

This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.



# Industrial Policy for Development

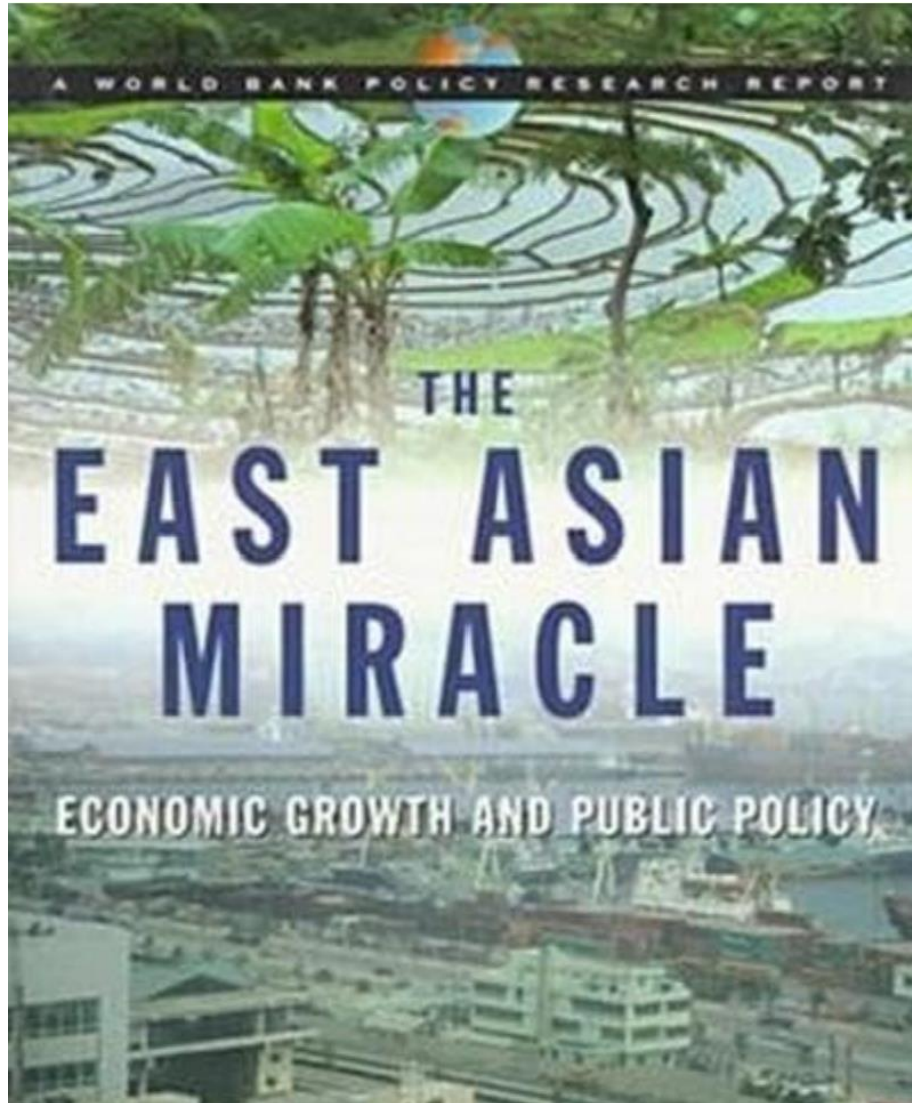
*A Policy Research Report*

April 14, 2026



*The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.*

# The East Asian Miracle?



## Big Debates in 1993

### ➤ State vs. Market:

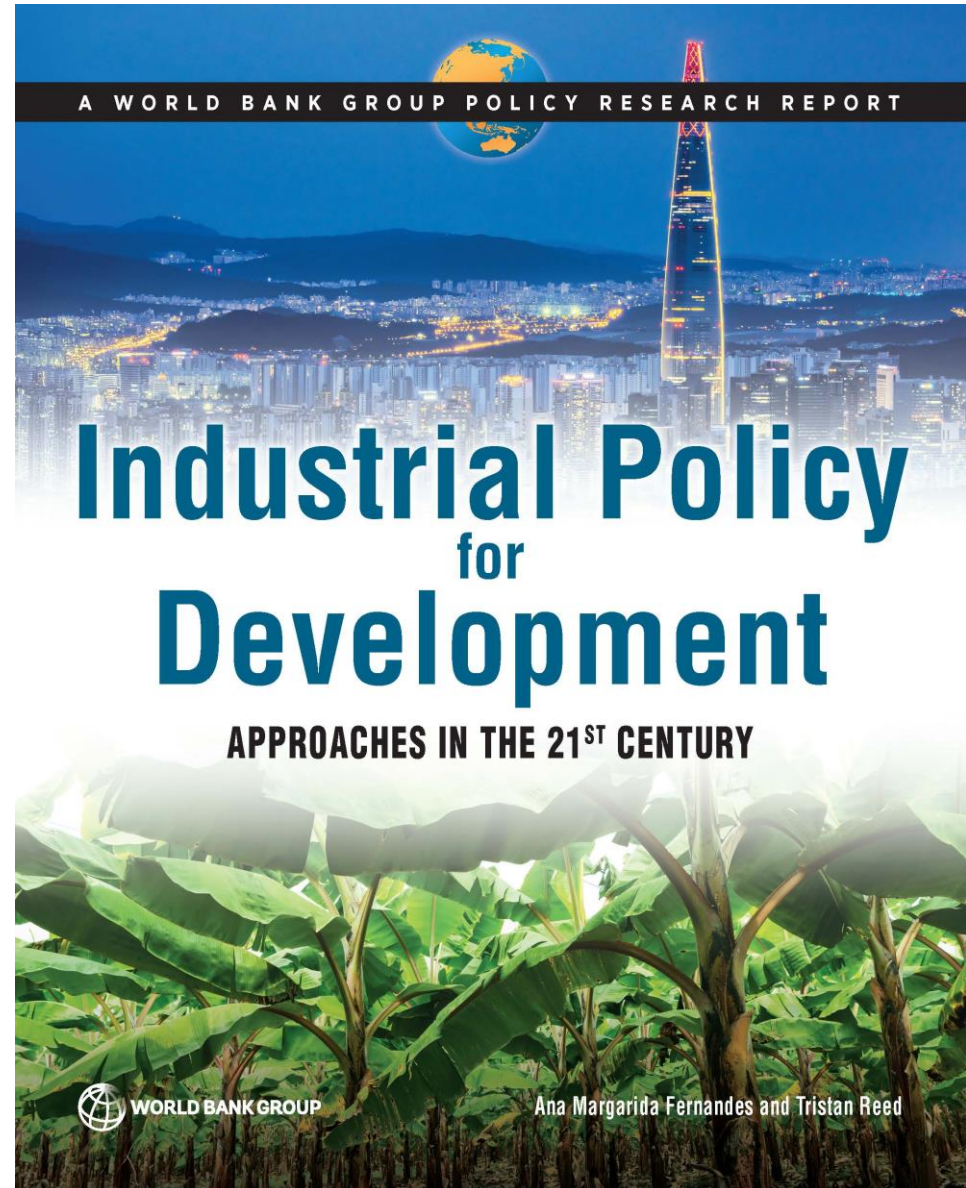
- World Bank emphasizes market fundamentals (human capital, savings rate, macro stability) source of east Asian growth
- Critics argued that active state-led industrial policy was crucial to success

### ➤ Replicability:

- Pres. Lew Preston argues unique “culture, politics, and history” may be preconditions for industrial policy
- Even if some success in northeast Asia, model difficult for other nations to replicate

