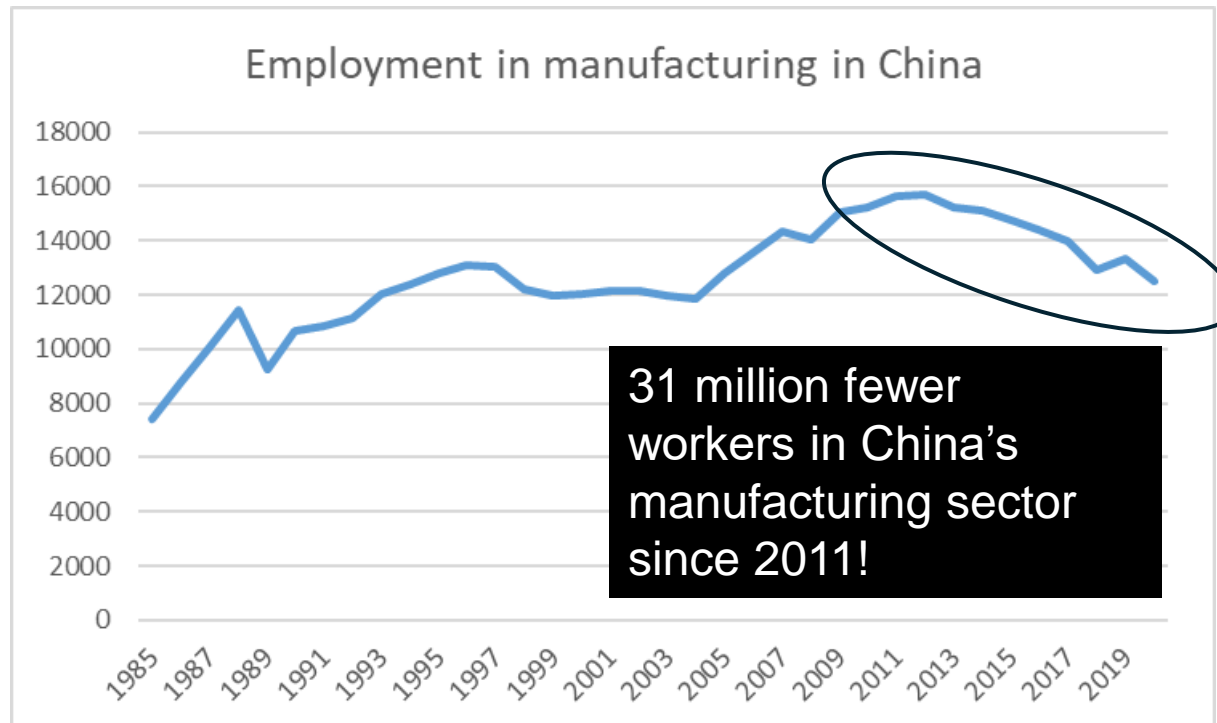


## Manufacturing employment share — Latin America, 1990–2018

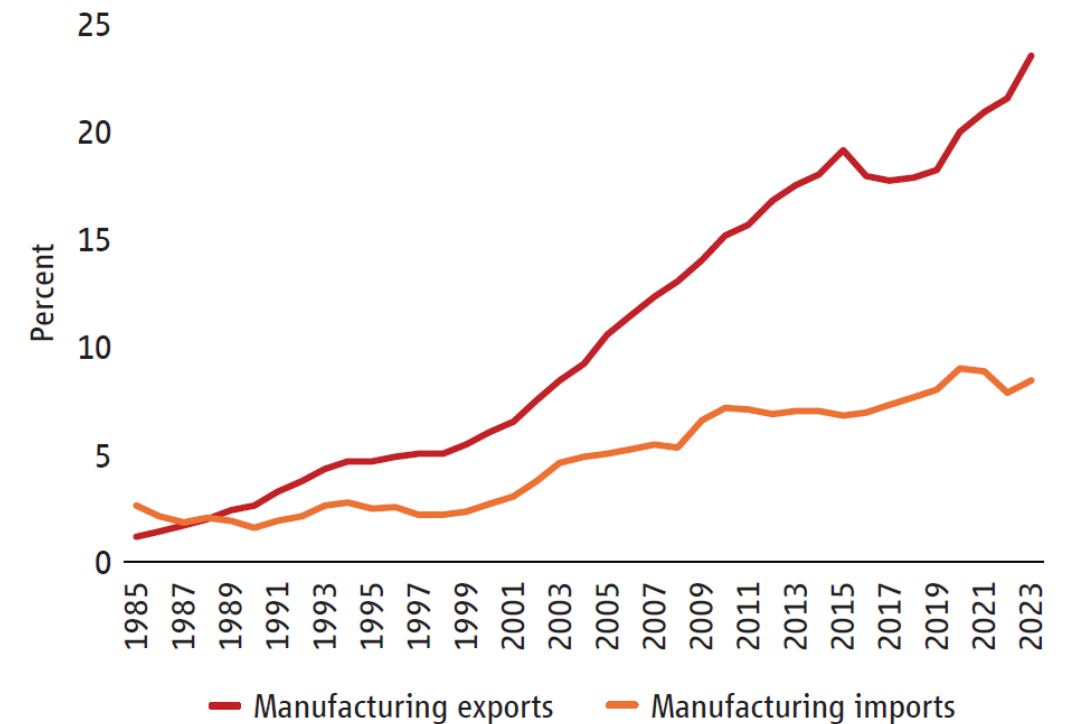
Manufacturing as % of total employment. Mexico