

Testimony prepared for the U.S. House of Representatives Oversight Subcommittee on Economic Growth, Energy Policy, and Regulatory Affairs for a hearing titled “Made in the USA–Igniting the Industrial Renaissance of the United States”

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Hearing on “Made in the USA: Igniting the Industrial
Renaissance of the United States”

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Chairman Burlison, Ranking Member Frost, and members of the Subcommittee, thank you for the opportunity to talk about what the United States can do to support manufacturing here at home. My name is Adam Hersh, and I am a Senior Economist at the Economic Policy Institute, a 501(c)3 nonprofit organization in Washington, DC where I study trade, industrial policy, manufacturing, and the U.S.-China economic relationship.

This is an important hearing topic for legislators.

Manufacturing industries are critical to U.S. economic and national security. Manufacturing is a special and economically critical activity for a number of reasons.

Productivity growth in manufacturing far outstrips that in service sector industries—the innovation that is essential to the continual increase in our standard of living.

Manufacturing activities have some of the highest multiplier effects—how much additional activity is induced in other sectors of the economy for a given level of production. The heavier the manufacturing activity, the larger the effect. For example, one job in motor vehicle manufacturing supports 14 jobs in other industries; 1 job manufacturing steel products supports 13 additional jobs.¹

Across countries, economic growth accelerations are associated with a rapid increase in the share of manufactures in exports and increases in the manufacturing share of total employment.² Just simply investing in production equipment yields a cross-country average return of 30 percent.³

But U.S. manufacturing has suffered a long, secular decline at the hands of a myriad of economic forces and policy mistakes. Though this is timely for policymakers to address this problem more seriously, the premise for this hearing is out of date. The previous administration had already

ignited a renaissance in key manufacturing industries. 2024 recorded the highest U.S. manufacturing investment in history.⁴ 2023 was the second highest year on record. This was achieved through a nascent approach to industrial policy that wove together robust incentives to expand supply and demand for Made-in-the-USA manufactures, strong investments in scientific research and development, and strategic tariffs that supported U.S. industry by countering unfair and mercantilist foreign trade practices. In less than 100 days, the current administration has squandered this progress with policymaking chaos, senseless cuts to critical and productive government programs, and an indiscriminate and nonstrategic approach to trade policy. While inheriting an historically strong economy, now economic indicators for the manufacturing sector outlook are hitting or near their lowest levels in recorded history and economic policy uncertainty is at its highest level ever.⁵

To be certain, the industrial policy approach begun under the Biden administration was not perfect. It left room for improvement and expansion. But President Trump is doing neither of these things. It is not so much that the Trump administration is throwing the baby out with the bathwater as they are demolishing the entire bathroom. As a nation, this will make us all poorer, more dependent on foreign technology leadership, and more at risk of costly supply chain disruptions. Nor will this approach create good jobs that provide a pathway to the middle class for the nearly two-thirds of the workforce without a 4-year college degree.

Governing and policymaking in the first 100 days of the Trump administration has imposed real and significant economic costs on businesses and families in the United States. Perversely, this is undermining our shared goal of a U.S. manufacturing renaissance. But there is no reason it needs to be this way. My testimony will explain how a different approach to trade and industrial policy that improves on past successes and fixes policy mistakes can get us there. This will require strengthening state capacity, rather than emasculating it as is happening under the so-called “Department of Government Efficiency” (DOGE). It will also make clear that “deregulation” is no recipe for economic success. Though there is always room for smarter regulations, regulations exist for reasons that enhance economic growth and social welfare.

Guidelines for U.S. industrial policy

Policymakers and economists have long debated the use of industrial policy. For every historical example of successful applications of industrial policies, there are even more examples of failed attempts. Resistance to industrial policy has been rooted in free market fundamentalist beliefs as well as in fears of policy capture by powerful special interests contorting policy’s goals and implementation for rent-seeking and corruption.⁶ Now, however, economists generally recognize pervasive market failures (and a more general class of coordination failures) that impede investments in industrial capacity as well as research and development. Moreover, legitimate concerns about policy capture and corruption can be addressed by good policy design and rigorous oversight. The overwhelming evidence of successful industrial policies carried out by late-developing East Asian economies has motivated a substantial body of research and produced an emerging consensus demonstrating not only that industrial policies are feasible and

efficacious, but also how and when it succeeds.⁷ Legislators should heed these lessons and incorporate them into policymaking to sustain America's industrial renaissance. I summarize the key points here.