# A fresh perspective

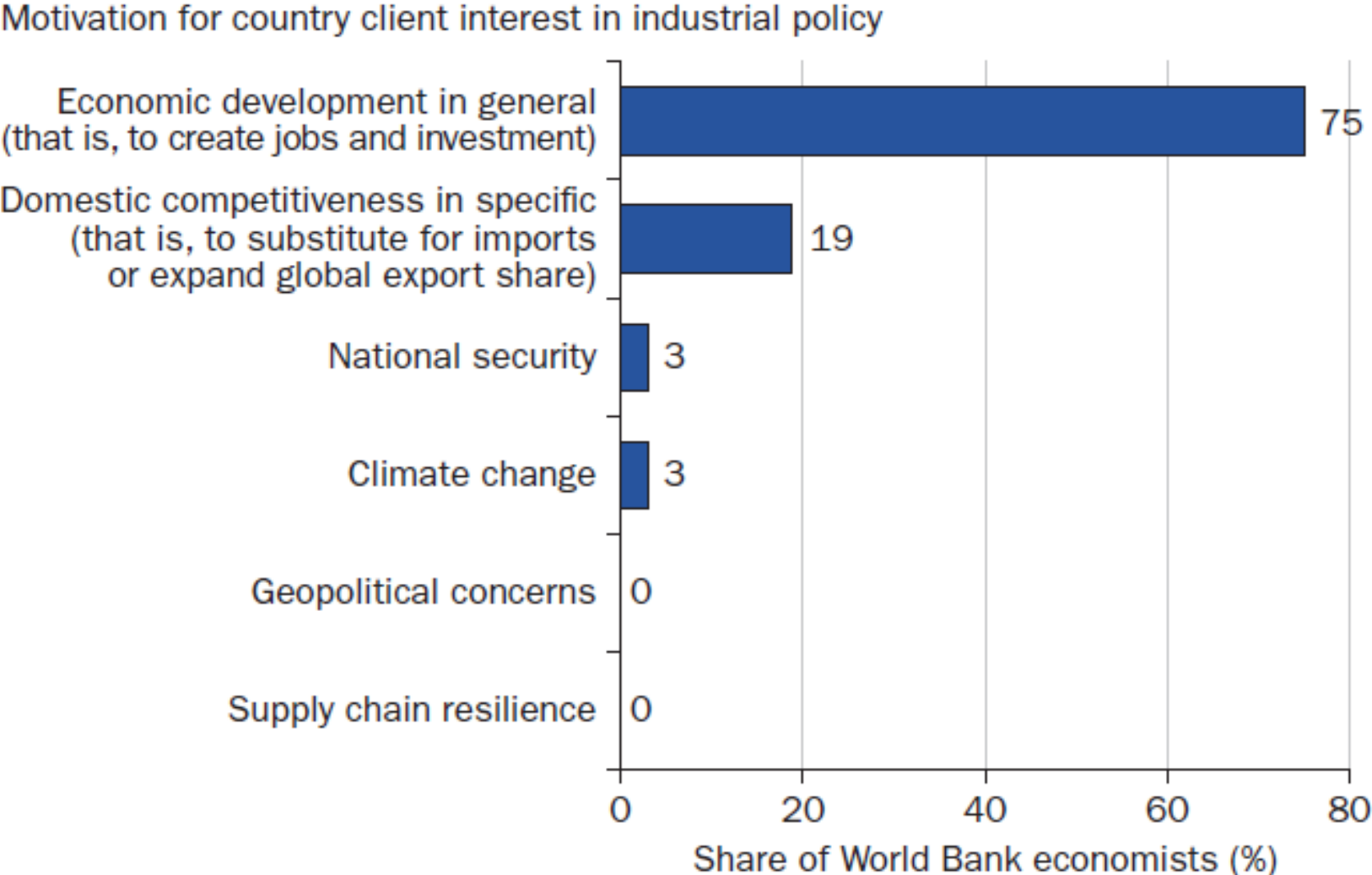
1. What is industrial policy?
2. Who does industrial policy?
3. How to do industrial policy?
4. Which activities to target?
5. How to get institutions right?



