

Praise for *Industrial Policy for the United States*

A strong, vibrant manufacturing sector is critical to the future prosperity of the United States and its workers. The authors provide enormous background, case studies, and analysis about how to implement strong trade and industrial policies to restore America's leadership in innovation and manufacturing – and the good jobs that come with it. Even the most controversial policy recommendations are worthy of review and consideration, no matter your position on trade policies. This should be required reading for any policymaker working to increase America's productive capacity and strengthen our supply chains.

*Rep. Earl Blumenauer (D-OR)
Ranking Member Subcommittee on
Trade House Ways and Means Committee*

Industrial Policy for the United States is truly impressive. While readers may disagree with some of its recommendations, almost all will find its documentation of the practice over the last three centuries a source of valuable historical perspective. And its assessments of past successes and failures – overseas and in the US – will be helpful to policymakers in a world where industrial policy is likely to become de rigueur.

*Willy Shih
Robert & Jane Cizik Baker Foundation
Professor of Management Practice
Harvard Business School*

Industrial Policy for the United States is an indispensable guide for CEOs – multinationals to small and medium-sized manufacturers – for understanding and taking full advantage of America's return to industrial policy. Equally valuable, it is also a guide to what US business should ask of our government to help them succeed against Chinese and other foreign competition. The book convincingly rebuts the “leave everything to the market” argument against industrial policy and quantifies the horrific damage done to our businesses, workers, and national

security during our decades-long pursuit of the free trade mirage. It explains, in theory and through country and industry case studies, why government support of US innovation and manufacturing, the strategic use of tariffs to ensure that things are made as well as invented here, and ending the overvaluation of the dollar are all necessary for sustained success. Its comprehensive, well-thought-out, and coherent set of policy recommendations should be required reading for every policymaker in Washington.

Dan DiMicco
Former Chairman and CEO Nucor

There has been a global trend of policymakers drifting away from laissez faire and free trade, because of various reasons. And that story has not been explained rigorously enough by most books and research papers that exist today. This in-depth treatise on industrial policy fills in this huge gap in a scintillating manner with references and explanations from across the world. The book provides the reader with the intellectual ammunition needed to contrast and compare various policy pathways and their potential impact on industries.

Badri Narayanan
Former Head of Trade and Commerce NITI
Aayog Lead Trade Advisor to PM Narendra Modi

State ownership and control of industry have failed, as has leaving everything to the market. Instead, governments need judicious and evidence-based industrial policies. This book makes a brilliant case for the same, combining strategic guidance by the state with the innovative potential of competitive enterprise. Everyone who cares about our economic future should read this.

Geoffrey M. Hodgson
Emeritus Professor of Economics Loughborough
University Editor in Chief Journal of Institutional Economics

If America and its democratic allies are to recover the economic and strategic bulk lost over the last four decades, elected officials and policymakers will need a plan. No longer can they blindly

put their hopes in the abstractions of free-market ideology. They must have industrial policy tethered to the reality of strategic competition. Our strategic rivals are embracing industrial policy to our detriment; we must respond. This excellent book lights the way ahead.

Andrew Hastie
Member of Parliament and Shadow
Minister for Defence Commonwealth of Australia

A well-written, well-reasoned, and remarkably thorough case for a much more vigorous and targeted industrial policy. It correctly argues that markets alone will not optimize output from the most valuable industries because of significant market failures. Its detailed, well-articulated proposal for a specific “industrial policy for the United States” should give free-market acolytes pause and progressives ammunition in the battle for an industrial revival.

Jeffrey Fuhrer
Nonresident Fellow Brookings Institution
Foundation Fellow Eastern Bank Foundation

So much economic analysis and controversy misses the real heart of our current crisis – America’s *industries*, especially manufacturing, and why they keep losing ground to foreign competitors. This book finally gives a complete picture of what went wrong and what we can do about it. I especially appreciated the discussion of how the development and deployment of innovations depend on not only the private sector, but also on crucial, underappreciated programs like the Manufacturing Extension Partnership and Manufacturing USA. If American industry is to convincingly recover its formerly world-leading position, this country will need to support every step of the innovation pipeline, not just pure science and defense-oriented technologies, across the entire industrial spectrum.

