

NATIONAL/INTERNATIONAL REPORTS: ANALYSIS

Overview of Industrial Policy for Development: Approaches in the 21st century

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(Please refer the link for complete report)

INTRODUCTION

Industrial policy are the range of policy tools that governments use to shape what an economy produces rather than leave it to the discretion of markets alone. Despite recent headlines, advanced economies are not the heaviest users of industrial policy. As this report documents, developing economies use it more intensively. In a recent survey of World Bank country economists, 80 percent reported that their client governments were seeking advice on industrial policy—overwhelmingly with the goal of spurring faster economic growth and job creation.

This report aims to provide a pragmatic answer. It offers the first comprehensive guide to industrial policies for development in the 21st century. It is distinctive in four respects. First, it covers a broad set of industrial policy tools—15 in all, well beyond the scope of existing literature, which focuses mainly on tariffs and subsidies. Second, it offers practical guidance on policy design and implementation, including how to target industries and design effective institutions. Third, it incorporates new evidence from more than 60 countries. Finally, it identifies targeted approaches that can be taken when governments seek to use industrial policy to pursue specific goals: earning foreign exchange, creating jobs, reducing pollution, and strengthening economic resilience.

This report offers a comprehensive definition of industrial policy in terms of 15 policy tools. Academic studies of industrial policy focus mainly on import tariffs and subsidies. Beyond that, some governments have emphasized industry-targeted “productive development policies” such as industrial parks or skills- development programs, or “new” industrial policies designed to tackle broader national objectives such as national security or reduced air pollution.

The 15 industrial policy tools that are examined throughout the report encompass all these categories. The tools are grouped into three broad categories: public inputs tailored to the needs of a specific industry or activity that are underprovided by markets, market incentives aimed at changing prices to make investment in a particular industry or activity more attractive than it otherwise would be, and macroeconomic interventions that incentivize industrial policy goals at the economywide level.

The report highlights four public inputs (industrial parks, skills development programs, market access assistance, and quality infrastructure); nine market incentives (import tariffs, public procurement rules, local content requirements, commodity export bans, “quid pro quo” arrangements that require technology transfer, and subsidies for production, innovation, exports, and consumer demand); and two macroeconomic interventions (competitive exchange rate devaluation and tax credits for research and development).

Table 0.1 Typology of feasible industrial policy tools for selected combinations of country characteristics

