

INDUSTRIAL POLICY AND PLANNING: A NEW (OLD) APPROACH TO POLICYMAKING FOR A NEW ERA

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INTRODUCTION

Industrial policy is any policy that encourages resources to shift from one industry into another. While open discussion of industrial policy was anathema to mainstream economic discourse for decades, over the past several years, industrial policy has reemerged in US policy debates. Numerous commentators have argued that industrial policy is a central feature of the Biden administration's approach to economic policy—from the recent National Economic Council review of supply chain resilience in key industries, to President Biden's embrace of the Advanced Research Projects Agency for Health (ARPA-H) (Reich 2021; Scheiber 2021; Smith and Smith 2021; Vogel 2021).

There is good reason for this re-emergence of industrial policy in our contemporary political discourse at this particular moment. Firstly, despite the myth over the past several decades that (unlike our allies and competitors) the US does not practice industrial policy and instead operates on purely free-market principles, our country has long had ad hoc measures that amount to an inadvertent neoliberal industrial policy favoring the wealthy and connected. Yet this neoliberal approach to industrial policy has largely failed: As the COVID-19 crisis has exposed, serious vulnerabilities in our economy have led inequality to grow to unimaginable, ungovernable, and unsustainable levels. The moment demands a more systematic approach.

Moreover, unlike other moments of crisis where an industrial policy would have been useful, this empirical failure has coincided with the emergence of an alternative perception of the role of the state in the economy. As Roosevelt Institute President and CEO Felicia Wong describes in [*The Emerging Worldview: How New Progressivism Is Moving Beyond Neoliberalism*](#), one distinct strand of neoliberal critique comes from a group of thinkers who she describes as “economic transformers,” and who challenge



the assumptions that defined the neoliberal approach, namely “that private market forces drive innovation and disruption and that individuals must adjust themselves to inevitable forces of change” (Wong 2020, 25). Instead, “economic transformers” view the state as having a necessary, appropriate, and central role to play in deciding which industries rise and fall, how industries are structured, and how they produce the goods and services our economy and citizens need. This is not only the case when it comes to correcting market failures; economic transformers understand that because states constitute and provide the conditions for our industrial structure, this structure must itself reflect certain fundamental values, such as democracy, equity, and sustainability.

The 2020s present an unparalleled opportunity to move past neoliberalism and reimagine industrial policy and planning for a new era. The reasons for this are many:

- The increasing recognition post-COVID that economic resilience in the face of growing global challenges requires the kind of planning and direction that can and should only be facilitated with and through democratic government;
- Reliance on private-sector initiative has proven misplaced, as companies hoard more and more of their money and fail to reinvest in the real economy;
- Government spending and direction can help boost effective demand and ensure that underdeveloped regions get the investment they need;
- The geopolitical scene presents challenges for the US that can only be resolved by selective emulation of the new norms of our trading partners; and
- The climate catastrophe demands ambitious action and massive reorganization of economic activity.

Because states constitute and provide the conditions for our industrial structure, this structure must itself reflect certain fundamental values, such as democracy, equity, and sustainability.

This issue brief proposes a forward-looking approach to industrial policy and planning as a core part of economic policymaking. Understanding and embracing the language and policy tools of industrial policy can aid economic policymakers seeking to rebalance power in our economy and harness the potential for growth and inclusion in this new era. A new industrial policy should not be ad hoc, as it has been for the US



in the past, nor authoritarian, as it is now for China. Industrial policy is more likely to be effective as part of an economy-wide plan, and more likely to be legitimate if this plan is inclusive, democratically decided, and accountable. The US has an opportunity to distinguish itself from its allies and competitors by implementing industrial policy through more democratic, inclusive, and accountable means. As more and more policymakers across the ideological spectrum warm to a form of industrial policy,¹ however, it is clear that there is a need for a set of criteria that can be embraced by the “economic transformers” described above.

