Beyond Rhetoric:

The Enduring Political Appeal of U.S. Industrial Policy for Critical and Strategic Technologies

Doug Calidas
Chris Li

HARVARD Kennedy School
BELFER CENTER
for Science and International Affairs

About the Authors

Doug Calidas is a Fellow at Harvard's Belfer Center for Science and International Affairs and currently serves as Senior Vice President of Government Affairs for Americans for Responsible Innovation (ARI), a nonprofit organization dedicated to policy advocacy in the public interest, focused on emerging technologies like artificial intelligence (AI). ARI's mission is to help U.S. policymakers develop a thoughtful governance framework for rapidly advancing technologies that protects the public from harm while continuing to foster innovation, and Doug leads ARI's policy development process and outreach to policymakers. He is also a former Technology and Public Purpose Fellow (2022-2023) at the Belfer Center.

Doug previously served as Chief of Staff to Senator Amy Klobuchar, a senior member of the Senate Democratic leadership team. As Chief of Staff to Senator Klobuchar, Doug managed a team of approximately 50 staffers and served as the Senator's top strategist for policy initiatives, media relations, and constituent services. He led all staff in supporting the Senator's work as Chair of the Judiciary Antitrust Subcommittee and a senior member of the Commerce and Agriculture Committees. Doug spent five years with Senator Klobuchar, having previously served as the Senator's Legislative Director, Deputy Legislative Director, and Senior Economic Adviser. Before advising Senator Klobuchar, Doug served as Chief Counsel for Senator Joe Manchin. He began his time in the Senate as a Fellow on the staff of the Senate Finance Committee under Senator Ron Wyden.

Prior to working on Capitol Hill, Doug spent six years as an attorney in private practice at the Steptoe law firm in Washington, D.C. He is a graduate of Duke University School of Law – where he was an Editor of the Duke Law Journal and a member of the moot court board – and the University of Pennsylvania's Wharton School of Business, where he studied finance, economics, and international relations. He lives in Rockville, Maryland with his wife Katie and their four young children.

Chris Li is a Technology and Geopolitics Fellow at Harvard University's Belfer Center for Science and International Affairs, where he focuses on U.S.-China relations, Indo-Pacific security, the geopolitics of Asia, and technology competition. His research interests also include Chinese politics, Taiwan and cross-strait relations, and biotechnology. Previously, Chris served as Director of Research for the Asia-Pacific Initiative at the Belfer Center, where he led projects examining U.S. strategy and foreign policy in the Indo-Pacific region. Chris began his career at the Belfer Center as a research assistant to Graham Allison in the Avoiding Great Power War Project and coordinator of the Harvard China Working Group, while also contributing to the Technology and Public Purpose Project, led by former Secretary of Defense Ash Carter. Prior to joining the Belfer Center, Chris was special assistant for life sciences strategy in the Office of the Provost at Harvard and conducted research in a molecular biology lab at Massachusetts General Hospital.

A proud native of New Jersey, Chris received his B.A. in biology from Harvard University and a M.A. in Global Affairs from Tsinghua University, where he was a Schwarzman Scholar. He is currently a PhD candidate in biological and biomedical sciences at Harvard Medical School.

About the Belfer Center

The Belfer Center for Science and International Affairs is the hub of Harvard Kennedy School's research, teaching, and training in international security and diplomacy, environmental and resource issues, and science and technology policy. The Center has a dual mission: (1) to provide leadership in advancing policy-relevant knowledge about the most important challenges of international security and other critical issues where science, technology, environmental policy, and international affairs intersect; and (2) to prepare future generations of leaders for these arenas.

About the Program on Emerging Technology, Scientific Advancement, and Global Policy

The Belfer Center's Program on Emerging Technology, Scientific Advancement, and Global Policy tackles policy challenges that arise at the intersection of technology and geopolitics and trains the next generation of leaders to be fluent in both technology and policy domains. The Program conducts research, convenings, training, and public engagement, including Technology and Geopolitics fellowships for outstanding pre- and post-doctoral scholars; senior fellowships to bring experienced scholars and practitioners into our scholarship, events, mentorship, and training; reports and articles; seminars, study groups, and other convenings.

The Program addresses challenges including: balancing security and innovation in the technology competition between the U.S. and China; ways in which emerging technology will shape the landscape facing policymakers and the tools with which they make and evaluate policy decisions; the international governance of technologies such as AI and bioengineering that are evolving faster than traditional policy methods can respond; the geopolitical implications of clean energy technologies; and balancing international scientific cooperation and competition in a multi-polar world.

The Program publishes frequent reports and holds regular events, drawing on expertise from the academic, government, and private sectors in the Boston-Cambridge area and beyond.

I. Introduction

In 2020, the United States embarked upon a novel experiment in industrial policy that was unthinkable just a decade before.[1] The laws passed by Congress between 2020 and 2022—particularly the *CHIPS and Science Act*, which provided large-scale subsidies to semiconductor manufacturers to defray the up-front costs of factory construction and equipment—marked a sharp break with decades of economic policy precedent and signaled the possible emergence of a new era of bipartisan support for a strong federal role in supporting high-tech manufacturing in the United States.[2]

While the lion's share of new laws, agency initiatives, and funding announcements were signed and promulgated during President Biden's term, President Trump's embrace of economic nationalism was the political earthquake that made such an experiment possible.[3] By catalyzing a wholesale realignment of economic policy priorities among much of the Republican voter base, Trump cleared the path for a new bipartisan coalition supporting a strong federal role in financing advanced technology manufacturing facilities.[4]

While the lion's share of new laws, agency initiatives, and funding announcements were signed and promulgated during President Biden's term, President Trump's embrace of economic nationalism was the political earthquake that made such an experiment possible.

President Trump's role in birthing the new industrial policy was more than rhetorical—in the last year of his first term, his administration took the first concrete steps to foster re-industrialization of advanced manufacturing facilities and Congress passed a law (the *CHIPS for America Act*) to authorize a new federal grant program to subsidize the construction of semiconductor manufacturing plants on U.S. soil. Keith Krach, then serving as President Trump's Under Secretary of State for Economic Growth, Energy, and the Environment, personally lobbied Taiwan chip manufacturer TSMC to build a fabrication plant in Arizona.[5] Under Secretary Krach also worked closely with Republican Senator John Cornyn and Democratic Senator Mark Warner to pass the *CHIPS for America Act*, which became law on January 1, 2021, three weeks before President Biden's inauguration.[6]

Yet because the authors of that law were unable to secure congressional funding of their bill at the time of enactment, it fell to the Biden administration and a bipartisan "gang" of senators to secure its funding. After

---

1 *See* Senator Marco Rubio, *Why I believe in industrial policy — done right*, Washington Post (Apr. 2, 2024) ("When I first came to Washington in 2011, 'industrial policy' were dirty words. Democrats and Republicans alike viewed pro-manufacturing laws and regulations with almost religious suspicion.") For a summary of this shift and the dynamics that helped bring it about, see William B. Bonvillian, *Industrial Innovation Policy in the United States*, Annals of Science and Technology Policy, v. 6, n.4: 318-352, 373-392 (Nov. 2022); Willy Shih, *The New Era of Industrial Policy is Here*, Harvard Business Review (Sept. – Oct. 2023).

In a working paper that one of us co-authored with Constanza Vidal Bustamante in February 2024, we examined the new political coalition that coalesced to rally support for passage of the *CHIPS and Science Act* and explored the sometimes conflicting policy aspirations that animated different members of the coalition. Constanza Vidal Bustamante & Doug Calidas, Working Paper, *Unraveling the Political Dynamics Shaping the U.S. Strategy for Technology Leadership*, Belfer Center for Science and International Affairs, Harvard Kennedy School (Feb. 20, 2024).

2 The White House. "FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China" (Aug. 9, 2022); David Adler & William Bonvillian, *America's Advanced Manufacturing Problem—and How to Fix It*, American Affairs, v.7, n. 3 (Fall 2023).

While the U.S. government has pursued measures previously that could be considered a form of industrial policy—such as the bailout of General Motors in 2009—many of those efforts are best understood as components of a broader economic stabilization strategy pursued in the wake of the 2008 financial crisis.

3 Julius Krein, *What Should Be the Goal of U.S. Industrial Strategy?*, The Liberal Patriot (Nov. 13, 2023).

4 *See* Eliana Johnson, *A Big Policy Fight Is Brewing on the Right. And It's Not All About Trump*, Politico (Aug. 5, 2021).

5 Alan Patterson, *Architect of CHIPS Act Speaks on Its Impact*, EE Times (Aug. 1, 2022).

6 *Id*.

eighteen agonizing months of negotiations within and between the two parties and chambers, this funding was finally secured with the passage of the *CHIPS and Science Act*, a landmark law that also sought to overhaul the way the federal government supports scientific research.[7]

Both President Biden and Vice President Harris highlighted the *CHIPS and Science Act* during their 2024 presidential campaigns against President Trump.[8] This was an easy political choice—the law was passed during their time in office and was popular with voters in both political parties, especially voters in the midwestern swing states that often decide presidential contests.[9] Thus, just weeks before election day, it seemed clear that regardless of which candidate prevailed, he or she would champion a substantial continuation—if not enhanced form—of industrial policy, including direct federal subsidies to U.S. manufacturers in critical technology sectors.

Trump threw a sharp curveball into this analysis just ten days before the election. Near the end of a three-hour appearance on the *Joe Rogan Experience*, he harshly criticized the *CHIPS and Science Act* and manufacturing subsidies in general, proclaiming:

> [L]et me just say, that chip deal is so bad. We put up billions of dollars for rich companies to come in and borrow the money and build chip companies here. And they're not going to give us the good companies anyway. All you had to do is charge them tariffs.[10]

At the time, with Trump favored to win the upcoming election—which he ultimately did—these comments ricocheted across the business, policy, and international community, instilling fear or delight (depending on one's point of view) that in his second term, Trump will eschew any reliance on direct federal subsidies for advanced technological manufacturing and thereby halt the recent turn to vigorous industrial policy he helped usher into place.[11]

Speaking to House Republicans at a Miami retreat a week after beginning his second term as President, President Trump reiterated his campaign pledge and promised to impose major new tariffs on imported semiconductors, among other items (including oil and pharmaceuticals).[12] Threatening tariffs of "25, 50 or even 100 percent" on chipmakers who do not manufacture their chips in the United States, President Trump accused Taiwan of "stealing" the United States' chip industry and once again denigrated the subsidies provided through the CHIPS Act, stating "[w]e don't have to give them money."[13] On cue, Trump's comments triggered a panic among interested parties, including the government of Taiwan, which soon sent a delegation to Washington.[14] And in his first second-term address to Congress on March 4, 2025, just weeks after assuming office, Trump doubled down, calling the CHIPS Act a "horrible, horrible thing," while touting TSMC's

---

7 Tim Clancy, "CHIPS and Science Act Enshrines Policy for New NSF Technology Directorate," American Institute of Physics (Nov. 23, 2022).