Carroll Thomas Former Director Manufacturing
Extension Partnership

The fight to control tomorrow’s strategic industries will not be determined by market forces but by industrial policy. This

superb and timely book explains why and how America must act if it is to be a major player in the world's industrial future.

Stewart Paterson

*Author China, Trade and Power:
Why the West's Economic Engagement Has Failed*

Without a doubt this is the most definitive analysis of industrial policy ever written. For anyone interested in industrial policy and its implications for the economy, this is the perfect source and a real triumph!

Barry Bluestone

*Professor Emeritus of Public Policy
and Urban Affairs Russell B. and Andree B. Stearns
Trustee Professor of Political Economy
Northeastern University*

Research, discussion, and policy initiatives advocating industrial policy for the US are spreading in the wake of the failure of neoliberal doctrines to deliver inclusive growth and technological leadership. Fasteau and Fletcher's seminal contribution advances this agenda and paves the way for a proactive commonsensical set of industrial policies.

John Komlos

*Professor Emeritus of Economics
and Economic History University of Munich*

This book illuminates the path through the complexities and escalating costs of industry and advanced manufacturing, where current US policy is insufficient. Presenting a detailed plan and advocating for a whole-of-government industrial policy, it offers essential guidance for students and policymakers to navigate and shape the future of American industry.

David Bourne

*Principal Scientist, Robotics Carnegie Mellon
Associate Director Manufacturing Futures Institute*

Fasteau and Fletcher have assembled an extraordinarily comprehensive work on industrial history and strategy. It should be a must-read for policymakers. It is an impressive

and insightful exploration and analysis of not just America's industrial past, present, and future, but of how its competencies compare to the rest of the world. Moreover, the authors have compiled such a tremendous amount of data in making their case that this book will serve as an essential go-to reference book for years to come.

Ira Moskowitz
CEO Advanced Robotics for Manufacturing
Institute Former Vice President General Manager
of US Operations Analog Devices Inc.

The authors demolish the illusion that our post-WWII economic dominance was the result of the private sector on its own developing and commercializing technologies from the underlying science. They address the need for a multipronged growth policy targeting a portfolio of high technologies with a market focus. They rightly advocate investment in R&D, capital formation, labor upskilling, and technological infrastructure, and address the quasi-public-good nature of much of this investment, necessitating a combined government-industry approach. Although recent legislation offers hope for such reforms, the jury is still out, making this book very timely.

Gregory Tasey
Economic Policy Research
Center University of Washington

This book explores the profound effects of America's failure to embark on sound industrial policies and how these could evolve. Importantly, it makes a real contribution in pulling together the economic side of industrial policy: the need to pull together manufacturing promotion, trade, and exchange rate policies.

William Bonvillian
Lecturer Massachusetts Institute of Technology
Former Senior Policy Advisor US Senate

This book turns an opinion not widely held not so long ago into a statement of the obvious through the logic inherent in the wealth of facts it deploys. Its powerful argument for America to adopt a coherent industrial policy is driven home by cataloguing

the deleterious impact unbridled globalized free trade has had on the US economy and chronicling the successes (and failures) in this field of America's competitors. Fasteau and Fletcher have managed to cram more common sense into one book than any author since Tom Paine.

Nicholas Comfort

*Author Surrender: How British Industry
Gave Up the Ghost, 1952–2012*

A major cause of the declining wages of non-elite workers over the past decades has been the deindustrialization of America. In this remarkable volume Fasteau and Fletcher present a powerful case for coherent industrial policy that can reverse this disturbing trend. They discuss in detail both successful and unsuccessful past experiences of governments implementing industrial policy worldwide, and how industrial policy should be implemented in practice. Anybody who worries about where America is heading needs to read this book.