holds up; the rest deindustrialize.



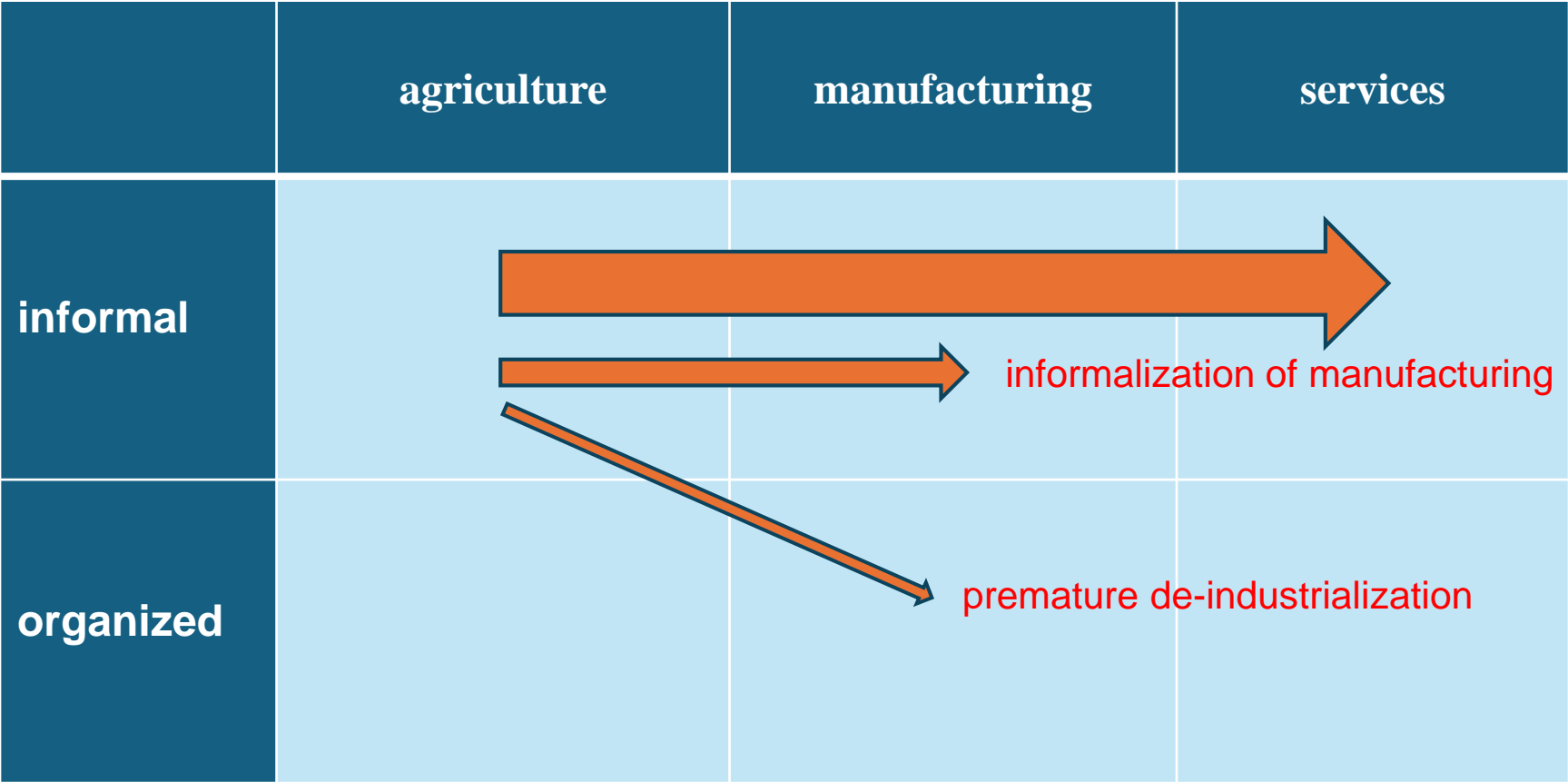
# Manufacturing is shedding labor in China, but that does not mean jobs will move elsewhere...