8 Jeanne Whalen et al., *Harris Puts Government Intervention at Heart of Economic Policy*, Wall Street Journal (Sept. 26, 2024).

9 *See* American Compass, Research: The New Conservative Voter (Sept. 27, 2023), https://americancompass.org/the-new-conservative-voter (summarizing poll finding that 78 percent of Republican voters agree with the statement that "the government should provide support to ensure that America is a leader in advanced technologies like semiconductors"); John Halpin, "What's the Point? Americans Support the CHIPS and Science Act," Center for American Progress Action Fund (Aug. 19, 2022), https://www.americanprogressaction.org/article/whats-the-point-americans-support-the-chips-and-science-act (examining polling conducted by Morning Consult and Politico, which found that "71 percent of Americans who voted for Biden and 62 percent of those who voted for Donald Trump in the 2020 presidential election back the basic provisions of the CHIPS and Science Act").

10 President Donald J. Trump (speaking to Joe Rogan), *The Joe Rogan Experience* (Oct. 26, 2024)

11 *See* Aaron Mehta & Valerie Insinna, *Trump's threat to abandon CHIPS Act 'horrific idea' Raimondo says*, Breaking Defense (Dec. 7, 2024); Chris Miller, *How the chip war could turn under Trump*, Financial Times (Dec. 6, 2024).

12 Gerrit De Vynck & Annabelle Timsit, *Trump says new tariffs on computer chips, semiconductors are coming soon*, Washington Post (Jan. 28, 2025).

13 *Id*.

14 Jonathan Chin, *Officials sent to the US to discuss Trump tariffs*, Taipei Times (Feb. 9, 2025).

announcement the day prior that it would invest an additional $100 billion to expand semiconductor manufacturing operations Arizona.[15]

President Trump's tariff negotiations are notoriously unpredictable, and a discussion of anticipated tariff policy over the next four years is outside the scope of this paper. Our purpose instead is to examine the outlook for federal subsidies for advanced technology manufacturing—including chip manufacturing—during the second Trump term. On this front, Trump's repeated disparagement of subsidies has caused many observers to believe that all hope is lost for an industrial policy package building on the success of the *CHIPS and Science Act*, whether focused on chip manufacturing or other advanced and critical technologies.

While reasonable, we believe this conclusion is premature. President Trump has a documented history of sharply criticizing the policy efforts of his predecessors for political gain, and there is good reason to believe that's what has happened here.[16] It remains to be seen how he will treat the *CHIPS and Science Act* specifically—and there are reasons for champions and beneficiaries of that law to be concerned.[17] Trump's insistence that tariffs are his preferred tool and indeed responsible for his win on TSMC's March 2025 announcement of another $100 billion investment, as well as his rhetorical broadsides against the CHIPS Act in his joint address to Congress, have cast doubt on the longevity of the legislation. But we believe it would be a mistake to place undue weight on President Trump's recent criticism of that law in assessing the outlook for follow-up industrial policy initiatives, including direct subsidies to manufacturers, over the next four years—especially the final two years of his term.[18]

Now that his contest with Vice President Harris is in the rear-view mirror, nearly every political factor points in the direction of Trump ultimately embracing a subsidies program for advanced technological manufacturing. For that reason, we expect he will, in time, embrace a continuation of the turn to advanced manufacturing subsidies kicked off by the *CHIPS and Science Act*.

Direct subsidies for advanced manufacturing are the proverbial "low-hanging fruit" for President Trump's second term. They directly advance his core campaign promises to restore American manufacturing

---

15 White House, *Another Historic Investment Secured Under President Trump* (Mar. 3, 2025).

16 *See, e.g.,* Bruce Crumley, *Why Trump May Drop Plans to Repeal Biden's Chips Act,* Inc. (Nov. 7, 2024) ("Trump repeatedly tried to repeal Barack Obama's 2010 Affordable Care Act during his first term, and just last year pledged he'd finish the job if re-elected. But given the popularity of the medical insurance program, Trump reversed course in March, declaring in a social-media post 'I'm not running to terminate the ACA.'").

Due in large part to the decisions of both President Biden and Vice President Harris to emphasize the *CHIPS and Science Act* and industrial policy in their 2024 campaigns, the law became associated in the public's mind with the Biden-Harris Administration. As a purported bipartisan accomplishment of the Biden-Harris Administration, the law became a natural target for denigration as Trump sought to neutralize Harris's perceived strengths, especially since major portions of the voting public never became familiar with the details of the law. *See* Alan Rappeport, *Trump Win Shows Political Limits of Biden's Industrial Policy Vision*, N.Y. Times (Nov. 8, 2024) (quoting Dr. Jonas Nahm, former Senior Economist for Industrial Strategy on the White House Council of Economic Advisers, as saying the law "was never sold" to the public as part of the presidential campaign).

17 *See* Kate Magill, *Trump could curtail CHIPS Act funding if reelected*, Manufacturing Dive (Nov. 4, 2024) ("'He could certainly throw a wrench into the existing CHIPS Act,' said Alan Sykes, a law professor at Stanford University. 'There's a possibility of fairly dramatic effects if he were to win the White House and try to curtail the subsidies.'").

President Trump announced on March 3, 2025 that TSMC would invest $100 billion for expanding its semiconductor plants in Arizona—giving credence to his argument that he prefers tariffs as an effective inducement to incentivize companies to build chip manufacturing capacity in the U.S. While the 2022 CHIPS and Science Act aimed to achieve similar objectives, Trump has criticized the legislation—including in his March 4, 2025 address to Congress˜—saying, "We are not giving them any money. Your CHIPS Act is a horrible, horrible thing. We give hundreds of billions of dollars and it doesn't mean a thing. They take our money and they don't spend it. All that meant to them—we giving them no money—all that was important to them was that they didn't want to pay the tariffs, so they came and are building, and many other companies are coming." See The New York Times, *Full Transcript of President Trump's Speech to Congress* (Mar. 4, 2025).

18 Since 2015, observers of all stripes have struggled to divine the policy implications of Trump's statements on the campaign trail, and Salena Zito's 2016 formulation of interpreting Trump's rhetoric has become a touchstone. *See* Salena Zito, *Taking Trump Seriously, Not Literally,* The Atlantic (Sept. 23, 2016) ("When he makes claims like this, the press takes him literally, but not seriously; his supporters take him seriously, but not literally."); *see also* Adam Rowe, *The Return of American Exuberance*, Compact Magazine (Jan. 20, 2025) ("A candid interpretation of his record must begin with acknowledging that much of it consists in erratic improvisations and meaningless hyperbole.").

might; they remain highly popular with both Trump's base of voters and the electorate at large; they can help forestall a decline in U.S. factory employment[19] that would be politically toxic to President Trump's brand; and they should easily gain bipartisan support if the President is willing to seek it in good faith. And in his March 4, 2025 address to Congress, Trump even singled out shipbuilding as an area where he will likely support industrial policy, announcing the creation of a "new office of shipbuilding in the White House that offers special tax incentives to bring this industry home to America where it belongs." As he argued, "we are also going to resurrect the American shipbuilding industry, including commercial shipbuilding and military shipbuilding. We don't make them anymore very much, but we're going to make them very fast, very soon."[20]

> Direct subsidies for advanced manufacturing are the proverbial "low-hanging fruit" for President Trump's second term. We believe President Trump will be inspired to pluck this fruit in the second two years of his current term (2027-2028).

We believe President Trump will be inspired to pluck this fruit in the second two years of his current term (2027-2028). The partisan governance that typically characterizes unified control of government—which Trump has arguably taken to an unprecedented degree during his short time back in office thus far—will likely poison the well for meaningful bipartisan collaboration on legislation beyond the typical "must-pass" bills that Congress must consider each year.[21] With Republicans holding a "trifecta" in Congress through the end of 2026 and the major provisions of the 2017 *Tax Cuts and Jobs Act* soon expiring, Congress is widely expected to focus its attention on policy priorities that it can advance on a party-line vote through the process of budget reconciliation. Trump may seek to advance some industrial policy goals through this process as well, though competing priorities and budgetary constraints may limit his ambitions on this front.

The following Congress, which will meet in 2027, will present new challenges for President Trump, and it is during these years that we believe vigorous industrial policy—including direct subsidies to manufacturers, particularly in strategic technology industries—will become especially appealing to the President. If history is a guide, Democrats will be favored to retake majority control of the House of Representatives and seek to oppose and challenge many aspects of the Trump Administration's agenda.[22] In this context, industrial policy will be one of the few areas where both congressional Democrats and Trump's own base will enthusiastically support the same agenda.[23] Moreover, the benefits of industrial policy may accrue to communities and constituencies that have borne the effects of retaliation from aggrieved trading partners, including for example farmers, thus creating immediate political benefits for the President.

---

19 While the number of permanent jobs that would conceivably be created by new semiconductor plants may be small, between short-term construction and long-term employment in other manufacturing sectors, the effect of subsidies would be politically aligned with President Trump's voter base.

20 The New York Times, *Full Transcript of President Trump's Speech to Congress* (Mar. 4, 2025).

21 This includes the annual appropriations bills, the annual National Defense Authorization Act, and legislation required to renew authorization for popular expiring programs.

22 See, e.g., Jacob Holt, *The Price of Legislative Success: The President's Legislative Agenda and Midterm Seat Loss*, American Politics Research, Vol. 53, Issue No. 1 (Sept. 25, 2024).

23 *See* American Compass, Research: The New Conservative Voter (Sept. 27, 2023); John Halpin, "What's the Point? Americans Support the CHIPS and Science Act," Center for American Progress Action Fund (Aug. 19, 2022); Julius Krein, *What Alexandria Ocasio-Cortez and Marco Rubio Agree On*, N.Y. Times (Aug. 20, 2019) ("Just as Republicans and Democrats in the Bush-Clinton era had intense debates over issues like marginal tax rates, all the while advancing an underlying neoliberal agenda, so will future debates play out in an era of renewed industrial policy.").