Peter Turchin

*Author End Times: Elites, Counter-elites, and
the Path of Political Disintegration*

As questions about technological competitiveness and the accelerating loss of good jobs press themselves ever more intensely to the front of public debate, industrial policy looms as a nearly inescapable imperative for US policy makers. This extremely timely book is the most thorough historical and comparative examination of industrial policy practice and variants across the advanced political economies. No informed discussion of our industrial options in the US moving forward should proceed without familiarity with the arguments in this book.

Gary Herrigel

*Paul Klapper Professor College
and Division of Social Science Department
of Political Science University of Chicago*

Industrial Policy for the United States

The U.S. is losing the international competition for good jobs and high-value industries because Washington largely believes trade should be free, the dollar should float, and innovation comes from the private sector. In this book, the authors make the bold case that such laissez-faire ideas have failed and that a robust industrial policy is the best way for America to remain prosperous and secure. Trump and Biden have enacted some elements, yet America now needs something systematic and comprehensive, including tariffs, a competitive exchange rate, and federal support for commercialization—not just invention—of new technologies.

Timely, meticulously researched, and bipartisan, this impressive analysis replaces misunderstandings about industrial policy with lucid explanations of its underlying economic theory, the tools that implement it, and its successes (and failures) in America and abroad. It examines key industries of the past and future – steel, automobiles, television, semiconductors, space, aviation, robotics, and nanotechnology, while offering an actionable policy roadmap.

A work of rigor and ambition, *Industrial Policy for the United States* is essential reading.

Marc Fasteau is a vice-chair of the Coalition of a Prosperous America. Before founding an insurance company acquired by Progressive, he was a partner at Dillon Read & Co., a New York investment bank. Earlier in his career he served on the professional staffs of the US Senate majority leader, the Joint Economic Committee and the House Banking and Currency Committee. He is a graduate of Harvard College and Harvard Law School, where he was on the Harvard Law Review.

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Industrial Policy for the United States

Winning the Competition for Good
Jobs and High-Value Industries

Marc Fasteau
Ian Fletcher

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**For Anne
For Abby**

The general reader will have to make up his mind whether he wants simple answers to his questions or *useful* ones – in this as in other economic matters he cannot have both.

Joseph Schumpeter, 1930

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Preface

This book advocates for a coherent and comprehensive industrial policy for the United States, so it must deal with the dominant view of most US economists, policymakers, journalists, and citizens that industrial policy has not worked and cannot work. Americans have been inculcated to believe that government intervention in industries should be limited to funding basic research and correcting a few market failures, that trade can and should be free, and that exchange rates should be left to the market.

For this book to help change this paradigm, it must explain what industrial policy is, explicitly address the arguments against it, and make the arguments in its favor. It therefore addresses industrial policy's underlying economic theory, its policy tools, and how these tools have been successfully and unsuccessfully deployed in other countries, in the US, and in several key industries.

Our argument identifies three pillars of industrial policy:

1. Supporting innovation, commercialization, and retention in the US of what we call “advantageous” industries
2. Designing and implementing trade policies to support and, when necessary, protect these industries from imports and to pressure foreign governments to reduce the obstacles they place on US exports of the products of these industries
3. Managing the dollar's exchange rate to the level that balances US trade and countering the efforts of other governments to manipulate their currencies to make their goods cheaper in our markets and ours more expensive in theirs

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We explain how deeply entwined these pillars are and how they must be coordinated to avoid working at cross-purposes and sapping the efficacy of multibillion-dollar US innovation and manufacturing programs.

This is virgin territory. To our knowledge, no US university has a degree-granting program in industrial policy – either by this or another name – covering this ground. With very few exceptions, these three phenomena are studied in silos. Because we are starting almost from scratch, our argument must be fully elaborated to be persuasive.

We also believe that sound industrial policy must be highly specific to industries and the domestic and international context in which they compete. This requires an understanding of its general principles *and* a granular feel for how varied and tailored to specific circumstances the application of these principles must be. The latter can be conveyed only through the particularities of national histories and industry case studies.