First, the existence of market failures can create positive (or negative) externalities where the benefit (or cost) from an economic activity is not fully captured by (or contained within) the entity undertaking that activity. Though there are numerous examples of externalities that policies can correct to shape the direction of industrial development and enhance growth and social welfare, the foundational case for industrial policy is the positive externality created by learning spillovers. Learning is costly—whether that is investment of time and money in research and development of new technologies, or learning what kinds of products can be produced profitably given existing resources and technology—but knowledge from those investments in learning is readily appropriable by third parties, even in an environment of strong intellectual property rights.⁸ The result of this positive externality is endemic underinvestment.

In short, because other people can easily emulate what I might learn from investing in knowledge discovery, it is a disincentive for me to make those investments. The more general and appropriable the knowledge, the stronger the disincentives are to make those investments. This is why public investments in basic scientific research is so critical and why it yields such a high return on investment.⁹ Federal Reserve research finds that public nondefense investments in R&D yield a return of between 140 and 210 percent and account for one-fifth of business sector total factor productivity growth since World War II.¹⁰ In contrast, the long-run average return on investment in the S&P 500 index is around 10%.¹¹ Ideally, public and private investment in knowledge is complementary. For example, the 3D printing technology on which my co-panelists rely for their businesses (Hadrian and Divergent3D) was developed at a public research center in Japan, the Nagoya Municipal Industrial Research Institute.

But chronic underinvestment also occurs at the frontiers of technological progress. In addition to the knowledge appropriability problem, investments in both research and commercialization at the technological frontier, by definition, have unknowable probabilities of success. This makes it difficult for private investors and risk markets to estimate an expected return on investment and, therefore, to commit private capital to cutting-edge ventures. This problem is troublesome both because of a notable long-term slowdown in U.S. productivity growth and innovation, as highlighted by Northwestern University economist Robert Gordon, and because of rapid technological advance resulting from China's successful industrial policies.¹² Note that China's BYD, now the world's largest electric vehicle manufacturer, achieved its market-leading position not by "stealing" technology from U.S. firms—we don't have that technology.

There are a broad range of policy interventions available to address externality problems in addition to public scientific research, including supply-side and demand-side subsidies (such as tax credits, grants, and credit enhancement in the Inflation Reduction Act and CHIPS and Science Act), advance market commitments (such as used in Operation Warp Speed), and innovation challenges.¹³ Not only are strong intellectual property rights insufficient to solve these externality problems, but by restricting the dissemination of

knowledge they can actually impede innovation and limit the national competitive advantage created by generating novel ideas.¹⁴

Policies to address information externalities should take a portfolio approach that provides support to firms, universities, and government research institutions *and* embody more risk tolerance in a diversified investment strategy.¹⁵ Moreover, policymakers can increase the returns on investment for the public by requiring broad dissemination of knowledge produced with taxpayer support, reversing the Bayh-Dole Act of 1980's allowance of private patenting for publicly-funded inventions, and creating a public investment trust that retains equity ownership stakes or requires open source technologies where the public finances innovation.¹⁶

Cuts to government and university research and the deportation of international students and scholars run counter to the goals of an American industrial renaissance and will decimate our ability to innovate and compete for the foreseeable future.¹⁷

Second, industrial policy should address coordination failures. Coordination failures occur when the profitability of one investment project is contingent upon complementary economic activity of other agents. As a simple example, consider a tropical island. This island may have great potential opportunity to attract investment in a range of tourism-related private businesses—hotels, restaurants, etc.—but these investments are unlikely to be forthcoming without some coordination that ensures a steady stream of tourists, such as an international airport and civil aviation regulatory infrastructure, a tourism promotion authority, and workforce development programs to train workers in hospitality and foreign language skills. These are scenarios where multiple equilibria are possible, but the high welfare equilibrium is only possible with overarching coordination; without coordination, the low welfare equilibrium will obtain where potentially profitable investments go unrealized.¹⁸