B. China's share of global manufacturing trade



# Patterns of structural change today



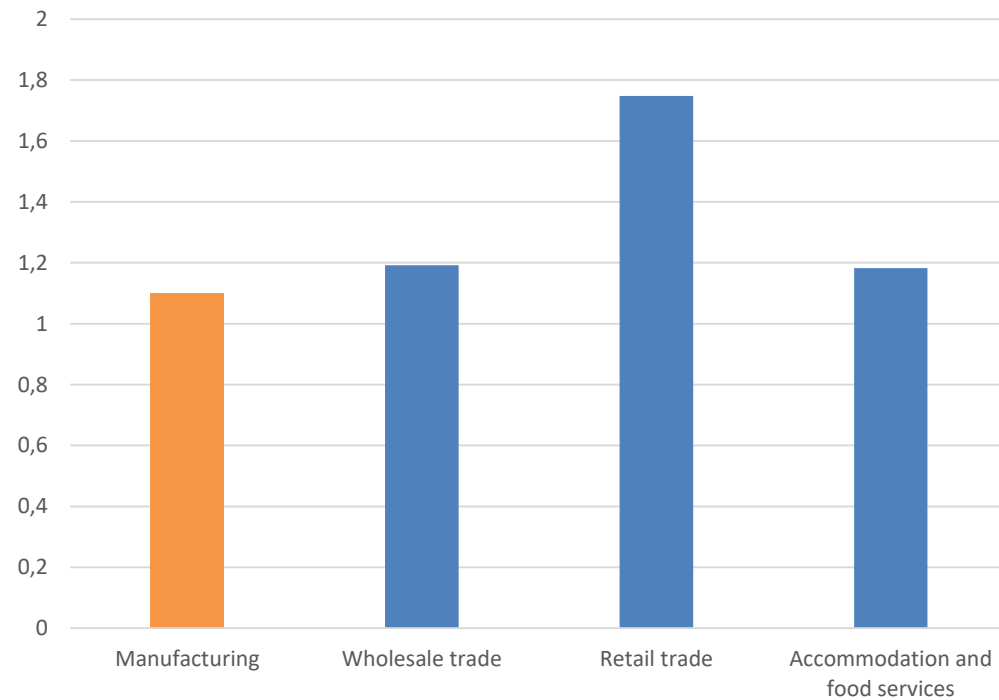
# Where the jobs will be

2024 National Employment Matrix title	Employment, 2024	Employment, 2034	Employment distribution, percent, 2034	Employment change, percent, 2024–34	Median annual wage, dollars, 2024[1]	Typical education needed for entry	Work experience in a related occupation
Home health and personal care aides	4,347.7	5,087.5	2.9	17.0	34,900	High school diploma or equivalent	None
Fast food and counter workers	3,796.0	4,029.2	2.3	6.1	30,480	No formal educational credential	None
Retail salespersons	3,936.7	3,917.1	2.2	-0.5	34,580	No formal educational credential	None
General and operations managers	3,712.9	3,876.8	2.2	4.4	102,950	Bachelor's degree	5 years or more
Registered nurses	3,391.0	3,557.1	2.0	4.9	93,600	Bachelor's degree	None
Laborers and freight, stock, and material movers, hand	2,988.9	3,033.1	1.7	1.5	38,940	No formal educational credential	None
Stockers and order fillers	2,764.8	2,999.8	1.7	8.5	37,090	No formal educational credential	None
Cashiers	3,157.2	2,843.6	1.6	-9.9	31,190	No formal educational credential	None
Customer service representatives	2,814.0	2,660.3	1.5	-5.5	42,830	High school diploma or equivalent	None
Janitors and cleaners, except maids and housekeeping cleaners	2,447.7	2,495.5	1.4	2.0	35,930	No formal educational credential	None

Top 10 occupations in the U.S., projected 2034 (source: BLS)  
Neither onshoring nor investment in education will help

# Is rapid productivity growth in services possible?

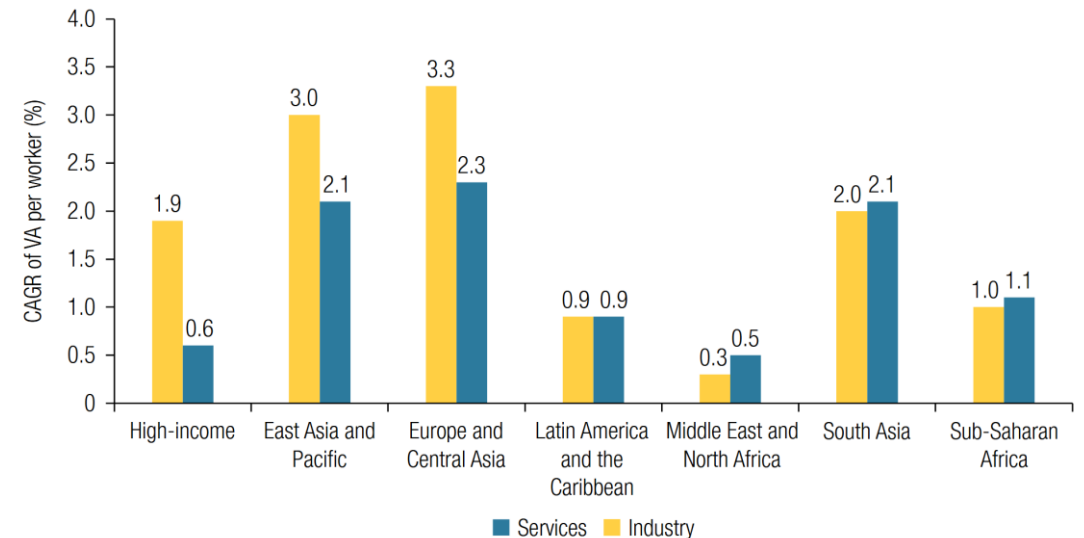
Increase in labor productivity in various sectors in the U.S., 2005-2024 (2005=1)



Source: BLS

**FIGURE 1.4 Labor Productivity Growth in Services Has Matched That in Industry across LMICs in Many Regions since the 1990s, Typically Exceeding That of HICs**