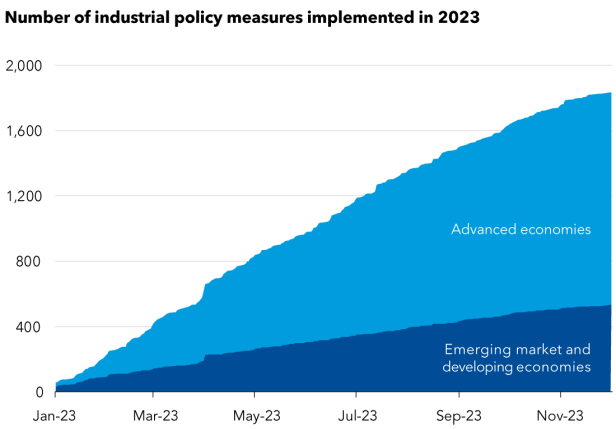
II. Historical Context of U.S. Industrial Policy

A. The Washington Consensus and its Discontents

For most of the late twentieth and early twenty-first centuries, mainstream economists and politicians in both major parties treated industrial policy with skepticism, if not outright scorn.[24] This resistance largely stemmed from the Cold War dominance of neoclassical economics, which prioritized market efficiency, opposed state involvement in production except in cases of clear market failure, and dismissed industrial policy as an undesirable interference with market processes.[25] As economists Réka Juhász, Nathan Lane and Dani Rodrik have observed, "[t]here are few economic policies that generate more knee-jerk opposition from economists than industrial policy."[26] Claiming that governments lacked the vision and impartiality required to "pick winners" among industries, critics consistently maintained that industrial strategy undermined inefficiency, encouraged rent-seeking, and enabled corruption. As Soviet-style planned economies withered and the West emerged triumphant in the Cold War, these views only became more engrained.

New measures

Advanced economies have been more active users of industrial policies in 2023.



Source: Anna Ilyina, Ceyla Pazarbasioglu & Michele Ruta, *Industrial Policy is Back But the Bar to Get it Right is High,* International Monetary Fund (Apr. 12, 2024), https://www.imf.org/en/Blogs/Articles/2024/04/12/industrial-policy-is-back-but-the-bar-to-get-it-right-is-high.

In the United States, this distaste pushed industrial policy to the outskirts of economic policy debates. However, as ever-rising inequality, deindustrialization, and geopolitical tensions made "cracks in [the] foundations" of the neoliberal consensus, the hardline opposition to industrial policy began to fade, setting the stage for a fundamental rethink of neoliberal economic policy in recent years.[27]

B. The 2016 Political Alignment and Its Aftermath

President Donald Trump's shocking victory in the 2016 presidential election—and the primary contests in both parties that preceded the general election that year—shattered the long-standing consensus on

24 Writing in August 2019, Julius Krein observed that "[j]ust a few years ago, the phrase 'industrial policy' was employed mainly as a term of abuse." *Id*.

25 Michael Lind, *How to Transform US Politics—and How Not To*, Compact Magazine (Mar. 14, 2023).

26 Réka Juhász, Nathan Lane & Dani Rodrik, *The New Economics of Industrial Policy*, HKS Working Paper (Aug. 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4542861

27 Remarks by National Security Advisor Jake Sullivan on Renewing American Economic Leadership at the Brookings Institution (Apr. 27, 2023). For a deeper examination of these developments, see Michael Lind, *How to Transform US Politics—and How Not To*, Compact Magazine (Mar. 14, 2023); Julius Krein, *What Alexandria Ocasio-Cortez and Marco Rubio Agree On*, N.Y. Times (Aug. 20, 2019) ("In the wake of the 2008 financial crisis, however, the Reagan-Bush-Clinton neoliberal consensus seems intellectually and politically bankrupt.").

neoliberal economic policy.[28] The election revealed deep grievances across the political spectrum, pushing both parties to confront the flaws of an economic system that many saw as prioritizing corporate profits over workers' livelihoods.

Trump's populist rhetoric, which blamed free trade for hastening the loss of blue-collar jobs and the demise of American manufacturing, galvanized working-class supporters who felt left behind by the promises of globalization.[29] On the Democratic side, Senator Bernie Sanders's insurgent campaign wildly outperformed expectations by voicing similar criticisms. Even after Sanders exited the race and conceded to Hillary Clinton, Clinton was forced to overhaul her own views on trade and the Democratic party platform was revised to conform to Sanders's position.[30] Clinton's initial embrace and abrupt abandonment of the proposed Trans-Pacific Partnership epitomized this sharp turn against globalization.[31]

In the eight years since Trump's first victory, policymakers in both parties have been forced to navigate a bewildering new landscape in which the old rules limiting what government can and cannot do to protect and promote U.S. industry no longer hold.[32] Ideological lines in both parties have blurred, and the nation as a whole remains in a confusing period of transition.[33]

Much of the public debate throughout this era has focused on tariffs, reflecting President Trump's rehabilitation of tariffs as his preferred instrument of international economic policy. From the time he entered the Republican presidential primary in 2015, the salutary impact of tariffs has been a mainstay of his speeches and he has singlehandedly caused a large swath of the American public to reject the longstanding view of tariffs as an antiquated policy tool with little purchase in the modern economy.[34] Because they directly impact profitability, supply chains, and business strategies, tariffs are highly relevant to corporate leaders, economists, and consumers, and remain a perennial focus of intense media coverage and debate.

But the relentless focus on tariffs by both President Trump and the mainstream press gives short shrift to industrial policy, which can be conceptualized as the domestic corollary to import tariffs. Past advocates of American industrialism, including Alexander Hamilton and Henry Clay, understood that affirmative policies directly supporting home industry—especially subsidies for strategically important industries—are a

---

28 Larry Kramer, Beyond Neoliberalism: The Problem and Possibilities for Rethinking Political Economy, The Hewlett Foundation (Apr. 26, 2018), https://hewlett.org/library/beyond-neoliberalism-rethinking-political-economy (The upshot is that the 20th-century free market paradigm has reached the end of its useful shelf life. There is little or no room left within it for useful solutions, or even productive disagreement about alternatives, when it comes to the challenges we face today.").

29 Senator Chris Murphy, *The Wreckage of Neoliberalism*, The Atlantic (Oct. 25, 2022).

30 MJ Lee, *How How Bernie Sanders has changed the Democratic Party*, CNN (May 11, 2016); *see* Larry Kramer, Beyond Neoliberalism: The Problem and Possibilities for Rethinking Political Economy, The Hewlett Foundation (Apr. 26, 2018), https://hewlett.org/library/beyond-neoliberalism-rethinking-political-economy ("The Democratic Party held out for a while, but after George H.W. Bush's election in 1988, its leaders got the message, just a few years ahead of the Labor Party in England. Bill Clinton's and Tony Blair's 'Third Way' amounted to a capitulation to neoliberalism and the presumptive superiority of markets, albeit with a progressive twist. And so it was for the next three decades, until the 2016 election.").

31 Doug Palmer, *Clinton raved about Trans-Pacific Partnership before she rejected it*, Politico (Oct. 8, 2016).

32 Patricia Cohen, *Why It Seems Everything We Knew About the Global Economy Is No Longer True*, N.Y. Times (June 18, 2024).

33 *See* Larry Kramer, Beyond Neoliberalism: The Problem and Possibilities for Rethinking Political Economy, The Hewlett Foundation (Apr. 26, 2018), https://hewlett.org/library/beyond-neoliberalism-rethinking-political-economy ("There may then be a period of confusion, but eventually a new paradigm emerges, one that does a better job addressing people's concerns and explaining events as they experience them."). Transitions, of course, entail movement in the direction of a new equilibrium, and it is uncertain if this one will resolve into a cohesive framework or merely intensify the instability that has characterized the previous ten years.

34 Harvard Center for American Politics Studies & the Harris Poll, *Harvard Harris Poll: January 2025 Key Results*, Harvard Harris Poll (Jan. 2025), https://harvardharrispoll.com/wp-content/uploads/2025/01/HHP_Jan25_KeyResults.pdf.

necessary complement to protective tariffs.[35]

The relevance of this historical understanding is particularly acute in the context of modern geopolitical great power competition, especially regarding strategic technologies that provide enormous economic and commercial advantages, but also impinge on national security. Here, the development of domestic manufacturing capabilities—particularly in industries characterized by high capital requirements and significant technological complexity—often require direct government intervention through subsidies, research support, and coordinated industrial policy initiatives. This dynamic is especially evident in sectors like semiconductor manufacturing, where the scale of investment required and the strategic importance of the industry necessitate comprehensive policy approaches that go beyond defensive trade measures, as well as other critical areas such as biomanufacturing, renewable energy, and green technologies.[36]

C. The National Security "Exception" Swallows the Rule

As William Bonvillian has observed, U.S. policymakers long recognized a "security-industrial exception" to the general market orthodoxy, which allowed the Defense Department, through celebrated initiatives like the Defense Advanced Research Projects Agency (DARPA) and creative procurement exceptions, to engage in efforts that are clearly a form of industrial policy.

Since the era of World War II and the early days of the Cold War, the U.S. government invested enormous capital and federal support to R&D projects that supported technologies critical for U.S. national security, which later became adopted for civilian use. From the Manhattan Project, which birthed the first nuclear weapon, to ARPANET, an early precursor to the Internet, to GPS and radar, the U.S. government—especially the Pentagon—drove pioneering investments in technology and manufacturing. While initially developed primarily in service of U.S. national security, these technologies later transformed civilian and commercial markets. These actions were justified and sold to the public through a Cold War lens, in which policymakers invoked the imperative of national security and shied away from claims that the projects would boost economic growth.

Of course, it's now widely recognized that the Defense Department's creative research programs did just that, by creating a vast array of new technologies that spilled over into the private sector and seeded entire new industries, especially throughout Silicon Valley:

> American efforts to push the boundaries of applied science rendered the Soviet Union's conventional military obsolete and gave the United States a decades-long commercial manufacturing advantage that shaped the contours of the modern world. . . . Meanwhile, microchips

35 Hamilton's Report on Manufactures and Clay's American System both emphasized the complementarity between trade protection and domestic industrial development policies. Their framework recognized that defensive measures like tariffs were insufficient in isolation to foster the development of strategic industries. Instead, they advocated for a coordinated approach that included direct government support through subsidies, infrastructure development, and institutional frameworks supporting domestic manufacturing capabilities. Alexander Hamilton, Report on the Subject of Manufactures (Final Version) (Dec. 5, 1791), available at https://founders.archives.gov/documents/Hamilton/01-10-02-0001-0007; Senator Henry Clay, "The American System," (Feb. 1832), featured in Senator Robert Byrd's compilation The Senate: Classic Speeches 1830 - 1993, https://www.senate.gov/artandhistory/history/resources/pdf/AmericanSystem.pdf.

The view that import tariffs and domestic subsidies are complementary is not universal. Treasury Secretary Scott Bessent has come out in favor of tariffs while opposing industrial policy. *See* Scott Bessent, *A Trump adviser on how the international economic system should change*, The Economist (Oct. 23, 2024) ("Interventions at the macroeconomic level, like broad-based tariffs, will be more effective than microeconomic interventions like industrial policy that generally rely on the government to pick winners and losers."); *see also* Gary Clyde Hufbauer and Euijin Jung, *Scoring 50 Years of Industrial Policy, 1970 - 2020*, Peterson Institute for Int'l Economics (Nov. 2021) (taking a critical view of industrial policy).