This issue brief attempts to do just that. The first section defines industrial policy and planning; the second section outlines the policy tools that can be used to engage in it; and the third section outlines a series of five criteria and design decisions that policymakers should take into account when implementing more thoughtful, democratic, and inclusive industrial policy and planning in the US.

WHAT IS INDUSTRIAL POLICY AND PLANNING?

There are a range of scholarly understandings of industrial policy. For the purposes of this issue brief, we think the following definitions are most useful: **Industrial policy** is any government policy that encourages resources to shift from one industry or sector into another, by changing input costs, output prices, or other regulatory treatment. **Industrial planning** is an intentional, economy-wide aggregation of and coordination among individual industrial policies. Together, **industrial policy and planning** influences the allocation of labor and capital among the over 1,000 industries in the economy—encouraging some activities and discouraging others. While it is possible to have an industrial policy without an economy-wide planning process (i.e., on an ad hoc basis for one industry at a time), it is preferable to have both, with a strong national mission at their center. We therefore use the phrase “industrial policy *and* planning.”²

¹ In July 2019, newly elected Senator Josh Hawley (R-MO) called for the government to shrink finance and grow manufacturing (Hawley 2019), and one of a small number of opportunities for bipartisan legislation may reside in the \$250 billion US Innovation and Competition Act, which directs \$52 billion to re-shore semiconductor making, creates a Directorate for Technology and Innovation at the National Sciences Foundation to maintain the US’s technological edge over China, and strengthens Buy American procurement rules (Sidley 2021).

² This understanding of industrial policy is close to that of economists Mario Cimoli, Giovanni Dosi, and Joseph Stiglitz, who argue that industrial policies “come together with processes of ‘institutional engineering’ shaping the very nature of the economic actors, the market mechanisms and rules under which they operate, and the boundaries between what is governed by market interactions, and what is not” (Cimoli, Dosi, and Stiglitz 2009, 7–8). Or as economist Ha-Joon Chang puts it, an industrial policy is “a policy aimed at particular industries (and firms as their components) to achieve outcomes that are perceived by the state to be efficient for the economy as a whole” (Chang 2003, 112). This notion of *intentionality* is important: As economist Mariana Mazzucato writes, it is up to the public sector to pick the *direction* of change (Mazzucato 2013).



While in recent years the US has not practiced industrial policy with intention, leading to the perception that it does not practice industrial policy at all, there have been periods throughout US history where industrial policy and planning has contributed to important economic, social, and geopolitical advances. This was most clearly the case during the World War II mobilization, during which the government converted factories to produce for defense needs, requisitioned rubber supplies from households, and financed the buildup of a synthetic rubber industry (Bossie and Mason 2020a). During this period, as economists Andrew Bossie and J.W. Mason describe in detail in [*Public Spending as an Engine of Growth and Equality: Lessons from World War II*](#), “[t]he war years saw the greatest leveling of incomes in US history” (Bossie and Mason 2020b).

The US’s more recent, ad hoc approach to industrial policy has contributed to increased inequality and corporate disinvestment and is notable for the extent to which it has caused, and is in turn driven by, corporate capture. For example, the US funds biomedical and telecommunications research in ways that create immense profits for pharmaceutical and technology companies. It procures fighter jets and nuclear weapons from defense contractors at costs that again create astounding excess profits for contractors. It underwrites and backstops the private mortgage market and financial industry, both of which occupy an outsized share of economic activity and rents relative to the number of people they employ. Finally, it gives privileged access to all these industries to shape public policies on matters ranging from international trade agreements to the domestic tax code.