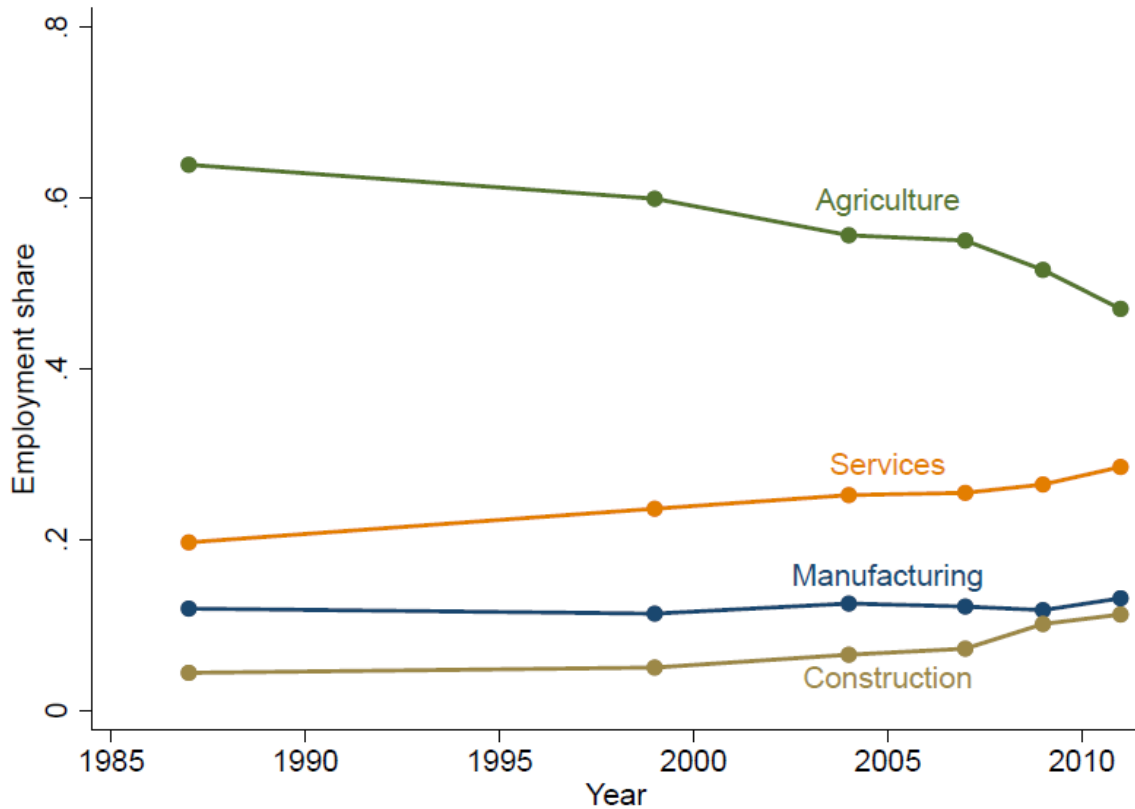
*Growth in value added per worker in LMICs, by broad sector and relative to high-income countries, 1995–2018*