36 *See* William Bonvillian, Pioneering Progress: American Science, Technology, and Innovation Policy 295 - 306 (2024) (contrasting industrial policy models for advanced manufacturing in China and the United States).

> opened the door — and gave America early access — to "[f]ast and cheap computing, optical data transmission, sensing, imaging, CAD/CAM manufacturing — all the technologies that have defined the economy of the past thirty years."[37]

China's rise as an industrial powerhouse and geopolitical rival profoundly challenges this paradigm. When military advantage comes from private sector technology leadership instead of government-sponsored research and development, and global markets with few trade barriers allocate production to far-flung nations without regard to geopolitical considerations, the traditional dichotomy between defense spending and commercial development breaks down.[38] The sheer size of the commercial markets for dual-use technologies—where private sector purchases often dwarf government purchases—undermines the United States' ability to maintain a reliable military industrial base by simply funding outlays to contractors through spending on the defense side of the discretionary funding ledger.[39]

The semiconductor industry is a prime illustration of this phenomenon. While defense considerations require a steady supply of advanced semiconductors to be produced either within the United States or by allied nations whose supply chains the United States can easily control in the event of an armed conflict, chip production has become concentrated in East Asian nations that are uniquely vulnerable to disruption at the hands of China, the United States' primary geopolitical rival.[40]

III. The CHIPS and Science Act

A. Origins and Context

In retrospect, it's remarkable that policymakers allowed the supply chain for advanced semiconductors to become concentrated in a geopolitical hot spot for so long without taking more than cursory actions to ameliorate this risk.[41] This changed with the onset of the COVID-19 pandemic, a watershed moment for policymakers' and business leaders' recognition of the deep vulnerabilities inherent in global supply chains, especially with regard to dual-use technologies like semiconductors.[42]

The *CHIPS for America Act* paved the way for increased domestic semiconductor manufacture by providing

37 Senator Marco Rubio, *Industrial Policy, Right and Wrong*, National Affairs (Spring 2024) (quoting David P. Goldman, *The Digital Age Produces Binary Outcomes*, American Affairs (Jan. 7, 2023).

38 See Senator Marco Rubio, *Industrial Policy, Right and Wrong*, National Affairs (Spring 2024) ("Our advanced weapons systems often depend on China — our most significant rival — for crucial components. . . While our industrial base has shrunk, China's has grown many times over.").

39 Gartner predicts worldwide semiconductor market revenue to reach $717 billion in 2025. The market value of semiconductors purchased worldwide for military and aerospace purposes is more difficult to quantify, but one research firm estimates it to have been worth $6.3 billion in 2021. Press Release, Gartner, "Gartner Forecasts Worldwide Semiconductor Revenue to Grow 14% in 2025," (Oct. 28, 2024), https://www.gartner.com/en/newsroom/press-releases/2024-10-28-gartner-forecasts-worldwide-semiconductor-revenue-to-grow-14-percent-in-2025; Allied Market Research, "Semiconductor in Military and Aerospace Market Size, Share, Competitive Landscape and Trend Analysis Report, by Component, by Technology, by End Use, by Application: Global Opportunity Analysis and Industry Forecast, 2021-2031," (Feb. 2023), https://www.alliedmarketresearch.com/semiconductor-in-military-and-aerospace-market-A47381.

40 *See* The White House, FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China (Aug. 9, 2022) (noting that "we rely on East Asia for 75 percent of global production").

41 *See* Sujai Shivakumar & Charles Wessner, "Semiconductors and National Defense: What Are the Stakes?," Center for Strategic and International Studies (CSIS) (June 8, 2022) ("The current chip legislation . . . represents the most comprehensive program of federal support ever undertaken to ensure the viability of a domestic semiconductor industry—that is, an industry whose critical functions are located within the geography of the United States. *The legislation is both essential and overdue*.") (emphasis added).

42 The economic pain was especially acute in the market for "legacy" node chips, which are older-generation semiconductors used for car manufacturing and a variety of consumer applications.

billions of dollars in subsidies for fabrication sites in the United States. However, due to its authors' inability to gain the support of the appropriations committees, the enacted law lacked the funding necessary to carry out its objective. Nearly two years later, Congress passed the *CHIPS and Science Act* to provide this funding, coupling it with a new "Science" component to alter federal research support through a new technological directorate at the National Science Foundation. Ironically, this second component has also been plagued by insufficient appropriations, rendering much of its purpose unfulfilled.[43]

B. Legislative History

The legislative journey of the *CHIPS and Science Act* was unusually grueling. The Act, championed by a bipartisan coalition led by Senate Democratic Leader Chuck Schumer and Republican Senator Todd Young, assembled an unlikely mix of interests: national security, job creation, worker support, and domestic social policy. At the time, it was unclear whether the strange new coalition supporting the law would endure or if the Act would remain an isolated experiment in industrial policy.[44]

C. Political Aftermath

We believe this coalition will endure and that President Trump's return to office will only strengthen support for industrial policy. The factors that underlie the Act's adoption remain the same: despite U.S. export controls on cutting-edge technologies such as advanced semiconductors that power military applications of artificial intelligence, China continues to invest heavily in state subsidies, propelling itself up the technological value chain—and indeed has accelerated its national plans to achieve technological dominance in critical industries—while its East Asian neighbors continue to pursue large-scale subsidy policies that make it extremely challenging for U.S. manufacturers to compete if left to the whims of the international market.

For decades, China's government has implemented industrial policy in strategic technologies at a massive scale—with a series of "national strategic plans" setting targets in critical sectors and offering roadmaps for local level subsidies, as well as "Made in China 2025," which represented the Chinese Communist Party's attempts to shift away from low-end manufacturing toward high-end technology. In telecommunications, the behemoth Huawei represented an archetypal example of the Party choosing winners—baptized "national champions"—while other tech giants like Baidu, Alibaba, and Tencent relied on substantial government support, including subsidies, tax incentives, and state-backed financing, to establish their dominant positions in the Chinese economy. In 2023, Chinese President Xi Jinping unveiled his new approach to unleashing the power of "new quality productive forces," and directed his government to prioritize the further modernization of critical high-tech sectors and a Chinese industrial system that rely on a large manufacturing base.[45]

Combined with massive state subsidies and acquisition of foreign technology through joint venture-mediated tech transfer, China has doubled down in recent years on its industrial policy. As Robert Lighthizer,

---

43 *See* Matt Hourihan, "CHIPS and Science Funding Update: FY 2023 Omnibus, FY 2024 Budget Both Short by Billions," Federation of American Scientists (May 12, 2023), https://fas.org/publication/chips-and-science-funding-update-fy-2023-omnibus-fy-2024-budget-both-short-by-billions (tracking funding shortfalls).

44 Constanza M. Vidal Bustamante & Doug Calidas, Working Paper, Unraveling the Political Dynamics Shaping the U.S. Strategy for Technology Leadership, Belfer Center for Science and International Affairs, Harvard Kennedy School (Feb. 20, 2024).

45 "New-quality productive forces" (新质生产力) refers to Xi Jinping's recent approach to economic development, introduced in 2023-2024 as a innovation-driven strategy that prioritizes critical technology and manufacturing industries. *See* Arthur R. Kroeber, *Unleashing "New Quality Productive Forces": China's Strategy for Technology-Led Growth*, Brookings Institution (Feb. 20, 2024), https://www.brookings.edu/articles/unleashing-new-quality-productive-forces-chinas-strategy-for-technology-led-growth/.

President's Trump's former U.S. Trade Representative, once observed, "China's government is aggressively working to undermine America's high-tech industries and our economic leadership through unfair trade practices and industrial policies."[46]

With President Trump's election and his team of China hawks in place, intense strategic competition with China will likely continue, particularly in the economic and technological domains. China remains a formidable geopolitical rival and relations between the United States and China have not meaningfully changed since the law was signed in August 2022. Meanwhile, an increasingly larger number of both swing-state voters and those among Trump's political base remain vocally opposed to globalization, deindustrialization, and financialization, creating strong political incentives for reindustrialization policies that create manufacturing jobs.

Ironically, the very popularity of the *CHIPS and Science Act* has hampered bipartisan follow-up efforts. The sequencing of negotiations and key votes—which saw the Senate pass the bill just hours before Senate Democrats reached the critical intra-party agreement on the terms of what would become the *Inflation Reduction Act*—infuriated Republican leaders.[47] This prompted an immediate backlash among House Republicans, and led many Republicans in both chambers to vow future opposition to any similar efforts in the future that might provide a Democratic President with a political "win."[48] Conservative media and campaign messaging battles accentuated this dynamic, threatening to eviscerate the prospect of any bipartisan cooperation on industrial policy in the event that Vice President Harris emerged victorious in the 2024 election.[49]

Of course, Vice President Harris did not win the election, and with President Trump back in office, the political calculus has shifted. The operative question is whether the manufacturing subsidies enacted under Biden's presidency are too politically tainted by association with President Biden to remain a viable policy option for President Trump and his congressional allies. For a variety of reasons, we believe the answer is no.

> The operative question is whether the manufacturing subsidies enacted under Biden's presidency are too politically tainted by association with President Biden to remain a viable policy option for President Trump and his congressional allies. For a variety of reasons, we believe the answer is no.

Notwithstanding Trump's recent disparagement of subsidies, his transformation of the Republican party and the precedent of the *CHIPS and Science Act* have created all the conditions necessary for him to champion manufacturing incentives during the last two years of his second term in office, and we believe he will find compelling reasons to follow this path.

IV. President Trump's Industrial Policy Vision

46 Robert Lighthizer, U.S. Trade Representative, *USTR Issues Tariffs on Chinese Products*, Office of the U.S. Trade Representative (June 15, 2018), https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/june/ustr-issues-tariffs-chinese-products.

47 Mychael Schnell & Emily Brooks, *Whip-lash: House GOP moves to oppose CHIPS-Plus bill*," The Hill (July 27, 2022); Manu Raju et al., *In a major boost to Democrats, Manchin and Schumer announce deal for energy and health care bill*, CNN (July 28, 2022).

48 *See* Kevin Liptak et al., *How secret negotiations revived Joe Biden's agenda and shocked Washington*, CNN (July 28, 2022) (quoting Senate Republican Whip John Thune as saying "I think everyone got surprised, certainly by representations that had been made by Democrats about this deal, and I think there was certain amount of people being blindsided — not only on our side but on the Democrats' side.").

49 Even Trump's sharp criticism of the *CHIPS and Science Act* during his interview with Joe Rogan can be understood as part of this Republican backlash to President Biden's industrial policy achievements.