In contrast, many of America’s allies use industrial policy and planning *with intention* to rebuild after wars, mitigate the effects of climate change, and deal with de-industrialization. From 1946 to 2006, for example, France engaged in so-called “indicative planning.” Every five years, the government would make a plan outlining the country’s goals and projections over the time period to come. While no industry was compelled to participate in this process, many found the exercises valuable and saw them as a semiformal way for the government to communicate which investments it planned to make (Nielsen 2017; Brunet 2018). Similarly, for over 50 years, the Netherlands has made national plans to make the country more internationally competitive and its cities more livable. In recent years, its parliament adopted a National Policy Strategy for Infrastructure and Spatial Planning for 2040, which aims to coordinate different policies with an eye toward challenges the country will face in the coming decades (Government of the Netherlands 2011). And since 2015, it has been official EU policy to promote the creation of national development banks to execute green industrial policy, support technology startups, and more. These banks now have assets that account for as much as 25 percent of GDP in some member countries (Mertens, Thiemann, and Volberding 2021).



The US, too, has an opportunity to use industrial policy and planning with intentionality as an important framework for shaping our economy. However, it can distinguish itself from its allies and competitors by executing industrial policy through more democratic, inclusive, and accountable means. In the following sections, we examine the available tools and guiding criteria to shape industrial policy to foster a more sustainable and equitable economy and society.

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WHAT ARE THE POLICY TOOLS INVOLVED IN INDUSTRIAL POLICY?

The industrial policy toolkit is expansive and multipronged, and includes measures that aim to make **inputs** to a given industrial process (labor, capital, and other supplies) more expensive, less expensive, unavailable, or of different quality; to make the **outputs** of an industry easier, harder, or impossible to sell on the market; to alter industrial **governance and ownership** structures; and to **coordinate** between the previous measures. In practice, many tools affect inputs, outputs, ownership, and coordination simultaneously.

INPUTS

A range of policy levers can affect the inputs (labor, capital, and other supplies) to a given industrial process. For example, transportation spending that determines whether to give grants to roads, ports, or railroads can make it easier for some firms to get supplies than others. Direct subsidies to firms can affect which firms are profitable and which are not, such as subsidies from the Department of Agriculture to farmers who grow certain kinds of crops but not others. One notable industrial policy tool—often overlooked as industrial policy—is various policies that affect the cost and supply of labor in particular industries. Retraining programs that support workers moving from sunseting industries to growing industries, or that incentivize—or fail to incentivize—unionization in certain sectors, for example, can determine the quality and direction of the supply of labor.



OUTPUTS

Similarly, there are a range of levers that affect the outputs to a given industrial process. Government procurement is a paradigmatic tool of industrial policy whereby the government guarantees that a certain share of output will actually be sold. Consumer subsidies give families and firms an incentive to purchase certain industry products and not others. One example is the Department of Transportation's 2009 Car Allowance Rebate System, known as "cash for clunkers." This program gave federal rebates to consumers who traded in less fuel-efficient for more fuel-efficient cars. Product standards set by agencies like the Consumer Product Safety Commission and the Food and Drug Administration also regulate certain industries by setting safety standards for certain products and determining whether and which products can be sold in the United States. Similarly, bans or maximum quotas can limit or prohibit an industry's output for certain products in their entirety, as with the Food and Drug Administration's bans on flavored tobacco products (which means that there can be no market for outputs on, say, cola-flavored cigarettes). Finally, in some instances, government intervention makes possible certain economic outputs that would not have otherwise been possible through market creation or underwriting. This would include, for example, the backstopping of the mortgage industry by the Federal Housing Administration.

GOVERNANCE AND OWNERSHIP STRUCTURES

There are other types of industrial policy beyond those that affect inputs and outputs. The so-called "bailouts" of the kind the Bush and Obama administrations undertook for Wall Street and the auto industry, but not for other sectors, are a form of industrial policy. In the case of the auto industry, for example, this was a form of subsidy that was conditioned on firm restructuring; companies were required to reduce management ranks and executive pay, cut production capacity and discontinue certain brands, and reduce labor costs for workers and retirees. It should be noted that, unlike in other countries, the US rarely takes ownership stakes when it makes bailouts, though it certainly could in the future. Insofar as greater state involvement or a ban of private investment affects inter-industry capital allocations, another form of industrial policy is nationalization—for example, when the National Railroad Passenger Corporation (also known as Amtrak) nationalized several railroads.