# Industrial policy is government action to grow a strategic business activity

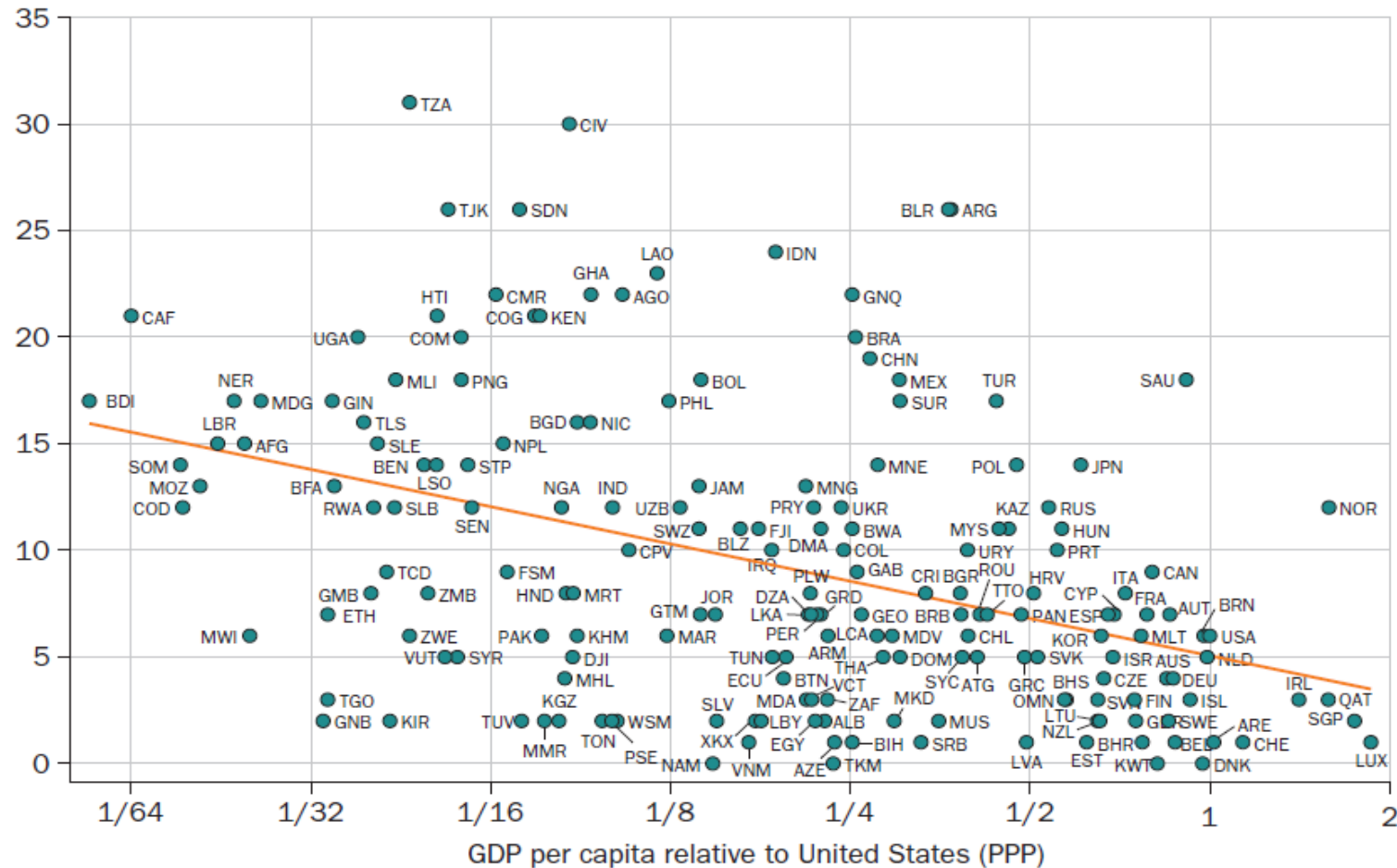
- **“Industrial”** is not just manufacturing. Any business activity can be strategic:
  - Agribusiness, critical minerals, skilled professional services, tourism
- **“Business activity”** can mean performing tasks or producing products:
  - assembling electric automobiles