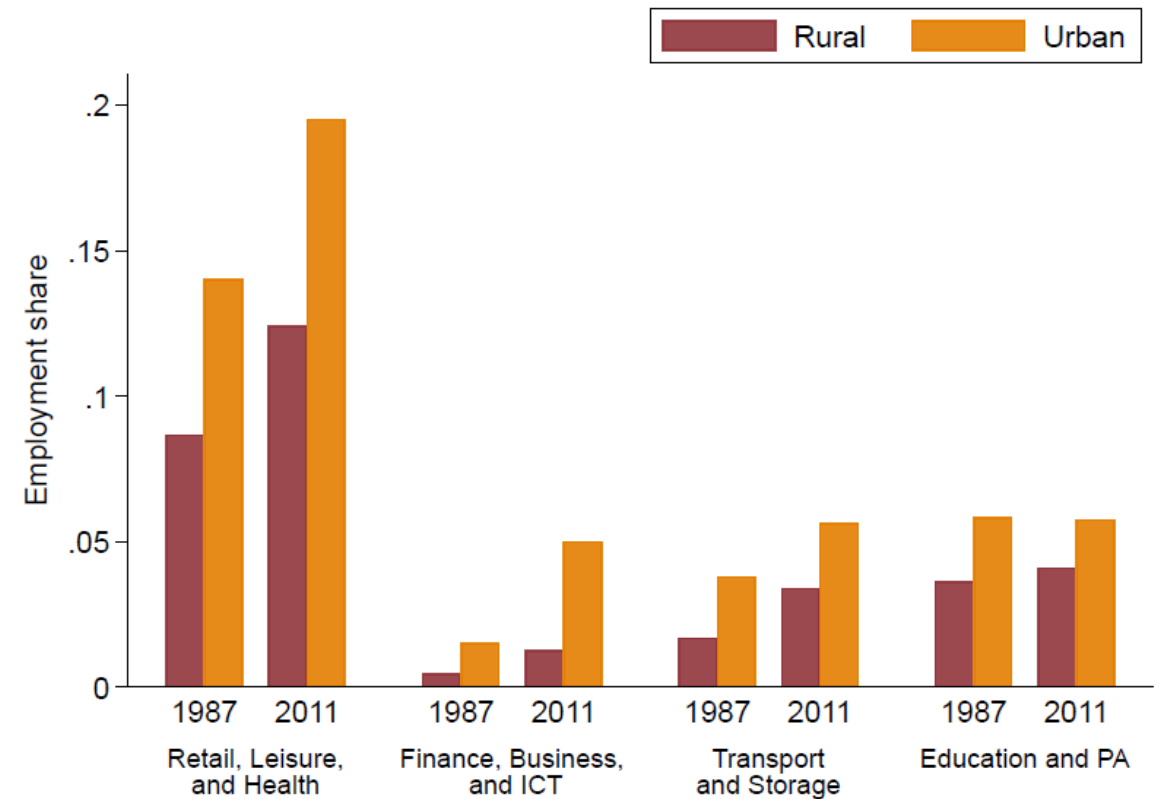
Source: World Bank (2021)

# The Indian case of services-led growth (1)

PANEL a: STRUCTURAL CHANGE IN INDIA



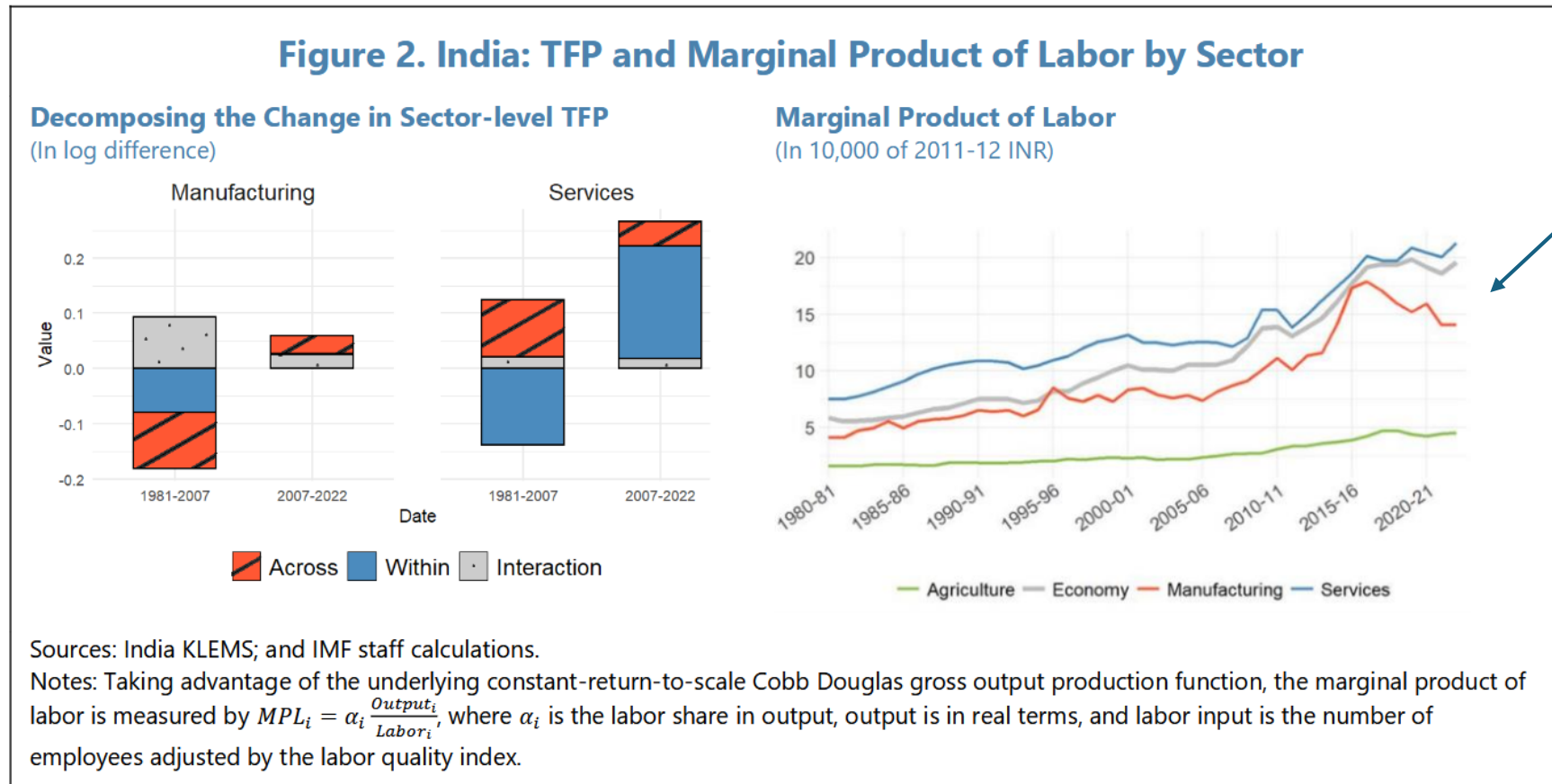
PANEL b: EXPANSION OF THE SERVICE SECTOR IN INDIA