COORDINATION

Policies that affect or govern the coordination among firms within an industry are another form of industrial policy. This can include antitrust enforcement by the Federal Trade Commission and Department of Justice. It can also include the work of agencies like the Federal Communications Commission, which was founded in 1934 to regulate radio, television, wire, satellite, and cable. Finally, certain types of international lending can constitute industrial policy, where the government administers loans to some sectors and not others. Unplanned varieties in the US include the Export-Import Bank, International Development Corporation, and the binational North American Development Bank capitalized by the US and Mexico; planned varieties include the development banks of China and Brazil.

In each of these categories, non-regulation or non-enforcement can serve as a form of industrial policy. Decisions not to regulate or enforce the law influences which firms and industries are exempted from certain penalties. For instance, the Department of Justice is not currently enforcing anti-cartel rules against the National Association of Realtors. This has allowed broker fees to remain at up to 6 percent of the transaction value, even though the time brokers put into each sale has fallen (due in part to internet searches). In contrast, Canadian fees are half that and Australian fees one-third (Ryan and Friedland 2019).

With the definition we introduced in the prior section and these policy tools in mind, recent policy interventions can be seen more clearly as industrial policy. The Affordable Care Act (ACA), for example, has typically been understood as a set of consumer subsidies and regulatory measures that would make health insurance more affordable and provide more comprehensive coverage. While this is and continues to be true, it can also be seen more plainly—and perhaps more properly—as industrial policy for the health care sector. Through regulation and subsidy, the ACA changed relationships among industries—including the health insurance industry, certain employers who act as health care purchasers, and health care providers. The ACA also addressed a range of workforce supply issues and sought to create a new market for long-term care insurance products. In several areas, it even sought some measure of planning, for example requiring nonprofit hospitals to conduct community needs assessments and adopt a strategy to meet community needs, creating a Workforce Advisory Committee to conduct a national workforce strategy, and implementing a national quality improvement strategy to improve the delivery of health care.



It is necessary to recognize that we are, in fact, engaging in industrial policy (and, occasionally, planning) to be able to do it with the intention required for it to be effective. Applying an industrial policy lens to laws like the Affordable Care Act is thus valuable in two ways: First, it makes plain the role that government plays in structuring markets and industries, and second, it creates space to attend to—and use the full power of the government to address—the key criteria we outline below.

FIVE CRITERIA FOR FORWARD-LOOKING INDUSTRIAL POLICY AND PLANNING

This section outlines five of the major considerations policymakers should account for when building industrial policy and planning now and in the future. In the near term, the greatest opportunity to apply these principles could come in sectors where the Biden administration has prioritized investments and supply chain reviews, such as for semiconductors, green batteries, rare earth mining and processing, and pharmaceuticals (NSC 2021). However, longer reviews by a half dozen other agencies of other associated supply chains are underway, and there may in the medium term be opportunities to apply this evaluation framework more broadly.

The following criteria for industrial policy and planning affect **productive capacity**, **climate**, **equity**, **economic democracy**, and **government capacity**.

DOES IT FOSTER THE INDUSTRIES AND MARKETS WE MOST NEED AS A SOCIETY AND COUNTRY?

Perhaps the most important question for policymakers when developing industrial policy is whether it is promoting the industries we need most to allow all members of our society and country to flourish. As leading industrial policy scholars Mariana Mazzucato and Rainer Kattel argue, “The public sector bears responsibility for the long-term resilience and stability of societies, and for shaping public outcomes through policy-making and public institutions” (Mazzucato and Kattel 2020). When posed so plainly, this suggests a reordering of our current industrial policy regime, one that gives far greater government support to some industries (green energy) and far less to others (fossil fuels). In fact, the recent COVID-19 crisis has led to a set of new industrial policy interventions—from vaccine development to semiconductor supply chain



management. Examining this question when it comes to shaping industrial policy and planning also marks a sharp and needed break with the neoliberalism of the late 20th and early 21st century, wherein, as historian Quinn Slobodian writes, elites weaponized the state to encase and protect markets and themselves from democratic accountability (Slobodian 2018). Put differently, the state never truly disappeared: Instead, its power was used by private interests to structure society toward their narrow interests. In our suggested alternative paradigm, the market structuring activity would be taken on behalf of the majority of society.