  - creating jobs in the film industry
  - adopting artificial intelligence in forestry
  - research and development (R&D) in export horticulture
- **“Strategic”** means that government decides one activity is more important than others

# Emerging market governments want industrial policy for development



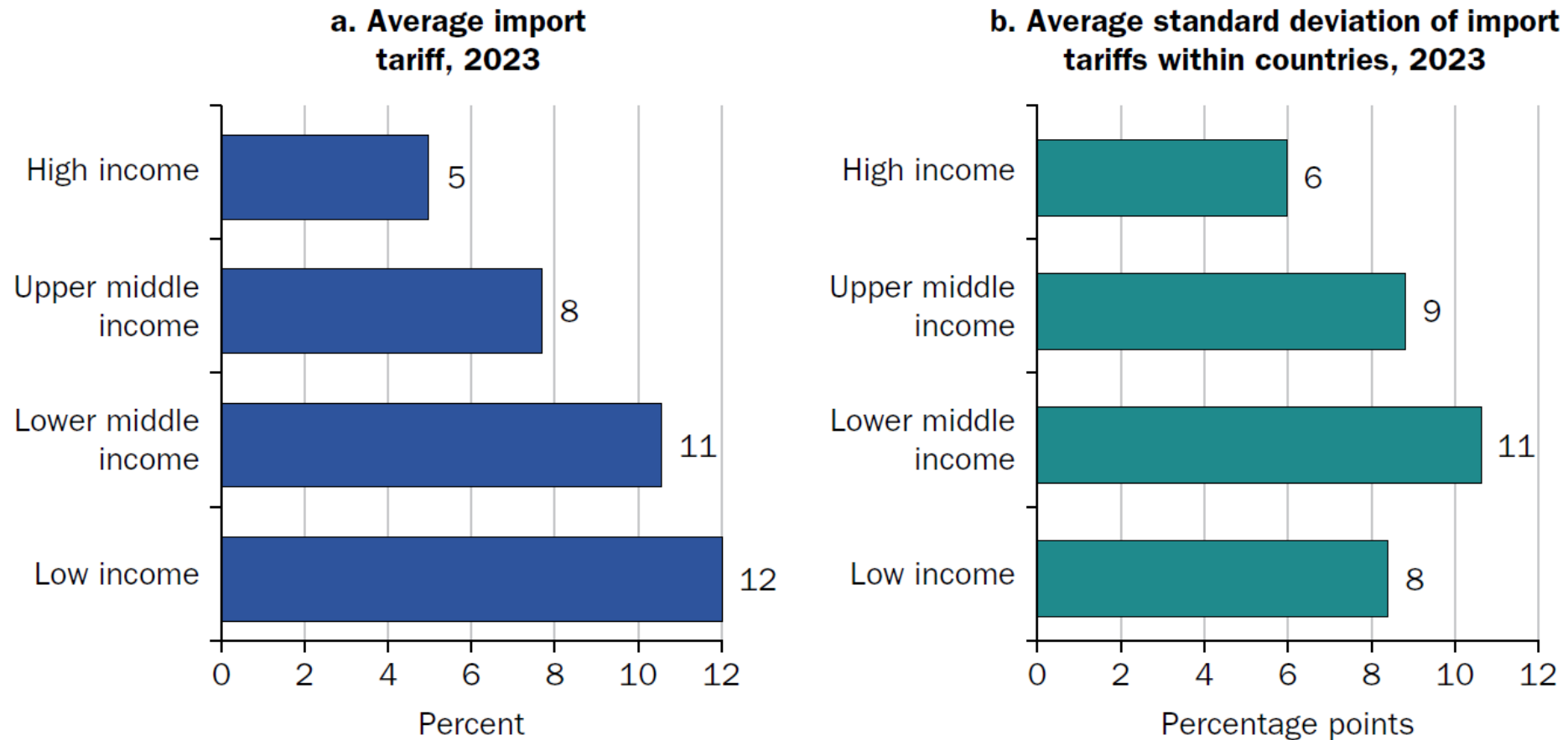
# Developing economies target more industries in development plans