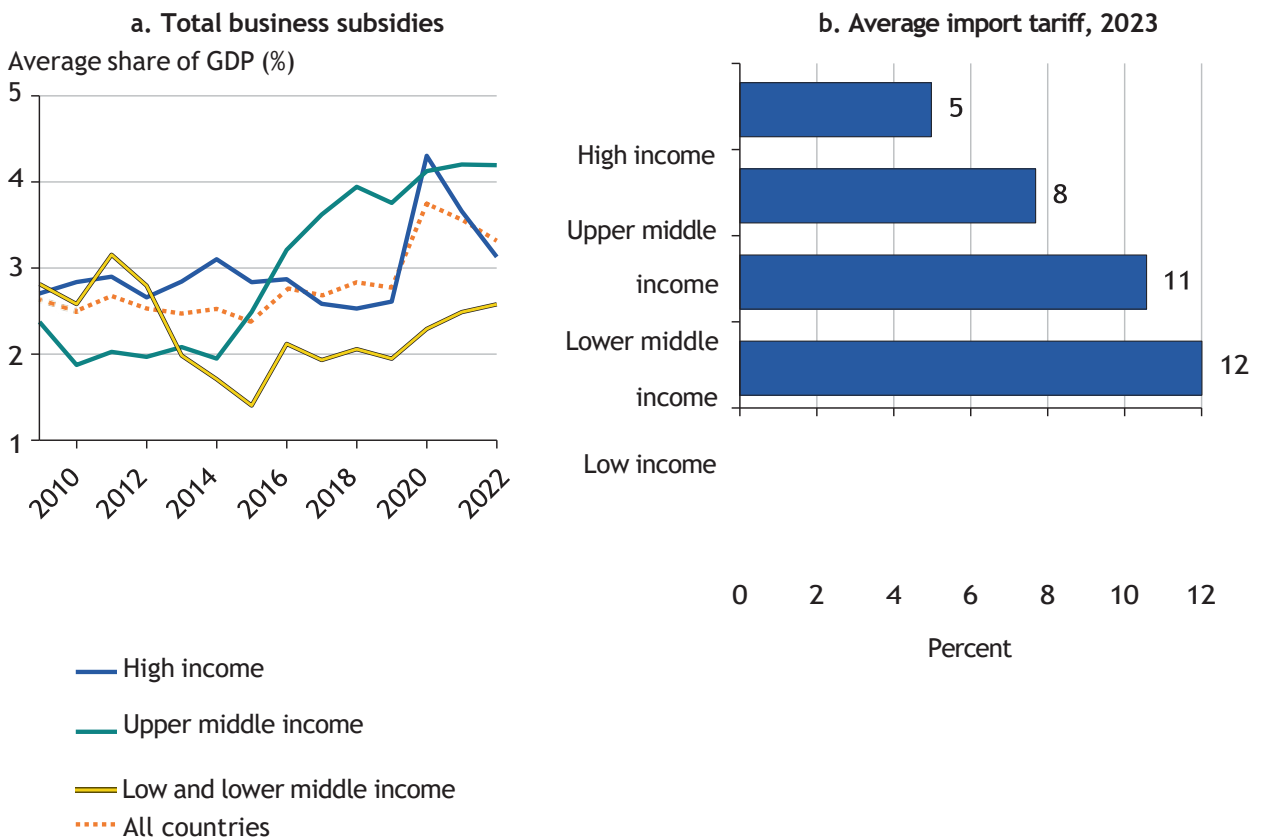
Country characteristics			Feasible policies		
Government bandwidth	Local market size	Fiscal space			
Small	Small	Small	<ul style="list-style-type: none"> Industrial parks Commodity export ban Competitive exchange rate devaluation 		
Large	Small	Small	“	<ul style="list-style-type: none"> Skills development Market access assistance Quality infrastructure 	
Large	Large	Small	“	“	<ul style="list-style-type: none"> Technology transfer quid pro quo Import tariff Local content requirement

Large	Large	Large	“	“	“	<ul style="list-style-type: none"> • Production subsidy • Specific innovation subsidy • <i>Export subsidy</i> • <i>Public procurement</i> • <i>Consumer demand subsidy</i> • <i>Research and development tax credit</i>
			Comparative advantages and market potential also shape feasibility at the industry level.			

Source: Original table for this publication.

Note: Refer to chapter 1 of the report for a comprehensive typology. Refer to chapter 4 on comparative advantages and market potential. **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, such as through a commodity export ban, foreign currency market, trade values, consumer markets, or the tax code. The ditto symbol (“) indicates that all policy tools listed in the cell above it are feasible for countries with characteristics listed in the row.

Figure 0.1 The value of industrial policies today and differences across income groups



Sources: For subsidies: BOOST Open Budget Portal, World Bank, <https://www.worldbank.org/en/programs/boost-portal>; Global Tax Expenditures Database, <https://gted.taxexpenditures.org/>; Government Finance Statistics, International Monetary Fund, <https://data.imf.org/en/datasets/IMF.STA:QGFS>. For tariffs: Base pour l'Analyse du Commerce International (BACI) (database), Centre d'Etudes Prospectives et d'Informations Internationales (CEPII), https://www.cepii.fr/DATA_DOWNLOAD/baci/doc/baci_webpage.html; World Integrated Trade Solution (WITS) TRAINS (Trade Analysis and Information System) tariff data, World Bank, <https://wits.worldbank.org/>.

Note: Business subsidies are direct funding plus tax expenditures. The term “direct funding” refers to direct transfers to businesses, such as cash grants, while “tax expenditures” refers to forgone tax revenue from businesses. Tax expenditures are an upper-bound estimate, as they assume activities receiving tax holidays would have occurred in the absence of the tax holiday. If the activity receiving a tax holiday, such as foreign investment, would not have taken place otherwise, forgone tax revenue would be zero. Import tariffs are import-weighted averages of most-favored nation (MFN) tariffs; a similar pattern emerges when using applied tariffs. GDP = gross domestic product.