Source: Fan, Peters, and Zilibotti (2023)

Services employment growth was not predominantly in ICT!

# The Indian case of services-led growth (2)



Marginal product of labor in services exceeds that in manufacturing!

# Industrial policy for (labor-absorbing) services: a taxonomy

Type of program	Examples
Partnerships with large firms	<b>Haryana ridesharing cab program</b> World Class Suppliers Program in Chile AliExpress Global E-Commerce Platform
Public inputs to MSMEs	<b>Business plan competition in Nigeria</b> <b>Lynk platform for gig workers in Kenya</b> Little Giants program in China
Technologies to enhance productivity	<b>Shortening of supply chain for street vendors in Bogota</b> Software for community health workers in India
Vocational training w/ wrap-around services & dual clients	Harambee in South Africa Kenya Youth Employment and Opportunities Project Job Search Expectations in Uganda

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# What does AI do? Task types

Task type	cognitive	manual
routine	<p><b>Codifiable / explicit knowledge</b> <i>(Polanyi: rule-based)</i></p> <ul style="list-style-type: none"> <li>• Bookkeeping and payrolls</li> <li>• Clerical processing</li> <li>• Routine credit scoring under fixed rules</li> </ul>	<p><b>Codifiable physical tasks</b> <i>(rule-based, repetitive)</i></p> <ul style="list-style-type: none"> <li>• Repetitive assembly-line operations</li> <li>• Sorting, packaging</li> <li>• Automated warehouse picking</li> </ul>
non-routine	<p><b>Analytical</b> <i>(tacit but pattern-based)</i></p> <ul style="list-style-type: none"> <li>• Drafting reports, memos, summaries</li> <li>• Coding, debugging, data analysis</li> <li>• Medical image reading, legal research</li> <li>• Customer service (problem-solving)</li> </ul>	<p><b>Embodied tacit knowledge</b> <i>(unstructured environments)</i></p> <ul style="list-style-type: none"> <li>• In-home elder and childcare</li> <li>• Cleaning, food preparation, serving</li> <li>• Skilled trades, plumbing, repair</li> </ul>
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Based on Autor, Levy, and Murnane (2003) and Autor (2025)