Figure 2.1 Number of industries specified in national development plans, by income



# Developing economies have higher tariffs and variance in rates

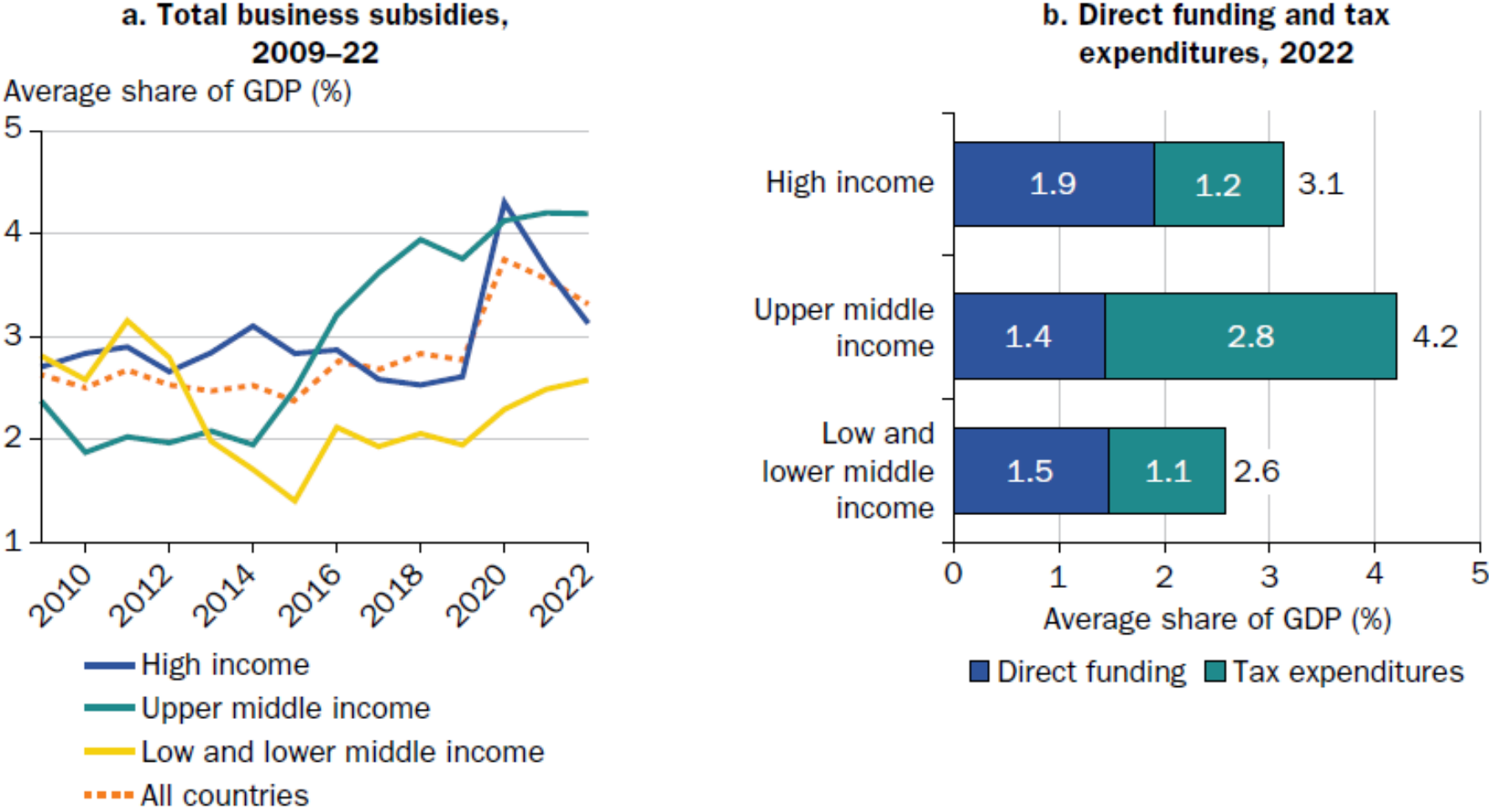
Figure 2.2 Average tariff levels and dispersion within countries, by income group