Governments pursue industrial policy in many ways using a wide array of policy tools, and Trump's recent comments focused squarely on only the inner core of industrial policy: direct subsidies to domestic manufacturers. As a starting point, this leaves the door open for other industrial policy tools, including tax preferences (especially preferences to defray research and development costs), in-kind subsidies of land, equipment, and energy resources, labor and workforce support, export promotions, and regulatory carveouts.[50] And while the Trump administration has announced cuts to NIH funding for indirect research costs at universities, these moves have been more motivated by political reasons relating to perceived progressive stances at universities—especially given that the largest university recipients of government research funding are located in blue states—than aversion to industrial policy and the political ramifications of direct subsidies to technology manufacturing sectors.[51]

Notwithstanding his repeated denigration of the *CHIPS and Science Act* and its subsidies for semiconductor manufacturers, Trump has never wavered in vocally supporting industrial policy writ large and the use of all tools apart from direct subsidies to firms. In case there were any confusion, he made this clear just a few weeks prior to his appearance on Joe Rogan's podcast and his first address to a joint session of Congress.

A. The "New American Industrialism"

In a *Newsweek* op-ed titled "My Plan to Make America Affordable Again—and Bring Back the American Dream," Trump proposed the following benefits for both foreign and U.S.-based manufacturers:

> The United States will give you the lowest taxes, the lowest energy costs, the lowest regulatory burdens, and free access to the best and biggest market on the planet—but only if you make your products here in America and hire American workers for the job.[52]

Terming his vision a "New American Industrialism," Trump promised that his proposal will "create millions of jobs, massively raise wages for American workers, and make the United States a manufacturing powerhouse once again."[53] He also promised to slash corporate taxes to 15 percent for companies who manufacture products in the United States (from the current 21 percent), expand the research and development tax credit (which has been weakened since 2022) and "cut energy and electricity prices in half within 12 months—not just for businesses but for all Americans and their families."[54] Finally, he promised to slash environmental regulations and institute "special zones on federal land with ultra-low taxes and regulations for American producers, to entice the relocation of entire industries from other countries."[55]

Notably absent from this list of incentives is any mention of direct subsidies to manufacturers; rather, all benefits are phrased in terms of tax benefits, regulatory exemptions, and reduced energy costs. Much of what Trump refers to as "industrial policy" in his op-ed can also be termed "infrastructure investment," and experts

---

50 Import tariffs that suppress the availability and affordability of foreign manufactures can also form a key component of any domestic manufacturing strategy. By convention, the term "industrial policy" does not typically incorporate tariffs.

51 Dan Diamond, Carolyn Y. Johnson & Lena H. Sun, *NIH Cuts Billions of Dollars in Biomedical Funding, Effective Immediately*, The Washington Post (Feb. 8, 2025).

52 Donald J. Trump, "My Plan to Make America Affordable Again – And Bring Back the American Dream)," *Newsweek* (Oct. 1, 2024). Written at the height of campaign season, President Trump's op-ed is peppered with over-the-top criticisms of Vice President Kamala Harris (e.g., "If Vice President Harris gets four more years, this time as president, she will de-industrialize the United States and destroy our country. We will become a Banana Republic. There will be no car industry, no steel industry, no significant manufacturing of any kind—and we will be at risk of military defeat.")

53 *Id*.

54 *Id*.

55 *Id*.

have long quibbled over the extent to which different types of infrastructure outlays should be deemed a form of industrial policy. The distinction matters a great deal to most economists, who tend to view infrastructure improvements that facilitate general commerce as public goods that form an appropriate subject of government expenditure—in contrast to industrial policy, of which they are much more skeptical.[56] By contrast, federal lawmakers have typically viewed both projects through the broader lens of government involvement in the economy financed by taxes. For several decades before President Biden's term in office, they were largely unable or uninterested in financing comprehensive federal infrastructure investments or subsidizing domestic manufacturing.[57]

B. The Question of Direct Subsidies

Putting Trump's criticism of the *CHIPS and Science Act* and his *Newsweek* editorial side-by-side, one straightforward conclusion would be that he will simply champion all forms of industrial policy *except* direct subsidies to manufacturing firms until he leaves office in January 2029. This is certainly one possible outcome. However, we believe the political tailwinds for a subsidies program make this outcome unlikely.

Why are subsidies so important? First and foremost, they represent the inner core of industrial policy. The very term "industrial policy" means different things to different people and can be construed broadly to include a variety of policy tools that favor domestic manufacturing, including the tools that Trump laid out in his op-ed (corporate tax policy, energy initiatives, etc.). But while observers may disagree about whether each of these tools constitute industrial policy, there is no dispute that direct federal subsidies awarded to individual manufacturing firms in strategic industries constitute the paradigmatic form of industrial policy.[58] Direct subsidies to individual firms have traditionally received the most vociferous opposition from neoclassical economists and small-government conservatives, who view them as especially corrosive to market equilibria and particularly ripe for rent-seeking and political favoritism.

Yet the drafters of the *CHIPS for America Act* and the *CHIPS and Science Act* broke with tradition and created $39 billion in subsidies for semiconductor manufacturing firms even while acknowledging the viability of these objections, which they sought to ameliorate through strict grantmaking procedures and eligibility conditions.[59] Why?

---

56 *See* Celestin Monga, *The False Distinction Between Industrial and Economic Policy*, Project Syndicate (July 10, 2024) ("The term [industrial policy] now encompasses all government interventions – from subsidies and tax incentives to public procurement and the design of intellectual-property protection – 'that explicitly target the transformation of the structure of economic activity in pursuit of some public goal.'"). Monga criticizes this distinction, which has long been maintained by economists and policymakers, as artificial and unhelpful. *See id.* ("Perhaps more importantly, the distinction between industrial and economic policy is fundamentally false. Drawing a line between 'good' ('horizontal' and 'neutral') and 'bad' ('vertical' and 'targeted') government intervention may be politically attractive, but does not hold water either conceptually or in practice.").

57 *See, e.g.*, Senator Chris Murphy, *The Wreckage of Neoliberalism*, The Atlantic (Oct. 25, 2022) (describing the *CHIPS and Science Act*, *Infrastructure Investment and Jobs Act*, and *Inflation Reduction Act* as "three major legislative acts" of "economic nationalism"). Notably, the bipartisan coalition that came together to pass the *Infrastructure Investment and Jobs Act* included many of the same Members who helped champion the *CHIPS and Science Act*, particularly Democratic Senator Mark Warner of Virginia and Rob Portman of Ohio. The breaching of the dam for infrastructure investment paved the way for manufacturing subsidies within the same Congress.

58 Subsidies do not have to take the form of direct grants. A variety of financing and guarantee mechanisms can support industrial projects, including "deal structuring" efforts that reduce risk for private companies and investors. Notably, the *CHIPS and Science Act* incorporated several such tools, including loan guarantees. *See* CHIPS for America Fact Sheet, "CHIPS Program Office Launches Notice of Funding Opportunity," (Feb. 28, 2023). President Trump may prefer these "deal flow" mechanisms over traditional grants because they reinforce his preferred reputation as a consummate dealmaker rather than an agent of government largesse.

59 Of course, subsidies for semiconductor manufacturing were also coupled with significant private sector investment. Since the passage of the CHIPS Act, companies like Intel, TSMC, and Samsung all announced commitments to building semiconductor factories—and altogether the CHIPS Act is expected to attract substantial private sector spending through federal investment.

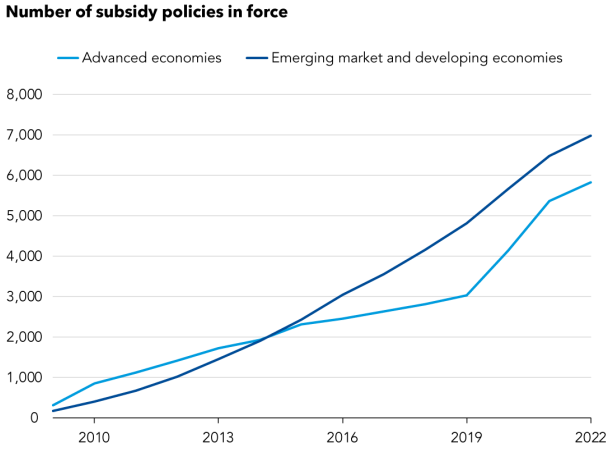
V. The Global Outlook for Advanced Manufacturing Subsidies

A. International Competition

One of the most overlooked aspects of these laws is that they did not originate in a vacuum and only make sense when evaluated in the context of other nations' industrial policies. Whatever one may think of the merits of industrial policy on its own terms, there is no escaping the reality that other industrialized nations—especially the advanced manufacturing economies of East Asia—have long been engaged in aggressive subsidization of high-tech manufacturing that will continue to distort the international market for these goods for the indefinite future.

Rising subsidies

Between 2009 and 2022, subsidies were more prevalent in emerging markets and developing economies.



Source: Anna Ilyina, Ceyla Pazarbasioglu & Michele Ruta, *Industrial Policy is Back But the Bar to Get it Right is High,* International Monetary Fund (Apr. 12, 2024), https://www.imf.org/en/Blogs/Articles/2024/04/12/industrial-policy-is-back-but-the-bar-to-get-it-right-is-high.

In a persuasive speech on the Senate floor during consideration of the bill that would become the *CHIPS and Science Act*, former Republican Senator Rob Portman of Ohio—a former United States Trade Representative and card-carrying member of the Republican free-enterprise establishment—explained to his colleagues why market orthodoxy would not suffice to preserve the United States' industrial base and American semiconductor manufacturing firms' ability to compete in a global marketplace. Pointing out that "[t]his is not a free market situation," Senator Portman identified the forces in play:

> One of my colleagues today asked me today about, "shouldn't we let the market decide?" If the market decides and China is offering $150 billion, which they are over the next 10 years, when Europe has its own equivalent legislation to ours and is offering tens of billions of dollars, tens of billions of euros or when South Korea or Japan or when Taiwan are offering the huge incentives, it's very difficult to see us being able to bring these chips back to America where costs are a little higher and be able to be competitive. We need that to happen for our domestic economy, but also our national security.[60]

Across East Asian economies, industrial policy has been a core driver of economic modernization. To truly understand the U.S. push for industrial policy today, one must look across the Pacific to East Asia, where Taiwan, Japan, and South Korea have long pursued a strategy of industrial policy to achieve growth and

60 Press Release, Office of Senator Rob Portman, "On Senate Floor, Portman Calls for Swift Passage of Bipartisan Competitiveness Legislation," (July 29, 2024), available at https://www.legistorm.com/stormfeed/view_rss/2110372/member/428/title/on-senate-floor-portman-calls-for-swift-passage-of-bipartisan-competitiveness-legislation.html. Notably, while China's industrial policy is often cited as the justification for U.S. industrial policy and underlay the "Science" component of the CHIPS and Science Act, the manufacturing subsidies component of the law were more clearly targeted at bringing cutting-edge chip manufacturing back to the United States from our allies in East Asia – especially Taiwan and South Korea.

even dominance in technology manufacturing. These nations have employed a range of subsidies and state-backed incentives that have reshaped global markets. Indeed, these geopolitical conditions persist today—and we believe that in addition to domestic political considerations, these conditions will drive the Trump administration to continue subsidizing American high-technology manufacturing.