DOES IT PROMOTE ENVIRONMENTAL SUSTAINABILITY?

An important and necessary corollary to the question of whether industrial policy is fostering the industries and markets we most need as a society is whether it is properly addressing those industries that are causing destruction in ways that prevent all members of society from flourishing. With the US and humanity as a whole facing profound existential challenges from the climate crisis, any industrial policy should prioritize decarbonization. If the planet is not habitable, it won't matter which country is the best widget maker.

As our colleagues Rhiana Gunn-Wright, Kristina Karlsson, Kitty Richards, Bracken Hendricks, and David Arkush argue in [*A Green Recovery: The Case for Climate-Forward Stimulus Policies in America's COVID-19 Recession Response*](#), there is no such thing as “climate neutral” fiscal policy; all fiscal policy has climate impacts, and the question for policymakers is whether to harness it as a tool in the service of decarbonization or to ignore its impacts and continue on our current, unsustainable path (Gunn-Wright et al. 2020). This way of viewing fiscal policy is also true for industrial policy. In many ways, the logic of the Green New Deal ushered in the contemporary debate about express industrial policy, as it is explicitly premised on replicating for a 10-year mobilization the logic of the most successful period of industrial policy in US history—World War II—without the war.

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DOES IT FOSTER EQUITY AND INCLUSION?

The way many pundits and policymakers talk about industry and competitiveness is often trapped in the hypermasculine image of men (usually white) building things with their hands. Trade stories in the news often include pictures of factories, farm goods, and manufacturing goods in containers.

Yet this association is a result of systemic and institutionalized racism and sexism. For one, many Black and Latinx workers are in the manufacturing sector and have been disproportionately harmed by the trade shocks of recent decades (Western et al. 2021). Indeed, even the iconic Indiana Carrier plant that former President Trump pledged to save (in what some saw as a dog whistle of racial solidarity with the white working class) was nearly evenly divided between white workers and workers of color, while also employing many women (Jaffe 2018). Further, some of the sectors that Trump focused the most energy on—such as steel—disproportionately employ white workers, while relatively ignored sectors like care, restaurants, and retail disproportionately employ women and workers of color (BLS 2021).

Industrial policy can and should encompass every industry, including service sector industries. In fact, any industrial policy regime worth its salt would spend at least half of its energies on the service sector—which employs 80 percent of Americans (manufacturing accounts for only around 12 percent, agriculture 1.5 percent, and self-employed the remainder). Moreover, industrial policy planning that only addresses industries that predominately employ white people or men—making those industries more profitable or more attractive for private investment—serves to exacerbate race and gender inequality.

An industrial policy and plan that fosters equity and inclusion would extend some of the logic of “targeted universalism” (Flynn et al. 2016), whereby industries would be selected for favorable government treatment based in part on their current and historic employment of women and people of color.

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DOES IT ENHANCE DEMOCRATIC GOVERNANCE OF OUR ECONOMY?

A majority of American workers report being treated unfairly or arbitrarily in the workplace (Hertel-Fernandez 2020a). Indeed, by any measure of economic democracy—for example, having a union to protect rights in the workplace or concentration of corporate power at the top—the US does abysmally when compared to other countries. Yet we know higher union density is associated with economic gains and greater democratic participation for communities as a whole (Tucker 2018; Andrias and Rogers 2018), while at the other end of the distribution of might, highly concentrated corporate power leads to economic elites making decisions for the rest of us. The rise of financialization, decline of antitrust enforcement, and lagging tax enforcement at the top give private capital substantial discretion over everything from patterns of investment to labor markets to what passes Congress (Palladino 2018; Stiglitz, Tucker, and Zucman 2020; Naidu and Posner 2020).