Notes: Most-favored nation (MFN) tariff rates are used. Panel b presents the average standard deviation of MFN tariffs across Harmonized System (HS) six-digit products within countries by income group. Within-country the average tariff is value-weighted, but averages across income groups weight countries equally. The rankings between income groups are identical using applied tariff rates, though average rates are slightly lower. The sample covers 187 economies.

# Subsidies are highest on record in upper-middle income countries

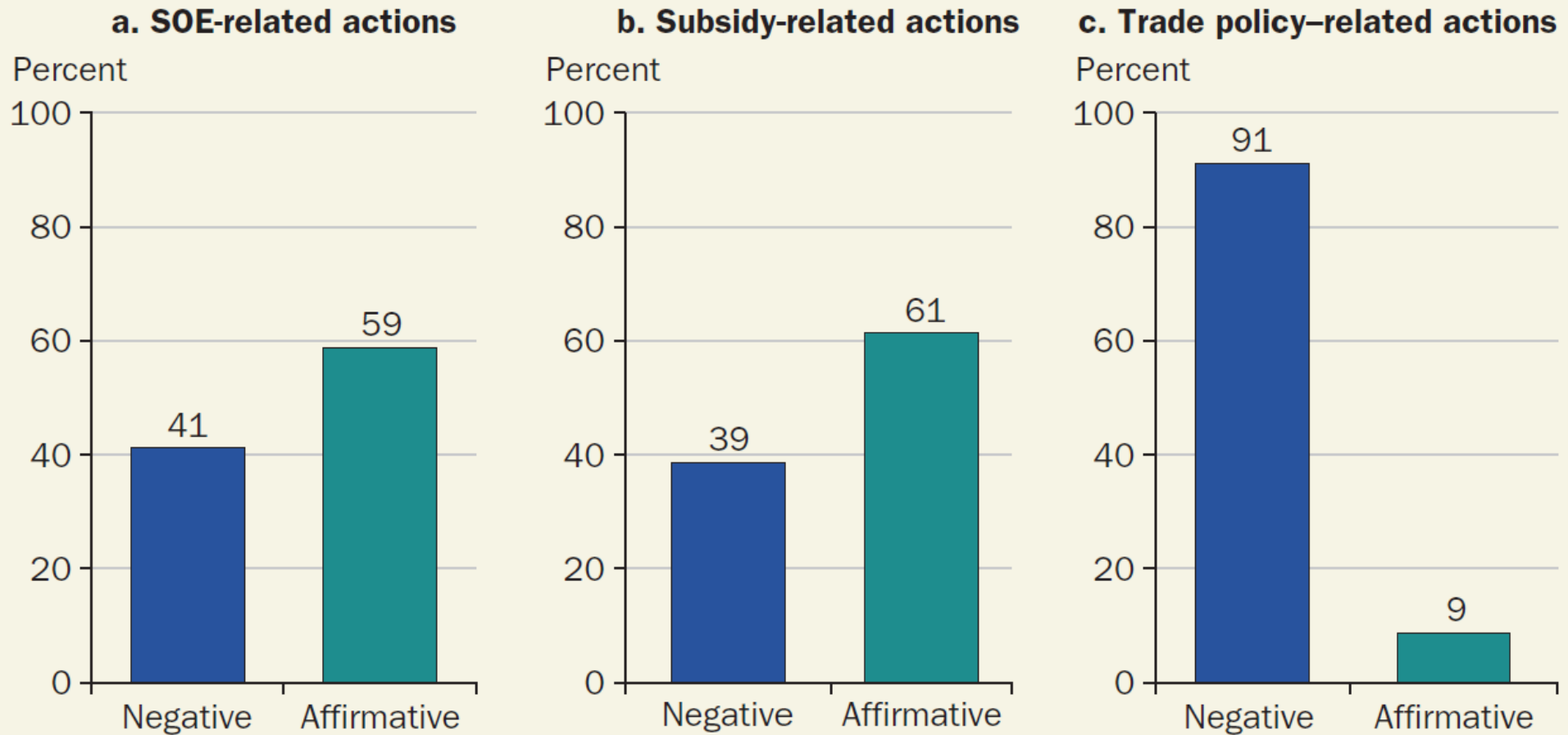
Figure 2.4 Direct funding to businesses and tax expenditures, by income group