A more complicated example has been efforts to onshore new electric vehicle battery manufacturing. Coordination activity required planning for the entire length of the supply chain—from critical mineral extraction and refining, to manufacturing of active battery materials, to well-regulated markets for trading these components, to production of battery cells and their assembly into modules to be placed in vehicles, to the development of charging infrastructure and a robust energy grid, to systems for recycling batteries at the end of their lifecycle, and the training of workers performing new tasks throughout the chain. China now dominates the global supply of batteries, battery components, and battery technologies because its industrial policy coordinated and provided incentives for the investments of disparate, unrelated party actors, distributed across the globe.¹⁹

Policymakers should identify key industries and activities to target for expansion—through both economic and national security lenses—conduct supply chain analyses, and devise coordination strategies specific to each application. Invariably, this will include investments of public goods, tailored to each activity, on which the viability of private investments relies. The ongoing global shortage of commercial and industrial electrical transformers is a reminder why such coordinating actions should be a concern as the United States aims to expand domestic manufacturing capacity (and to address housing shortages and

costs).²⁰

Coordination can also address the costs and externalities of fragile global supply chains. Recent decades have seen multinational corporations prioritize maximizing short-term profits, even at the expense of investing in the resilience of their supply-chains. For example, a company that focuses on maximizing current profits might source all inputs from the single lowest-cost producer. Or, they might minimize holding inventories of key inputs to production, since inventories by definition are inputs not being sold in the current period and generating profits.

This short-term focus both ignores risks to the company's own operations from supply chain disruption, but the individual business choice to underinvest in resilient supply chains creates a negative spillover cost for other businesses and consumers that rely on their products. The economic contraction and inflationary spikes created by supply chain disruptions during the COVID-19 pandemic—in particular shortages of personal protective equipment (PPE) and semiconductors that disrupted automotive and electronics supply chains—underscore the need to address realized and potential coordination failures.²¹

Third, where possible, industrial policy should promote efficiency and accountability. This can be achieved by combining rigorous monitoring, oversight, and discipline of entities using public funds with market-disciplining effects of competition. Exporting, in particular, provides such discipline and is associated with a rapid convergence toward productivity levels of the most advanced producers and some industrial policy supports can be designed to be contingent on export performance.²² Competition and economic efficiency may not always be feasible or desirable, particularly in cases where targeted industries are critical for economic security or national security, or where U.S. producers face unfair or mercantilist trade practices competing in U.S. and global markets. Here, industrial policy must endeavor to level the competitive playing field and rely on more direct oversight of industrial policy recipients.

Fourth, succeeding at these industrial policy actions requires strong state capacity. Even before the current administration's DOGE cuts, researchers at the Niskanen Center had warned that U.S. state capacity has eroded dangerously under a "a toxic contempt for government and public service per se."²³ There is no successful implementation of industrial policy in world history where state capacity is in decline.²⁴ When China embarked on reform from a centrally-planned communist economy, it did not cut its public sector bureaucracy—it expanded it by the millions, replacing ideological political hacks with scientists, engineers, and skilled managers.²⁵ Without sufficient state capacity, efforts to promote industrial development are prone to backfire and lead to much waste and corruption.

Strategic tariffs, not indiscriminate chaos

Thus far I have not mentioned tariffs. Tariffs can be and have been effective tools for promoting industrial development when they are targeted and strategic, *and when* they are accompanied by complementary industrial policies. They absolutely must remain part of the industrial policy toolbox—including proactive use and use in trade remedies such as

under Sections 232 and 301 of the Trade Act and in antidumping and countervailing duty applications to address unfair and mercantilist foreign trade practices. However, tariffs on their own are insufficient as an industrial strategy due to the myriad market failures and coordination problems discussed above. Thus, tariffs must be used judiciously and as part of a comprehensive strategy for industrial development.

Strategic applications of tariffs are effective in supporting targeted industries. Several examples of this are the 25% tariff on light-duty pickup trucks, Section 232 tariffs on steel and aluminum products, Section 301 tariffs on Chinese electric vehicles, and Section 301 tariffs on solar panels have all played important roles in sustaining and expanding U.S. manufacturing in key strategic industries.²⁶ Recent action to support the U.S. shipbuilding industry under Section 301 is also promising.²⁷ Tariffs also have a role to play in promoting a high-road approach to trade that disincentivizes the race-to-the-bottom competition in labor, environmental, and consumer protection.²⁸ The kind of border adjustment mechanism being implemented in the European Union to address carbon emissions pollution is a model that can be readily adapted to address a range of issues where weak or unenforced protections in foreign countries otherwise create a competitive advantage by exploiting workers, poisoning the air and water, and exposing consumers to toxic chemicals.