SCOPE OF THE REPORT

The report is organized around five broad questions that can shape the design and implementation of industrial policies for development. In the complete report, each chapter represents a concrete answer to those questions. The five questions are as follows:

- **What is industrial policy?** Chapter 1 lays the conceptual groundwork, framing industrial policy for development as addressing market failures and proposing a taxonomy that links country characteristics to the choice of industrial policy tools, as well as their prioritization—while also recognizing the associated risks.
- **Who does industrial policy?** Chapter 2 presents new stylized facts on cross-country patterns in the use of industrial policy tools, showing it is not only, or even mainly, the remit of advanced economies.

- **How to do industrial policy?** Chapter 3 distills 12 lessons from a survey of recent evidence on each of the 15 industrial policy tools, emphasizing that context and details matter greatly for outcomes. The chapter offers principles of practice to implement each policy tool and tailor it to the local context.
- **Which activities to target?** Chapter 4 proposes a practical framework that can guide governments in the complex decision of which activities to target strategically when pursuing industrial policy for development. The framework considers both the potential development benefits of activities, in terms of positive spillovers and external impacts, and their feasibility, based on market potential and evolving comparative advantages. The discussion encourages governments to think in terms of industrial strategies and proposes experimenting with a portfolio of targeted activities, recognizing that some initiatives will fail.
- **How to get the institutions right?** Chapter 5 focuses on the institutions that are crucial for effective industrial policy, which have arguably improved in recent decades. It considers delivery units, which guide diagnostics and policy design for the head of government, and seven implementing agencies with the potential to deliver, including national development banks and export promotion agencies, among others. Three core criteria for effective design and implementation of industrial policy are proposed: embeddedness, appropriate use of incentives, and accountability.

Table 7.1 Criteria to identify strategic business activities for development

Criteria		Indicator
I. Benefits from business activity	Positive spillovers	<ul style="list-style-type: none"> • Business activity is new, and has not been done in the economy before • Diversification of the economy through new products, processes, and inputs, creating knowledge spillovers • Learning-by-doing with advanced production methods (for example, through worker training, research and development) • Contribution to industrial upgrading (for example, experience producing for a leading international buyer signals ability to produce high quality)
	External impacts	<ul style="list-style-type: none"> • Foreign exchange earnings • Job creation • Pollution reduction • Economic resilience and security
II. Opportunity	Market potential	<ul style="list-style-type: none"> • Current value of world imports and/or domestic demand • Growth of world imports and/or domestic demand • Limited competition in international market measured by number of exporters
III. Feasibility	Risk based on evolving comparative advantage	<ul style="list-style-type: none"> • Low-risk activities have revealed comparative advantage • Medium-risk activities use adjacent technology in “product space” • High-risk activities lack both revealed comparative advantage and adjacent technology

Source: Original table for this publication.

GUIDANCE TO CHOOSE THE MIX OF POLICY TOOLS FOR FRAMING INDUSTRIAL POLICY

Once a government decides to expand a particular business activity, the central question becomes how best to promote it. Which industrial policy tools offer the greatest potential to stimulate growth, and how does this depend on country context and constraints? Beyond an industry's comparative advantage and market potential, the feasibility and effectiveness of different tools depend on three country characteristics: **government bandwidth** (institutional capability, trained personnel, and interagency coordination), **local market size** (domestic demand and preferential export markets), and **fiscal space** (the ability to mobilize revenue).

Table 7.2 Minimum country requirements to use industrial policy tools

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

Source: Original table for this publication.

In table 7.2, cells marked “large” indicate where an industrial policy tool requires a large level of fiscal space, market size, or government bandwidth for success. Blank cells indicate feasibility even in countries with limited resources. The purpose of these binaries is to illustrate the assumptions required for industrial policy to be effective. It is up to governments to assess whether the government bandwidth, local market size, and fiscal space are “large” enough in their context. With more talent in government, larger middle classes, and domestic tax mobilization, these preconditions may well be satisfied.

Note: First-choice policies address market failures directly by subsidizing the activities that are underprovided. Second-choice policies shape industry outcomes by intervening indirectly in adjacent markets. Blank cells indicate that no minimum requirements of a given country characteristic are needed for a policy to be feasible.