Notes: Total business subsidies is direct funding or transfers plus tax expenditures. Direct funding includes transfers to compensate for recurrent losses, subsidies payable to resident producers for output used locally, subsidies resulting from the central bank accepting interest rates lower than the prevailing market rates, and subsidies on payroll, while “tax expenditures” refers to forgone tax revenue from businesses, an upper bound estimate. The sample covers 89 economies in the left panel and 64 economies in the right panel.

# World Bank operations already support some industrial policy

Figure B5.1.2 Affirmation and negation of industrial policy in World Bank projects



Covering 10,000 prior actions in World Bank policy loans over 2004-2023 period

# Fifteen industrial policy tools are available, but not all equal

Market failure	No.	Industrial policy tool	Rank
<b>Public inputs tailored to needs of activity</b>			
Coordination failure	1	Industrial parks	1st choice
Underinvestment in training	2	Skills development	1st choice
Asymmetric information	3	Market access assistance	1st choice
	4	Quality infrastructure	1st choice
<b>Market incentives</b>			
Positive spillovers, including learning-by-doing with advanced products and processes	5	Production subsidies	1st choice
	6	Specific innovation subsidies	1st choice
	7	Commodity export bans	2nd choice
	8	Public procurement	2nd choice
	9	Import tariffs or quotas	2nd choice
	10	Export subsidies	2nd choice
	11	Technology transfer quid pro quo	2nd choice
	12	Local content requirements	2nd choice
	13	Consumer demand subsidies	2nd choice
<b>Macroeconomic interventions</b>			
	14	Competitive exchange rate devaluation	2nd choice
	15	Research and development tax credit	2nd choice

Source: Original table for this publication.

# Country characteristics shape policy feasibility

Country characteristics			Feasible policies
Government bandwidth	Local market size	Fiscal space	
Small	Small	Small	<ul style="list-style-type: none"> <li>• <b>Industrial parks</b></li> <li>• <i>Commodity export ban</i></li> <li>• <i>Competitive exchange rate devaluation</i></li> </ul>
Large	Small	Small	" <ul style="list-style-type: none"> <li>• <b>Skills development</b></li> <li>• <b>Market access assistance</b></li> <li>• <b>Quality infrastructure</b></li> </ul>
Large	Large	Small	"                      " <ul style="list-style-type: none"> <li>• <i>Technology transfer quid pro quo</i></li> <li>• <i>Import tariff</i></li> <li>• <i>Local content requirement</i></li> </ul>
Large	Large	Large	"                      "                      " <ul style="list-style-type: none"> <li>• <b>Production subsidy</b></li> <li>• <b>Specific innovation subsidy</b></li> <li>• <i>Export subsidy</i></li> <li>• <i>Public procurement</i></li> <li>• <i>Consumer demand subsidy</i></li> <li>• <i>Research and development tax credit</i></li> </ul>
			Comparative advantages and market potential also shape feasibility at the industry level.