These are examples of strategic, targeted tariffs. However, indiscriminate and broad-based tariffs—such as the so-called “Liberation Day” tariffs—will not solve the trade challenges facing U.S. manufacturing or rebalance trade deficits.²⁹ First, U.S. manufacturing relies on a significant share of imported intermediate inputs. As much of 45% of the value of U.S. manufactures is comprised on imported content.³⁰ Levying tariffs on these inputs may have the perverse effect of raising production costs and pricing U.S. manufacturers out of the competition or rendering U.S. production financially unviable. A significant share of those intermediate inputs originates from China and now manufacturers in every factory on Earth outside of the United States can procure those inputs without paying a 145% tariff.

Second, careless application of tariffs invites retaliation from trading partners on our exports, including tariffs that price U.S. manufacturers out of key global markets. China, for one, has retaliated not just with tariffs on U.S. goods, but by canceling orders for Boeing aircraft.³¹ This was a predictable outcome, which the Trump administration should have anticipated given that China did the same thing after the 2018 tariffs.³² Three-fourths of Boeing’s commercial aviation market is outside the United States, with China comprising one-third of that foreign market.

Third, other things being equal, broad-based tariffs should be expected to cause an appreciation of the U.S. dollar against foreign currencies. When the dollar appreciates, it makes U.S. exports relatively more expensive and less competitive to foreign buyers and makes imports more attractive to U.S. buyers. This penalizes manufacturing exports and exposes manufacturers to higher pressures of import competition. However, this so far has not been the case with changes to tariff policies this year—instead, the dollar is plummeting as the chaotic and universally hostile trade policy is leading investors and foreign governments to question the future of the dollar as an international reserve currency and safe harbor investment. My Economic Policy Institute colleagues, among

others, have long argued for an orderly, competitive realignment of the value of the dollar to remove this deterrent to U.S. manufacturing.³³ There are ways to do this responsibly, but undermining the dollar-centered international financial system is the wrong way to achieve a currency realignment and risks permanently higher costs of capital for would-be manufacturing investors and tighter fiscal constraints on the conduct of industrial policy.

Labor standards and unions make good jobs

One motivation for focusing on an industrial renaissance is the preservation or expansion of manufacturing jobs. Here, too, this motivation is backward-looking rather than facing the future. Manufacturing jobs were not always good jobs—they only became good jobs when widespread unionization made them good jobs—particularly for workers without a 4-year university degree to achieve a middle-class standard of living. But unionization in manufacturing has been on the decline alongside declining levels of manufacturing employment because of antiworker policies; import competition, offshoring and employer threats to offshore; as well as automation and productivity growth, which reduce labor requirements for a given level of manufacturing production. Unionization in manufacturing stood at 27% for nonsupervisory workers in 1989, but fell steadily to 20% in 2001, 12% in 2017, and 11% in 2024.³⁴

As unionization has fallen, so has the quality of manufacturing jobs. Federal Reserve research finds that declining unionization explains more than 70 percent of the decline in the manufacturing wage premium.³⁵ In other words, without unions, we should not expect manufacturing work to provide better jobs than those in nonmanufacturing industries. On average, union nonsupervisory manufacturing workers earned 20% higher wages than their nonunion counterparts in 1989; in the current business cycle expansion, the average union manufacturing worker earns less than 2% more.

A smart and robust industrial policy can increase manufacturing activity and employment, but unless policymakers also take steps to ensure these are high quality jobs, lower wages and riskier jobs will result, as seen in the recent expansion of motor vehicle manufacturing across Southern states.³⁶ And given that countries like Germany and China, which have long sustained trade surpluses in manufactured goods, also see manufacturing jobs falling as a share of total employment, we should be under no illusion that manufacturing employment will return to levels of the Golden Age of the postwar U.S. economy. Instead, policymakers should work to ensure that all jobs in our economy provide dignity and decent compensation.