So this is a big book, because industrial policy for the US is a big subject. We have tried to make it both technically sound *and* accessible to readers without expertise in economics. Given its length and scope, we expect that some readers will choose certain chapters over others, hopefully while noting and taking comfort that the topics of the other chapters are covered in depth.

To help navigate the book, here is its structure with its underlying logic:

The Introduction describes the economic crisis that motivated us to write this book and summarizes the industrial policy we propose to resolve it.

Part I The Underlying Economics

Chapter 1, “Why the Free Market Can’t Do Everything,” explains why free markets on their own cannot deliver prosperity and why purely free-market thinking cannot design industrial policies that can.

Chapter 2, “The Dynamics of Advantageous Industries,” spells out our concept of “advantageous” industries and the economics that derives from it.

Chapter 3, “The Industrial Policy Tool Kit,” describes the tools governments worldwide have used to implement industrial policy based on this alternative view of economics.

Chapter 4, “Trade, Currencies, and Industrial Policy,” explains how international trade, including comparative advantage and foreign exchange rates, fits into our economic theory and policy proposals.

Part II Country Case Studies

These studies:

1. Exemplify the principles, practices, successes, and pitfalls of industrial policy more completely than the history of US industrial policy alone
2. Rebut critics who argue that industrial policy has never truly succeeded or, where its success is undeniable, that it is due to a culture or political structure so different from ours that the US should not even bother to try
3. Show that industrial policy has driven rapid, high-quality economic development using the same basic principles in many countries with widely differing cultures and governments
4. Illustrate the many ways industrial policy must address a nation’s stage of economic development, its political structure, the sophistication of its industries, and the trade and exchange-rate policies of other countries
5. Show that industrial policy failures are not due to unknowable causes but to readily comprehensible and thus avoidable errors in understanding and applying its strategies and tools

Each country chapter serves this expository purpose in a different way:

Chapter 5, “Japan: The First Asian Miracle,” describes an extreme and clear case of successful, proactive industrial policy, and the first that attracted American attention. The chapter introduces the all-important Asian economic model and how industrial policy plays out over time at national scale.

Chapter 6, “Korea: Development despite Turbulence,” discusses that country’s industrial policy, derived from Japan’s, showing how industrial policy has been transmitted around the world as a *practitioners’ tradition* rather than a theoretical doctrine. This chapter is more historical, concrete, and industry-specific than Japan’s.

Chapter 7, “China: Pursuing Economic Hegemony through Mercantilism,” explores how that country’s extremely proactive, systematic, and aggressive industrial policy – drawn from those of Japan and Korea – ups the ante to a full-blown economic challenge to the US. Geopolitics and national security enter the narrative here.

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Chapter 8, “Germany: The Art of Relationship Capitalism,” extends our model beyond East Asia and introduces the idea of *indirect* multilevel industrial policies, in sharp contrast to the explicit, centralized East Asian approach.

Chapter 9, “France: The Triumph and Failures of the State,” comes next because that country’s record of both success and failure, despite having all the ingredients for success, is instructive.

Chapter 10, “Britain: No Theory and Little Execution,” is the first example of a systematically *unsuccessful* industrial policy, chosen because its familiarity to Americans makes its travails easier to grasp.

Chapter 11, “India: Dysfunctional Socialism, Directionless Capitalism,” is another failure case and a Third World example to show that our theory applies to radically different societies and levels of development. It is also a revealing comparator to China.

Chapter 12, “Argentina: A Dual Cautionary Tale,” because that country’s decades of catastrophic industrial policy failures give a readily understood picture of what *not* to do and of how repeated lurches toward *laissez faire* also failed.

The country case studies precede America’s own industrial-policy history to make clear the powerful effects that foreign industrial policies have had on the US economy and the challenges they will pose to the US going forward. Summaries of the strengths and weaknesses of these nations’ industrial policies are included for the benefit of readers who may not wish to read all these chapters.