Industrial policy and planning can play an important role in changing the distribution of power between firms, between labor and capital, and ultimately in our democracy itself. During the Franklin D. Roosevelt administration, the leaders of the Reconstruction Finance Corporation (RFC) leveraged federal resources to force corporate CEOs to limit their pay increases, settle disputes with workers, and change patterns of investment (Jones and Angly 1951). The threat of nationalization enabled government to increase or decrease competition within industries, depending on whether less or more coordination between private actors served the interest of the New Deal or wartime mobilization (Bossie and Mason 2020a, 2020b). We are seeing a return to this way of thinking in the Biden administration's recent supply chain review, which recommended that government investments in industry be paired with social conditions like card check neutrality in union drives (NSC 2021). In another example, during the COVID-19 pandemic, the Federal Reserve blocked banks from engaging in stock buybacks or paying dividends unless certain conditions were met (Palladino 2020; Cox 2021).

All of these past and potential tactics can be templates for how to align industry's geographic, corporate governance, and labor practices and decisions with the public interest, and in the process, increase the very legitimacy of industrial policy. Indeed, successful industrial policy requires careful guardrails to avoid regulatory capture of regulating agencies by the regulated firms (Evans 1995). Strong up-front conditions, credibly enforced, as well as attention to ownership and market structures, can ensure that democracy is deepened while our economy is transformed.



DOES THE GOVERNMENT HAVE THE INSTITUTIONAL CAPACITY TO DEVELOP AND SUSTAIN IT?

Successful industrial policy requires renewed attention to the capacity of government to develop and sustain it. Industrial policy of the past paid too little attention to whether the agencies that were being assigned work had the right mix of training for their staff, budget capacity, freedom from competing jurisdictional claims by other agencies, autonomy from private firms, and embeddedness and awareness about real-time economic developments (Finegold and Skocpol 1995; Andreoni and Chang 2019). Successful industrial policy requires investment in the capacity of government officials to become, as Mariana Mazzucato describes, “hotbeds of creativity, adaptation, and exploration” (Mazzucato 2015). It may also require updating the structure of our federal government to better reflect the demands of industrial policy. This could require, for example:

- A reorganization of regulatory review so that long-term investments are rewarded rather than penalized (both by executive and legislative branch “scorers” and “cost-benefit analyzers” and by the courts in judicial review) (Tucker and Nayak 2020);
- A rationalization of trade responsibilities across agencies (Meyer and Sitaraman 2018); and
- Careful attention to the cultivation of “policy feedback loops,” in which agencies create and continually mobilize and empower countervailing power (e.g., bureaucrats and labor unions) to check corporate power (Hertel-Fernandez 2020b).

CONCLUSION

Economic transformation is necessary to build back better after the COVID-19 crisis and to confront systemic inequalities, the climate crisis, and supply chain dysfunctions. A remaking of government is necessary to spur this critical economic transformation. Gaining the public trust and legitimacy to pursue industrial policy and planning will require upgrading the capacities and toolkit of government, which in turn requires public trust and legitimacy. This circularity (in which greater governmental capacity requires trust, which in turn requires demonstration of capacity) can only be overcome by committing to an industrial policy that looks neither like the authoritarian varieties we see in China, nor the technocratic submerged varieties we see in other trading partners. An American industrial policy for the 21st century must center



national productive capacity, climate, equity, economic democracy, and mobilization of countervailing power of government. This issue brief equips policymakers with the considerations they will need to embark on the journey of industrial transformation—a journey that will bring good jobs, more sustainable growth, and the potential for the social cohesion that such shared national projects can foster.



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