Deregulation is at best insufficient, at worst counterproductive for industrial growth

Many in the private sector are pinning their hopes on deregulation to deliver a burst of economic growth. Unfortunately, this hope is dangerously misplaced. Deregulation is no panacea. Regulations exist for a reason—they solve problems of negative externalities that unfairly and inefficiently shift costs and risks away from the economic activities where they are created. In other words, regulations provide benefits, not just costs.³⁷ The truth is that

there is no systematic relationship between regulations writ-large and economic performance indicators.³⁸

Financial regulation is a key example—inadequate regulation of financial actors led to the 2007-09 Great Financial Crisis, imposing previously unimaginable economic costs—an estimated \$14-22 trillion for the United States.³⁹ More than 10 years after the financial crisis, business investment still lagged far behind where it should have been.⁴⁰ We all would have been much better off with stronger regulation.

Often, when people talk of deregulation, they mean scrapping regulations that protect workers and the environment. These, too, don't reduce costs—they redistribute them onto people who are unable to bear or manage them. And, like with financial deregulation, they can often undermine rather than enhance economic growth. Anti-pollution regulations illustrate this case well. The Clean Air Act and related regulations prevent the discharge of toxic chemicals in the environment that impair cognitive and physical development—leading to lifelong human developmental deficits—increase incidence of health problems that lead to lower productivity and absences from work, and result in premature deaths that incur costly health expenditures.⁴¹

Analyses more often than not overestimate the costs of compliance with regulations and underestimate the benefits of regulation.⁴² This occurs because firms are more creative than quantitative models can account for and will find ways to comply with regulations that are unforeseen. Compliance strategies often involve innovation in abatement or mitigation of the regulated activity, which can spawn entirely new industries and technologies. This should not suggest there are no ways to do smarter regulation. But rather, that deregulation can be a recipe for making life worse for groups of individuals as well as the economy as a whole.

What Congress should do now

1. Overturn the president's declaration of a blanket national economic emergency and reclaim its authority to regulate trade. Only by removing the capriciousness of trade policymaking from the president's dictums can we hope to restore business and consumer confidence in U.S. economic policy and preserve tariffs for the strategic, targeted tool where they can do good. When confidence and normal order are restored to U.S. Treasury debt markets, consider legislation like the bipartisan "Competitive Dollar for Jobs and Prosperity Act," that would prevent overvaluation of the dollar by levying a market access surcharge on investors from countries running sustained current account surpluses with the United States.⁴³
2. Use budget reconciliation to restore and expand funding to critical scientific research programs, including the National Institutes of Health, the National Science Foundation, national laboratories, the National Institute for Standards and Technology, grants to universities and graduate students, and more.
3. Use budget reconciliation to preserve and expand funding for programs that are working to support manufacturing investment and production under the Infrastructure Investment and Jobs Act and the Inflation Reduction Act. In particular, this should

include (though not limit to): the Department of Energy's (DOE) Industrial Demonstrations Program the DOE Loan Program Office; the Greenhouse Gas Reduction Fund, using Buy America content requirements to promote domestic manufacturing; the Domestic Manufacturing Conversion Grant Program; the range of production, commercial, and consumer grants and tax credits for manufacturing electrical vehicles and components. EPI analysis finds that retreating from EV support policies will cost 35,000 job-years manufacturing medium- and heavy-duty trucks and buses in the United States, resulting in nearly half a million fewer deliveries of both low- and no emission trucks *and* internal combustion engine trucks by through 2032.⁴⁴

4. Use budget reconciliation to restore and expand funding for programs that promote strong labor standards abroad, including the Department of Labor's International Labor Affairs Bureau, the State Department's Bureau of Human Rights, USAID, and grants to the American Center for International Labor Solidarity. These programs working to raise labor standards abroad prevent U.S. workers from competing against labor exploitation and facilitate rising incomes that can support expanded exports of U.S. manufactures.
5. Pass the bipartisan PRO Act to ensure that workers can enjoy unimpeded their constitutional rights to free assembly and collective bargaining in unions. Use budget reconciliation to restore staffing and funding for the National Institute of Occupational Safety and Health, the Department of Labor's Occupational Safety and Health Administration, Wage and Hours Division (WHD), Office of Federal Contract Compliance Programs, and other DOGE-related reduction in force orders.

Thank you for the opportunity to testify today, and I look forward to your questions.

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