Part III The Forgotten History

Chapter 13, “The Renaissance Origins of Industrial Policy,” because the centuries-long, multi-continental record of industrial policy’s success bolsters its credibility today.

Chapter 14, “US Industrial Policy 1750–1865: Developing a New Nation,” shows how, contrary to prevailing myth, the US was founded as protectionist nation and used industrial policy to develop economically.

Chapter 15, “US Industrial Policy 1866–1939: The High Point of Protectionism,” describes the forgotten hand of industrial policy in well-known events from the Civil War to the Great Depression.

Chapter 16, “US Industrial Policy 1940–1973: The Golden Age of the US Economy,” explains how the US abandoned its successful

heritage of protectionism and, due to the Cold War, undertook massive governmental support for technology development.

Chapter 17, “US Industrial Policy 1974–2007: Doubling Down on Free Markets,” describes how the US largely misdiagnosed its growing economic problems and, instead of returning to sound trade and industrial policies, chose increasingly extreme free-market strategies.

Chapter 18, “US Industrial Policy 2008–Present: The End of the Old Order,” tells how Obama tried but failed to fix these problems by doubling down on free-market policies, and how Trump challenged this consensus, breaking new ground that Biden built on.

Part IV Innovation as a System

These chapters make two important points. First, they show that the US *already* has quite a lot of effective industrial policy, even if not recognized as such, supporting our thesis that the US can design and execute coherent industrial policy. Second, they highlight deficiencies of America’s current innovation system that need fixing. The detail in these chapters is needed to make clear the scope, diversity, and mechanisms of existing programs. They show how innovation is not a one-size-fits-all process, but requires institutions tailored to the needs of specific industries and contexts.

Chapter 19, “Governmentally Supported Innovations,” provides striking counterexamples against the widely held belief that almost all innovation comes from the private sector.

Chapter 20, “Federal Science and Technology Programs,” describes the most established, least controversial, most widely understood federal programs supporting innovation.

Chapter 21, “Federal Proactive Innovation Programs,” turns to lesser known, more controversial institutions that exemplify what the authors would like to see happen, as opposed to what already exists.

Chapter 22, “Industrial Policy for Advanced Manufacturing,” looks at advanced manufacturing to elucidate the key battlefield where innovation rivalry will play out.

Chapter 23, “Micro-governance of Industrial Policy,” examines the organization and management of day-to-day operations of industrial policy agencies for innovation and its commercialization.

Chapter 24, “The Crisis of the American Patent System,” describes the decline of our patent system that will be a major negative

for US industrial policy unless reversed. It is also a revealing case study of special interests' corruption of obscure and technical but extremely important policies.

Part V Industry Case Studies

Chapter 25, “Automobiles: Decline and a Chance at Revival,” introduces the reader to what failed US industrial policy looks like on a multi-decade, industry-specific level.

Chapter 26, “Semiconductors, Aviation, and Space: The Military Developmental State,” covers military industrial policies in the three industries in which the post-World War II US has had the most success at industrial policy.

Chapter 27, “Robotics: A Global Industrial Policy Competition,” describes the superior scale and sophistication of foreign industrial policy in an industry that is already important and will only become more so.

Chapter 28, “Nanotechnology: Is America Losing the Future?,” shows how much technological “wide open space” there is for new industries and industrial policies.

Part VI Cluster Case Studies

Chapter 29, “The Massachusetts Life Sciences Cluster,” features a state-level industrial policy success story and a good illustration of how to tailor policies to the characteristics and needs of the industry being supported.

Chapter 30, “The Upstate New York Semiconductor Cluster,” shows how state-level policies require many different players and, ultimately, support from Washington.

Recommendations

Recommendations answers the question, “Assuming our argument is valid, what specifically should the government do now?” Some recommendations will lose relevance as circumstances change. But even these will remain valuable as illustrations of the policy implications of our proposed economics.