B. Taiwan, Japan, and South Korea: Long-standing Champions of Industrial Policy

a. Taiwan

Taiwan's story is the most striking when it comes to the evolution of semiconductor industrial policy. In the 1980s, Taiwan was undergoing significant political and economic transition, as it sought to attain a position in the global high-tech economy. When Lee Teng-hui became president in 1988, his government decided that Taiwan would leverage its small size and nimbleness to construct a global technology powerhouse. The centerpiece of this vision was the 1987 founding of the Taiwan Semiconductor Manufacturing Company (TSMC), a move that would define Taiwan's economic trajectory for decades to come. As TSMC founder Morris Chang has noted, Taiwan's government was an important early supporter of the firm, investing $180 million and holding 48% of the shares—while its then Minister of Economic Affairs Li Kwoh-ting, dubbed "Godfather of Technology" in Taiwan, recruited Chang to spearhead Taiwan's chip industry.[61] In addition to investments, Taiwan's government supported TSMC through direct funding, infrastructure development, and favorable regulatory policies, essentially creating a world-leading hub for semiconductor manufacturing.[62]

In the decades that followed, Taiwan's strategy evolved but remained firmly rooted in a muscular industrial policy. TSMC's current dominance as the world's leading semiconductor foundry—producing 90% of the world's high-end chips[63]—owes much to its continued state backing. Taiwan's government has maintained substantial subsidies for the firm's R&D activities and its manufacturing expansion while also ensuring that foreign firms flock to Taiwan to build semiconductor plants. By 2022, TSMC's projected $100 billion investment in new semiconductor fabs underscored the Taiwanese government's commitment to this strategy, with Tsai Ing-wen's administration continuing to provide tax relief and direct incentives. Simply put, Taiwan's semiconductor miracle was not merely a result of private innovation but also the outcome of decades of government investment.

b. South Korea and Japan

South Korea, too, has had a long history of industrial policy in advanced manufacturing sectors. Since the 1970s, the South Korean government has pursued a strategy of heavy state involvement in industrial development, guided by President Park Chung-hee's vision of economic modernization. In the 1980s, when Samsung electronics was just beginning to emerge as a major player, the government funneled significant subsidies into key sectors, including semiconductors, which were seen as the cornerstone of South Korea's future technological leadership. Today, South Korea's government continues to pour billions of dollars into the

61 United Daily News, *Morris Chang Pointed Out U.S. Considers Taiwan a Dangerous Place: Warning to Lai?*, Fairwinds Foundation (Mar. 2023), https://fairwindsfoundation.org/en/event/Taiwan-Weekly/8/Morris-Chang-Pointed-Out-U.S.-Considers-Taiwan-a-Dangerous-Place%EF%BC%9AWarning-to-Lai%EF%BC%9F/654.

62 Ben Cohen, *He Turned 55. Then He Started the World's Most Important Company*, The Wall Street Journal (Mar, 2024).

63 Chang Chien-chung and Frances Huang, *TSMC receives NT$62.5 billion in aid from Japan, China*, Focus Taiwan (Aug. 24, 2024).

semiconductor sector as a key end producer. In 2023, South Korea unveiled its own version of the *CHIPS Act* called the Korean Chips Act, or "K-Chips Act," which boosted tax credits and other government support for infrastructure for chip-making facilities.[64] Indeed, the Korean government has continued to provide direct state investments focused on R&D, tax incentives, and loans to companies like Samsung (which accounts for 18% of global market share of fabless manufacturing, second only to TSMC[65]) and SK Hynix, which together account for 17% of the global market share and are the dominant producers of memory chips globally.[66]

Similarly, Japan has also played a significant role in shaping Asia's industrial policy landscape. In the 1980s, the Japanese government, spearheaded by its Ministry of International Trade and Industry (MITI), aggressively supported its semiconductor industry, leading the world in memory chip production by the mid-1980s. Japan's approach focused not only on semiconductors but also on technological leadership across other sectors including robots and green tech. Yet Japan's once-dominant role in chips later waned, overtaken by Taiwan and South Korea, as Japan's manufacturing giants like NEC and Toshiba fell behind in global competition.

C. Continuing Geopolitical Conditions: Subsidies in the 2020s

As Taiwan, Japan, and South Korea have continued to compete on the global stage, their governments have doubled down on state-backed initiatives, particularly after 2022, as global supply chains began to recover from disruptions caused by the COVID-19 pandemic.

As Taiwan, Japan, and South Korea have continued to compete on the global stage, their governments have doubled down on state-backed initiatives, particularly after 2022, as global supply chains began to recover from disruptions caused by the COVID-19 pandemic. The South Korean government, for example, recently announced a $19 billion subsidy program for research and development of next-generation semiconductors, including the creation of advanced manufacturing nodes. Channeled through the state-run Korea Development Bank, the recent 2024 package is aimed at providing financial backing for local chipmakers, while Korean President Yoon Suk Yeol has also announced an extension of tax breaks to promote investment in semiconductors.[67] As Vice Minister of Trade Moon Jung-woo declared, "semiconductors are not just an industry—they are a national security asset." Yoon has agreed, proclaiming in 2024 that "the competition over semiconductors unfolding now is an industrial war."[68] Since assuming office, his administration has unveiled a strategic plan leading to 2050 in which his government would support the creation of the world's biggest chip-making cluster in South Korea, which would span nearly 40 factories across eight Korean cities, while aiming to create more than three million jobs.[69] Meanwhile, the government in Seoul has committed to other forms of industrial support from expedited land approval to guaranteed electricity to tax credits for infrastructure.

---

64 Martin Chorzempa, *The U.S. and Korean Chips Acts Are Spurring Investment in High-Cost Semiconductor Manufacturing,* Peterson Institute for International Economics (Jun. 10, 2024), https://www.piie.com/blogs/realtime-economics/2024/us-and-korean-chips-acts-are-spurring-investment-high-cost.

65 Troy Stangarone, *The Role of South Korea in the U.S. Semiconductor Supply Chain Strategy, Commentary for Congressional Affairs*, National Bureau of Asian Research (Apr. 13, 2023), https://www.nbr.org/publication/the-role-of-south-korea-in-the-u-s-semiconductor-supply-chain-strategy/.

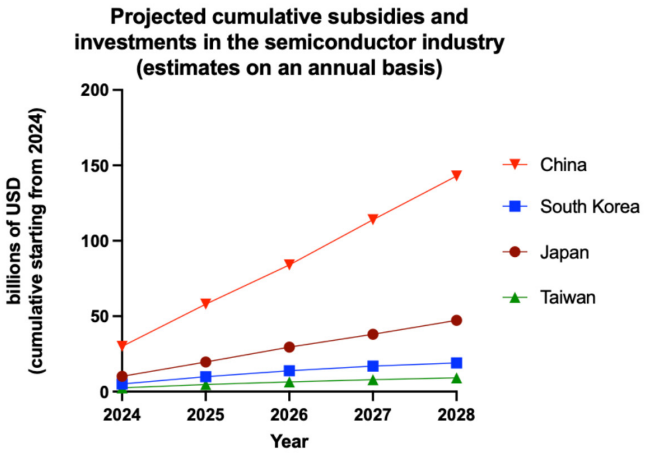
66 *Id*.

67 Kimberley Kao, *South Korea Unveils $19 Billion Package for Chip Industry,* Wall Street Journal (May 23, 2024), https://www.wsj.com/tech/south-korea-unveils-19-billion-package-for-chip-industry-0733c676?mod=article_inline.

68 Jiyoung Sohn and Yang Jie, Asia's Chip Giants Hustle to Maintain Their Edge Over the U.S., The Wall Street Journal (June 4, 2024), https://www.wsj.com/tech/asias-chip-giants-hustle-to-maintain-their-edge-over-the-u-s-2edd6904?mod=hp_lista_pos1.

69 *Id*.

Similarly, just last November, Japanese Prime Minister Shigeru Ishiba announced a $65 billion package of subsidies to bolster domestic semiconductor and AI industries over the course of the next five years, with specific provisions for Tokyo-based semiconductor manufacturer Rapidus, which is aiming to begin manufacturing leading-edge chips in Hokkaido with IBM as a collaborator.[70] Similarly in 2023, Japan's government under Prime Minister Fumio Kishida allocated $13 billion to the semiconductor industry.[71]



Methodology: Authors' analysis based on projected and available data from official government sources and reporting—figures are estimates, and data points represent estimated cumulative amounts starting from 2024. Amounts include subsidies and investments that have been officially announced as commitments but have not yet manifested in budgets or been dispensed (e.g., in November 2024, Japanese Prime Minister Shigeru Ishiba announced a $65 billion plan for subsidies and investments in the semiconductor industry. While this plan must be submitted to Japan's legislature, we have included this amount in our projections). Sources include Japan's Ministry of Economy, Trade, and Industry; Korea's Ministry of SMEs and Startups, Taiwan's Ministry of Finance, and China's Ministry of Industry and Information Technology.

Finally, Taiwan's government has continued its push to expand its chip industry. In early 2023, its legislature passed the Industrial Innovation Act, an analog of the American *Chips and Science Act*, which provided eligible chip manufacturers a 25% tax deduction on R&D expenditures and 5% deduction on costs for new machinery.[72] Its Ministry of Economic Affairs will review applications by companies, but giants like TSMC have already met specified criteria in the legislation. More recently last month, after President Trump floated the possibility of imposing tariffs on the island, Taiwan Premier Cho Jung-tai publicly mused about potentially increasing government support for the semiconductor industry: "We will urgently look at whether we need to make more cooperative plans and future assistance programs for the industrial sector. Taiwan's position in the world's industrial chain is not to be ignored, and that we will continue to maintain such an advantage."[73]

D. China: A Rising Giant's Industrial Push

Meanwhile, China has pursued industrial policy with an intensity unmatched by most other nations. Since the early 2000s, China has implemented a series of ambitious plans to reduce its reliance on foreign technology and establish itself as a global leader in high-tech manufacturing. But under President Xi Jinping, the push has become far more aggressive and strategically targeted. In 2022, Xi announced a new approach of unleashing "new quality productive forces," an initiative that seeks to achieve technological self-sufficiency across a range of high-tech sectors, including semiconductors, telecommunications, and artificial intelligence, and as such, bolster China's economic growth well into the next few decades. In the semiconductor industry, China has also doubled down, creating and expanding a national semiconductor fund that aims to bolster

70 Takaya Yamaguchi and Leika Kihara, *Japan Unveils $65 Bln Plan to Aid Domestic Chip Industry, Reuters* (Nov. 11, 2024).

71 Tetsushi Kajimoto and Sam Nussey, *Japan to Spend $13 Bln for Chip Industry Support in Extra Budget*, Reuters (Nov. 10, 2023).