MAJOR FINDINGS

Four key messages emerge from evidence and practice:

- Public inputs tailored to industry needs are fiscally inexpensive tools with proven success, though some require greater government bandwidth.
- Market interventions—subsidies, tariffs, commodity export bans, local content requirements, public procurement—are costly both fiscally and to the wider economy.
- Industrial policy tools should include termination clauses tied to evidence of learning-by-doing and productivity improvements.
- Expect some failure in industrial policy efforts and communicate this expectation.

CONCLUSION

Table 7.3 Criteria for industrial policy institutions

Criteria	Indicator
Embeddedness	<ul style="list-style-type: none"> • High-quality industry diagnostic studies, produced in-house or by consultants • Surveys of beneficiaries and other market participants • Private sector membership in executive committee and general assembly • Managerial expertise in government
Appropriate use of incentives as carrots and sticks	<ul style="list-style-type: none"> • Avoid automatic termination clauses when subsidies are exemptions from taxes, duties, or rules that may eventually be extended to all businesses • Otherwise, use automatic termination dates of 10 years • Allow extension only when there is clear evidence of productivity gains, measured by declining input cost per unit of output compared to nontargeted industries • Successful exports or import substitution can proxy for productivity gains
Accountability	<ul style="list-style-type: none"> • Reporting of outcomes, targets, and workplans • Clear, publicly available criteria for policy decisions and program participation • Civil society membership in executive committee and/or general assembly • Independent oversight bodies like supreme audit institutions, judicial oversight

Source: Original table for this publication.

a. Industrial policy for foreign exchange

- ◆ Governments can still pursue a trade-led growth model by using public inputs (for example, industrial parks, skills development, market access assistance, quality infrastructure) to help local exporters succeed and expanding preferential trade agreements with a diverse set of partners—particularly South-South agreements and deeper trade agreements allowing for investment and movement of workers.
- ◆ Without large domestic markets—such as those of Brazil or India—encompassed by a preferential trade agreement, import substitution will be difficult limiting the gain from import tariffs, commodity export bans, local content requirements, consumer subsidies, and public procurement.
- ◆ Export subsidies used to generate foreign exchange earnings as well as competitive exchange rate devaluation are used less often, given the risk of retaliation from trading partners.

b. Industrial policy for jobs

- ◆ Governments face a trade-off between supporting labour-absorbing industries that quickly create many lower-wage jobs and supporting high-wage, skill-intensive industries that raise productivity, increase average wages, and deliver broader economic benefits.
- ◆ Governments must decide when to subsidize labour rather than capital, recognizing that in capital-intensive industries, capital subsidies can be a more cost-effective way to create jobs than labour subsidies.
- ◆ Governments may need to assist workers displaced by trade or technology, even though broader social safety nets that support all workers may provide greater overall benefits.

c. Green industrial policy

- ◆ Emissions regulations, including emissions trading schemes, may require adaptation to avoid damaging the competitiveness of domestic industries, such as by providing free emissions allowances for energy-intensive industries.
- ◆ Subsidies for adopting or inventing low-pollution technologies can reduce operating costs for eligible businesses, but they may displace conventional power generation without distinguishing between cleaner and dirtier fossil fuels, and they do not necessarily promote energy conservation.
- ◆ Governments may pair subsidies for downstream adoption with protective second-choice tools—such as local content requirements or import tariffs—to ensure that the benefits of green technology uptake accrue to domestic businesses, but this will slow the pace of adoption if domestic businesses cannot produce these technologies competitively.

d. Industrial policy for resilience and security

- ◆ Governments can protect against domestic shocks by dispersing production across multiple locations, but this raises costs when new plants operate in higher-cost locations or when underutilized capacity is expensive to maintain.
- ◆ Governments can diversify import supply away from unreliable suppliers by building domestic production capacity, but this may be prohibitively costly. A better approach is to encourage businesses to switch to alternative, ideally lower-cost, foreign suppliers.
- ◆ Governments can help businesses adapt to shifts in export demand—such as when trade partners raise tariffs—by providing market access assistance and improving quality infrastructure to support entry into new markets.

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