# Conventional automation

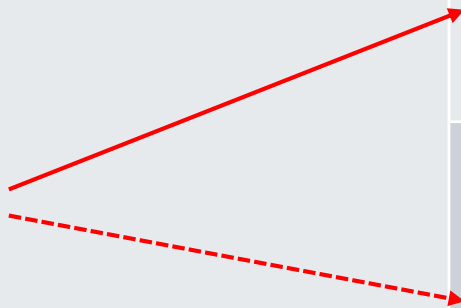
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Conventional automation  
(machines, robots,  
software and computers)

# The potential of AI

Task type	cognitive	manual
routine	<b>Codifiable / explicit knowledge</b> ( <i>Polanyi: rule-based</i> ) <ul style="list-style-type: none"> <li>• Bookkeeping and payrolls</li> <li>• Clerical processing</li> <li>• Routine credit scoring under fixed rules</li> </ul>	<b>Codifiable physical tasks</b> ( <i>rule-based, repetitive</i> ) <ul style="list-style-type: none"> <li>• Repetitive assembly-line operations</li> <li>• Sorting, packaging</li> <li>• Automated warehouse picking</li> </ul>
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AI



# Reconsidering development policy

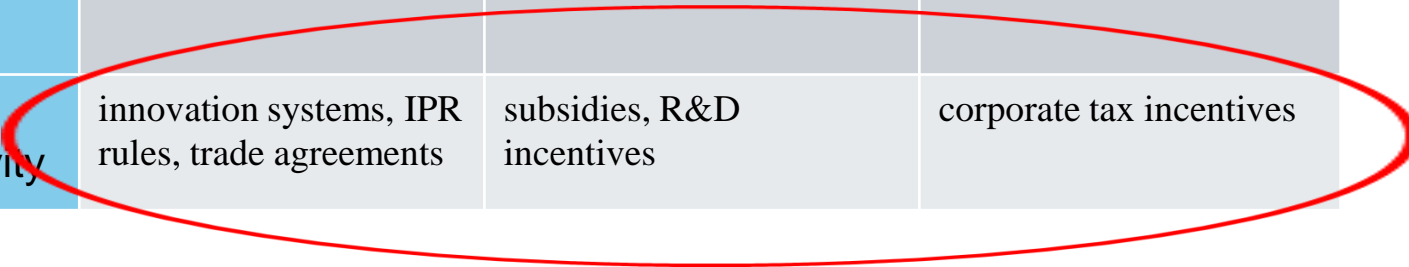
		At what stage of the economy does policy intervene?		
		pre-production	production	post-production
Which segment of the economy do we care about?	low productivity			
	middle productivity			
	high productivity			

# Traditional poverty-reduction & social protection model

		At what stage of the economy does policy intervene?		
		pre-production	production	post-production
Which segment of the economy do we care about?	low productivity	investments in education and training		cash transfers; full-employment macro policies
	middle productivity			safety nets
	high productivity			

# Traditional industrial & growth policies

		At what stage of the economy does policy intervene?		
		pre-production	production	post-production
Which segment of the economy do we care about?	low productivity			
	middle productivity			
	high productivity	innovation systems, IPR rules, trade agreements	subsidies, R&D incentives	corporate tax incentives



# The good-jobs development model

		At what stage of the economy does policy intervene?		
		pre-production	production	post-production
Which segment of the economy do we care about?	low productivity			
	middle productivity		promotion of higher-quality jobs in MSMEs through customized business incentives & inputs	
	high productivity			

# Concluding note: convergence of social and growth policies

- Inclusion/equity possible only through creation of productive jobs in sectors that can absorb low-educated workers
- Growth possible only by expanding productivity (and employment) in labor-absorbing sectors
- Implications for growth strategy
  - from encouraging export diversification, manufactures, integration to GVCs, to
  - encouraging productivity growth in labor-absorbing, mostly non-tradable services
- Growth will be lower, but its quality might be higher
  - more inclusive and focused on building the middle class
  - and less dependent on global markets/conjuncture