72 Debby Wu, *Taiwan Passes Its 'Chips Act,' Offers Tax Credits to Chipmakers*, Bloomberg (Jan. 9, 2023). *See Taiwan's Semiconductor Industry Development Policies*, Ministry of Economic Affairs, Taiwan (Jan. 7, 2023), https://www.moea.gov.tw/Mns/populace/news/News.aspx?kind=1&menu_id=40&news_id=104244.

73 Fan Chen, *Taiwan considers support for semiconductor industry after Trump's tariff threat*, South China Morning Post (Jan, 29, 2025), https://www.scmp.com/news/china/diplomacy/article/3296729/taiwan-considers-support-semiconductor-industry-after-trumps-tariff-threat

its chip-making capabilities. Announced in 2014, the National Integrated Circuit Industry Investment Fund has played a crucial role in China's semiconductor industry growth, with the government announcing it had raised another $48 billion fund in 2024, along with government grants, tax breaks, equity investments, and favorable loans.[74] The Semiconductor Industrial Association has estimated that as a combined sum, China's cash subsidies, preferential financing, and tax breaks—all key pillars of its industrial policy for chips—have totaled to funding worth more than $150 billion from 2014 through 2030.[75]

VI. Political Analysis

A. The Political Risk of Lower Manufacturing Employment

In recent years, the Republican base has demonstrated a remarkable affinity for industrial policy. While nationwide surveys reveal broad voter support for industrial policy and the *CHIPS and Science Act* in particular, anecdotal evidence suggests that this support is particularly strong among working-class voters in historic manufacturing regions, a demographic whose voting patterns have determined the outcome of presidential elections since 2016.[76]

In recent years, the Republican base has demonstrated a remarkable affinity for industrial policy.

Even casual followers of U.S. politics understand that Trump's political identity is inextricably linked with a pledge to restore American manufacturing might. "Make America Great Again" means different things to different constituencies, but Trump has never left any doubt that his view of American greatness includes a restoration of American manufacturing might.[77]

These promises are creating immediate vulnerabilities for Trump now that he has moved back into the White House. Factory employment increased dramatically under President Biden thanks in large part to programs like the *CHIPS and Science Act* and the partisan *Inflation Reduction Act*.[78] While both the Biden-Harris and Harris-Walz campaigns bemoaned the fact that few voters recognized this development, and some experts believe that the industrial policy laws played only a supporting role in boosting factory

There is little doubt that any declines in factory employment or manufacturing facility construction projects will be loudly amplified by Democratic politicians and the media at large.

74 Liza Lin, *China Raises $48 Billion for Semiconductor Fund to Bolster Chip-Making Capabilities*, Wall Street Journal (May 27, 2024).

75 Jiyoung Sohn, *The U.S. Is Investing Big in Chips. So Is the Rest of the World*, Wall Street Journal (Jul. 31, 2022).

76 *See* American Compass, Research: The New Conservative Voter (Sept. 27, 2023); John Halpin, "What's the Point? Americans Support the CHIPS and Science Act," Center for American Progress Action Fund (Aug. 19, 2022); Ted Geer, *Rethinking the Midwest as a Center for U.S. Chip Fabs*, The Columbus Region (June 15, 2023).

77 *See* Oren Cass, *How Trump Can Rebuild America*, Foreign Affairs (Jan. 16, 2025) (discussing how "Trump's personal brand and political coalition" are closely tied to reindustrialization).

78 Ed Friedman, *U.S. Factory Building Strong, but Set to Slow*, Moody's Analytics (Aug. 28, 2014) (stating that "U.S. factory building is at its highest point in more than 50 years" and that "[m]ost of the activity is in chip plants, but CHIPS Act grants will soon max out"); U.S. Department of Commerce, Manufacturing Booms Thanks to Biden-Harris Administration Investments (Oct. 30, 2024) (highlighting the creation of over 700,000 new manufacturing jobs during the Biden-Harris Administration).

employment, there is little doubt that any declines in factory employment or manufacturing facility construction projects will be loudly amplified by Democrats and the media at large.[79]

B. The New Economic Nationalism Policy Apparatus

The post-2016 intellectual landscape has witnessed a significant transformation in conservative policy infrastructure, marked by the emergence of new institutions dedicated to developing and promoting economic nationalist ideas. This institutional evolution represents a notable addition to the ecosystem of conservative think tanks and publications, which has previously been dominated by organizations harboring enormous skepticism of any significant government role in funding advanced manufacturing.[80]

American Compass, founded by Oren Cass in 2020, is one of the best-known new organizations supporting industrial policy initiatives from the right. Popular among many Republican congressional staffers, it showcases both sophisticated policy proposals and shorter lists of actionable policy recommendations that blend conservative social values with support for a more assertive role of the state in influencing the economy. Its work on issues like supply chain resilience, workforce development, and family policy reflects a comprehensive attempt to construct an intellectual framework for conservative policies that welcome a more assertive role for the state in economic policy.

American Affairs, launched in 2017 under Julius Krein's leadership, has emerged as an influential intellectual force building the case for U.S. reindustrialization. The quarterly journal has published detailed analyses of industrial policy and cutting critiques of tired market fundamentalism, drawing contributions from scholars and policy practitioners across the ideological spectrum. Its articles frequently combine detailed policy analysis with broader philosophical arguments about political economy, helping to legitimate industrial policy within conservative intellectual discourse. Its deeply researched articles have made it a favorite read among thoughtful policy professionals of all stripes.

Compact Magazine, a relatively young publication, positions itself as a voice for a populist, "post-liberal" right that aims to question both liberal orthodoxy and conventional conservative paradigms. It frequently combines a defense of traditional values, national sovereignty, and economic interventionism with criticisms of capitalism, contemporary liberalism, and cultural progressivism. While covering a range of economic and social policies that go well beyond industrial policy, it frequently features authors who support industrial policy as a means of strengthening the U.S. economy while restoring a sense of dignity to working-class Americans.

These institutions share several distinctive characteristics that set them apart from traditional conservative

---

79 Leading Democrats have already previewed this line of attack. *See* Senator Chris Murphy, *The Wreckage of Neoliberalism*, The Atlantic (Oct. 25, 2022) ("Although Trump's anti-neoliberal messaging has been successful, his policies have never matched his rhetoric. *By the time he left office, there were fewer, not more, well-paying manufacturing jobs in America*. . . . Republican nihilists hate the government so much that their party will never be able to pass legislation to create the kind of national industrial policy needed to bring innovation and manufacturing jobs back to America.") (emphasis added).

By the same token, since "'[i]ndustrial policy is a long-term strategy [that] takes many years to work,'" President Trump "could ultimately end up declaring that the new factories and jobs were his doing." Alan Rappeport, *Trump Win Shows Political Limits of Biden's Industrial Policy Vision*, N.Y. Times (Nov. 8, 2024) (quoting Dr. Jonas Nahm, former Senior Economist for Industrial Strategy on the White House Council of Economic Advisers).

80 *See* Larry Kramer, Beyond Neoliberalism: The Problem and Possibilities for Rethinking Political Economy, The Hewlett Foundation (Apr. 26, 2018), https://hewlett.org/library/beyond-neoliberalism-rethinking-political-economy ("[It]'s important first to recognize that the triumph of market ideology did not occur organically. It was, in fact, an intentional, cultivated, and — most important for present purposes — well-funded effort . . . [L]eaders of the movement . . . became pioneers in the development of policy think tanks and launched a number of these specifically to propagate free market ideas, including the American Enterprise Institute, the Foundation for Economic Education, the Hudson Institute, and, later, the Heritage Foundation, the Cato Institute, and others.").

think tanks and publications. First, they demonstrate much greater comfort with state intervention in markets to advance national strategic objectives, which they each define in their own way. Second, they explicitly reject many of the assumptions regarding international trade that have dominated conservative economic thinking in recent decades. Third, they emphasize the importance of productive capacity over financial metrics in assessing economic health. Finally, they tend to view economic policy through the lens of great power competition, particularly with China, rather than abstract economic efficiency.

The impact of these groups transcends mere policy formulation. By constructing an intellectual base for national conservatism, they have helped find and train a group of policy experts and writers who can fill important administrative roles. Their work has been particularly effective in converting general nationalist principles into targeted policy recommendations in discussions about reclaiming the nation's manufacturing capacity and defending its technological leadership.

This institutional evolution implies a more profound transformation in the conservative political landscape, one that may endure well beyond the next electoral cycle. President Trump's re-election is now widely viewed as signaling an enduring shift in the nation's political orientation, and these organizations seek to develop the intellectual heft for a lasting conservative commitment to investment in state capacity.[81]

C. Coalition Politics

Should he pursue his own package of subsidies for strategic technologies, President Trump will likely find that banging the drum for advanced manufacturing subsidies helps unite his unruly coalition. Many observers have noted the rough seams linking his culturally conservative base to the venture capital funders who bankrolled his most recent presidential campaign. Subsidies for advanced manufacturing are uniquely positioned to unite these two constituencies because they appeal to both the industrial heartland (by promising a resurgence of manufacturing might and good jobs) and the venture capital crowd (by providing capital to finance continued U.S. technological leadership, especially in the cutting-edge industries of the future).[82]

Should he pursue his own package of subsidies for strategic technologies, President Trump will likely find that banging the drum for advanced manufacturing subsidies helps unite his unruly coalition.

In the months before President Trump entered office for the second time, these two constituencies feuded over the wisdom of expanding visas for high-skilled foreign workers.[83] Given their incongruous regional bases and backgrounds, they will very likely engage in more infighting throughout Trump's second term and threaten

81 Finally, the second Trump Administration includes many officials who are deeply committed to industrial policy and manufacturing subsidies in particular, and these officials can be expected to advocate for the passage of manufacturing subsidies. Since Trump's first term in office revealed his predilection for shifting personnel in rapid succession, we will refrain from examining the public commitments of each cabinet secretary and White House official.

82 Oren Cass has articulated the appeal of industrial policy to both wings of Trump's 2024 coalition. "His multiethnic, working-class base takes particular interest in the prospects for a resurgence in manufacturing to create good blue-collar jobs, revitalize communities, and eliminate reliance on foreign producers. The Silicon Valley technologists salivate at the prospect of slashing red tape and maximizing rewards for productive enterprise." Oren Cass, *How Trump Can Rebuild America*, Foreign Affairs (Jan. 16, 2025).