- **First-choice policies in bold** address market failures head-on by subsidizing the activities that are underprovided
- *Second-choice policies in italics* shape industry outcomes by intervening indirectly in adjacent markets
- The ditto symbol (") indicates that all policy tools listed in the cell above it are feasible for countries with characteristics listed in row

# Industrial policy today seems more replicable than before

- **Government bandwidth to interact with private sector is greater**
  - Independent agencies like national development banks, state-owned enterprises export/investment/innovation promotion agencies, cluster initiatives, and public-private dialogue augment capacity in line ministries
- **Local market size is larger allowing for scale economies**
  - Larger middle classes have added to domestic consumption
  - Regional and global integration through trade agreements allows specialization in production
- **Fiscal space is larger, conditional on expenditure rationalization**
  - Tax revenue to GDP has increased with domestic resource mobilization
  - Optimization of existing industrial policy can yield fiscal space

*Sources:* (i) Survey of current ministers' education. Li et al. (2020), (ii) Goldberg, P.K. and Reed, T., 2023. Presidential Address: Demand-Side Constraints in Development. The Role of Market Size, Trade, and (In) Equality. *Econometrica*, 91(6), pp.1915-1950. (iii) Bachas, P., Fisher-Post, M.H., Jensen, A. and Zucman, G., 2022. Capital taxation, development, and globalization: Evidence from a macro-historical database (No. w29819). National Bureau of Economic Research; (iv) Benitez, J.C., Mansour, M., Pecho, M. and Vellutini, C., 2023. Building tax capacity in developing countries. International Monetary Fund.

# Production subsidies best tied to production, not costs or profits

## Case studies



Investment subsidies for heavy and chemical industry: *Effective* in raising sales, employment, labor productivity & *efficient* with large net benefits in Korea



Payroll tax exemption for software industry: *Effective* in raising sales, employment, labor productivity in Romania






Production-based tax credit for renewable energy: More *effective* in raising generator productivity and more *efficient* than input equipment subsidy in USA


*Sources:* (i) Choi, J., and A. Levchenko. 2025. “The Long-Term Effects of Industrial Policy.” *Journal of Monetary Economics* 152: 103779; (ii) Kim, M., M. Lee, and Y. Shin. 2021. “The Plant-Level View of an Industrial Policy: The Korean Heavy Industry Drive of 1973.” NBER Working Paper 29252, National Bureau of Economic Research; (iii) Lane, N. 2025. “Manufacturing Revolutions: Industrial Policy and Industrialization in South Korea.” *Quarterly Journal of Economics* 140 (3): 1683–741; (iv) Manelici, I., and S. Pantea. 2021. “Industrial Policy at Work: Evidence from Romania’s Income Tax Break for Workers in IT.” *European Economic Review* 133: 103674; (v) Aldy, J. E., T. D. Gerarden, and R. L. Sweeney. 2023. “Investment versus Output Subsidies: Implications of Alternative Incentives for Wind Energy.” *Journal of the Association of Environmental and Resource Economists* 10 (4): 981–1018.

# Industrial policy should be temporary, but after ~10 years

## Case examples

 Governments typically argue policies are temporary, until fundamentals improve:  
— India's production-linked incentive short-term fix while government addresses longer-term challenges like electric power and inadequate skills

 Many industrial policies take years to develop  
 — In China, solar panel subsidies drive patents over 20 years  
— In USA, 1890 tariffs on tin plate take 10 years to substitute for imports

 Green industrial policies in USA reversed after just 3 years  
— Problem may not be “letting losers go” but “keeping winners long enough”

# For development, target “new” business activities

- **Scientific targeting of activities is hard and research points in different directions**
  - Different studies estimate different external economies of scale across industries
- **Rule of thumb is target activities that are “new” to country, with a growing market**
  - New activities require learning and create “knowledge spillovers”
  - Growing international demand implies less competition with other countries
- **But many countries still target “old” rather than “new” activities**
  - In Kenya, leather and tea still feature in National Industrialization Policy
  - In Serbia, 92 percent of subsidy value supports businesses that do not invest in R&D
  - Firms in declining industries have stronger incentive to lobby for support?

# How to prioritize interventions in pursuit of development?

## 1) Keep the emphasis on improving enabling institutions

- When governments pursue industrial policy as a temporary fix for fundamentals, set milestones for improvements in fundamentals

## 2) Select low-cost public inputs not provided by the market

- Inputs require tailoring to needs of industry, but should not be exclusive

## 3) Provide market incentives if fundamentals and public inputs are insufficient

- Market incentives are costlier, either fiscally or for the broader economy including producers and consumers and can elicit retaliation

## 4) Be wary of macroeconomic interventions

- Competitive exchange rate devaluation is difficult to sustain and general subsidies and tax credits including for R&D may not translate into innovation

# Industrial Policy for Development: Approaches in the 21<sup>st</sup> Century

<https://www.worldbank.org/en/publication/industrial-policy-for-development>