83 Ben Berkowitz & Zachary Basu, *MAGA civil war breaks out over American "mediocrity" culture*, Axios (Dec. 26, 2024); . The online feud was triggered by President Trump's appointment of Indian-American Sriram Krishnan to serve as Senior AI Policy Advisor within the White House Office of Science and Technology Policy and claims that Krishnan had previously voiced support for increasing the number of H1-B temporary foreign worker visas for "specialty occupations," often in information technology.

his ability to preserve a united coalition of outside support. Uniting these two powerful Republican constituencies through a manufacturing subsidy program that will likely be opposed only by a handful of free-market ideologues and fiscal hawks will be a highly appealing option with very little political downside.[84]

D. The Merits of Malleability

Against this backdrop, the primary reason Trump may have *not* to support new manufacturing subsidies would be a desire to fully break with the Biden Administration's project and maintain a position consistent with his remarks on the Joe Rogan podcast and in his remarks to Congress. This also implicates Trump's stated reasons for opposing subsidies: that rich manufacturing companies are undeserving of taxpayer money, and tariffs alone will be sufficiently compelling to force manufacturers to build factories in the United States. As commentators have long noted, Trump generally favors sticks over carrots, and he may think that he can simply strongarm companies into building in the United States with tariffs alone.[85]

We think it is unlikely that Trump will feel compelled to retain his campaign position throughout his second term. As a wealthy businessman who never held political office before entering the White House, Trump has distinguished himself from most "career politicians" by his willingness to break the rules of campaigning that box in more conventional personalities. Following Ralph Waldo Emerson's dictum that a foolish consistency is the hobgoblin of little minds, Trump has been more than willing to change his position on issues with much more explosive political risk than manufacturing subsidies, and his detractors' attempts to punish these moves by labelling him a "flip flopper" have never gained traction.[86] By one account, President Trump has at one time or another publicly reversed his stated positions on a range of issues including the state and local tax deduction, status of Chinese telecommunications firm ZTE, proposals to ban the use of TikTok, the legalization of marijuana, vaping, and cryptocurrency regulation.[87]

> [President Trump's] distaste for awarding subsidies to 'rich companies' may win him plaudits among small government conservatives and progressives such as Senator Bernie Sanders, but neither of these constituencies is anywhere close to the core of his political coalition.

Meanwhile, his distaste for awarding subsidies to "rich companies" may win him plaudits among small government conservatives and progressives such as Senator Bernie Sanders, but neither of these constituencies is anywhere close to the core of his political coalition.[88]

---

84 This is another major difference between tariffs and subsidies and one that was well appreciated by the Biden Administration. If tariffs are "sticks" that will antagonize at least some business interests, subsidies are "carrots" that will buy political goodwill without antagonizing any material interests of domestic interests.

85 While a full consideration of tariff policy during the second Trump term is outside the scope of this paper, we can note that the link between imposition of tariffs and reshoring of factories is speculative at best – while tariffs previously in place may have protected American manufacturers from foreign competition and preserved siting inside the United States, the re-imposition of tariffs will not necessary foster reshoring.

86 *See, e.g.*, Ed Kilgore, *Trump Keeps Flipping and Flopping on Abortion*, New York (Sept. 3, 2024).

87 Erin Doherty, *Trump fights his old policies in series of flip-flops*, Axios (Sept. 30, 2024).

88 *See* Chris Stein, *How Bernie Sanders and conservatives united against US semiconductor bill*, The Guardian (July 31, 2022) (noting both Senator Sanders and Americans for Prosperity opposition to the *CHIPS and Science Act* as "corporate welfare").

E. The Rubio Model and Tariff Pain Relief

Prominent conservatives such as Marco Rubio have shown a path for supporting industrial policy in general and manufacturing subsidies in particular while denigrating and opposing the *CHIPS and Science Act*. Having won the contest to serve as President Trump's Secretary of State following a lengthy career as an influential U.S. Senator, Rubio is a leading light of the National Conservative movement.[89] His advocacy for industrial policy is stronger than nearly anyone in the Republican party and yet he voted against the *CHIPS and Science Act* in 2022.

Rubio's stated reasons for voting against the bill were that it lacked strong guardrails to prevent U.S. technology innovations from being stolen by China and that the science component of the bill would provide funding to "woke" universities undeserving of taxpayer funding.[90] Rubio's explanation of his vote provides a ready-made blueprint for President Trump: find a reason to distinguish and denigrate the *CHIPS and Science Act* in particular while preserving the right to champion technology manufacturing subsidies programs drawn up by Republicans.

Finally, having a purse of funds with which he can award favored constituencies will hold obvious appeal to Trump, especially as his early policy initiatives—especially the promised imposition of tariffs—will invite retaliation from trading partners that will be targeted to cause him and his fellow Republicans political pain.[91]

The imposition of tariffs is almost certain to encourage affected nations to institute retaliatory tariffs that target politically sensitive constituents.[92] Trump himself acknowledged this reality in his March 2025 address to Congress, observing that as a result of his tariffs, "there will be a little disturbance, but we are OK with that." In this scenario, introducing some carrots into the mix that encourage industry to build factories and hire workers in these regions will be a difficult course to resist, particularly if Trump can do so with bipartisan support. Trump's willingness to tap the Department of Agriculture's Market Facilitation Program to provide $12 billion in subsidies for farmers harmed by China's retaliatory tariffs imposed during the early days of the U.S.-China trade war offers an instructive example of his interest in using domestic subsidies to aid favored groups.[93] Congressional Democrats may balk at such blatant political favoritism, as they did during his first term, but standing in the way of subsidies for swing state voters who have been harmed by retaliatory tariffs is a difficult and possibly unsustainable position for any elected official.

---

89 Now serving as President Trump's Secretary of State, then-Senator Rubio could be scathing in his critiques of traditional Republican economic orthodoxy that disdained industrial policy. *See* Senator Marco Rubio, *Industrial Policy, Right and Wrong*, National Affairs (Spring 2024) ("Far too often, the answers from think tanks, consultants, and committee chairs felt like under-contextualized Reagan-era talking points in a modern font. They simply did not reflect the world we lived in — a world in which China was rising, corporate patriotism was declining, and communities were fracturing.").

The term "national conservative" has emerged as shorthand for right-leaning policymakers and thinkers who favor traditional social and cultural practices coupled with heterodox economic policies that may welcome a more assertive role for the state in domestic and international economic policy. The term is not accepted by all conservative thinkers and organizations who favor industrial policy, and those who accept the designation differ greatly in their views regarding which economic interventions are appropriate. A proposed "Statement of Principles" for National Conservatism has drawn the support of many, but not all, of the leading thinkers associated with the movement. Will Chamberlain et al., National Conservatism: A Statement of Principles, Edmund Burke Foundation, https://nationalconservatism.org/national-conservatism-a-statement-of-principles

90 Senator Marco Rubio, *Why I believe in industrial policy — done right*, Washington Post (Apr. 2, 2024); Scott Powers, *Marco Rubio defends vote against CHIPS bill in room full of microchip execs* Florida Politics, (Aug. 11, 2022).

91 Evaluating U.S. trading partners' retaliation for the import tariffs imposed by President Trump during his first term, Carlos Schwarz and Theimo Fetzer found that "retaliation against the Trump administration's tariff hikes seems to be systematically targeted against the Republican voter base" and identified "some evidence suggesting that Republican candidates fared worse in the [2018] mid-term elections in the US counties most exposed to retaliation." Carlos Schwarz and Theimo Fetzer, "Tariffs and politics: Evidence from Trump's trade wars," Center for Economic Policy Research (Apr. 19, 2019). The evidence also showed "a degree of sophistication in the design of the retaliation response." *Id.*

92 *Id*. (observing that "[t]ariff retaliation is widely believed to be politically motivated" while noting "a lack of recent historical precedent" in the modern era prior to 2017).

93 Press Release, United States Department of Agriculture, "USDA Announces Details of Assistance for Farmers Impacted by Unjustified Retaliation" (Aug. 27, 2018).

VII. Possible Barriers to Future Manufacturing Subsidies

A. Political Leadership

If he wants to advance technological manufacturing subsidies during his term, President Trump—rather than congressional Republican leaders—will have to drive the legislative process. Trump's control over the party assures that his priorities dominate the Republican agenda, and if Trump makes industrial policy a key component of his program, congressional Republicans—led by Speaker Mike Johnson and Senate Majority Leader John Thune—are likely to follow suit. By the same token, without Trump's direction, Johnson and Thune are unlikely to pursue this issue on their own.[94] Both leaders, particularly on economic issues, are more closely aligned with traditional Republican free-market doctrine and tend to view industrial subsidies skeptically.[95]

The course of the budget reconciliation process will also significantly impact the political will to enact additional manufacturing subsidies in future years. With major individual income tax components of the 2017 *Tax Cuts and Jobs Act* scheduled to expire, at least one reconciliation bill is expected to focus squarely on tax policy, which will focus attention on industrial policy proposals that can be advanced through tax incentives. One potential flashpoint is the campaign to extend the *CHIPS and Science Act's* 25 percent Investment Tax Credit for semiconductor manufacturing facilities tax credit.[96] Trump has also called for a revival of the domestic manufacturing tax credit, which would apply to all domestic manufacturing, not just manufacturing in strategically important industries.

Semiconductor manufacturers and their trade associations have already begun making the case for the renewal of the CHIPS Investment Tax Credit, which focuses on the generous subsidies provided by East Asian nations and the need for U.S. industrial policy to support the reshoring of chip manufacturing facilities to be more than a one-off experiment if it is to have a lasting impact. It remains to be seen whether these arguments will succeed absent support from President Trump. Depending on how congressional Republicans choose to assess the budgetary impact of each reconciliation bill, they may or may not be willing to swallow the budgetary cost of these programs in lieu of enacting further cuts to individual and corporate income taxes, which has long been the primary policy objective for many Members.[97]

B. Focus and Prioritization

One additional consideration is that in order to gain bipartisan support for manufacturing subsidies, Trump has to approach the issue in a bipartisan manner and drive the process from start to finish. This may be

94 *See* Oren Cass, *How Trump Can Rebuild America*, Foreign Affairs (noting that Trump "has the potential to lead a truly transformational administration, but only if he chooses to blaze a trail that diverges from the market fundamentalism of the Republican Party's legacy establishment").

95 As always, Speaker Johnson has a difficult balancing act in channeling President Trump's priorities while supporting the political imperatives of each of the Members who form Republicans' razor-thin majority in the House. In the run-up to the November 2024 election, Speaker Johnson backtracked quickly after criticizing the *CHIPS and Science Act* during a campaign appearance with a Republican Member in a close race in upstate New York, where significant investments into a new Micron semiconductor fabrication plant were anticipated. Stephen Groves, *House Speaker Johnson says GOP may try to repeal CHIPS Act, then walks it back*, Associated Press (Nov. 1, 2024).

96 Several Republicans who opposed the *CHIPS and Science Act's* subsidies supported the Act's tax credits for semiconductor manufacturing facilities. *See, e.g.*, Press Release, Office of Senator Ted Cruz, Sen. Cruz Issues Statement on CHIPS-Plus Vote (July 7, 2022), https://www.cruz.senate.gov/newsroom/press-releases/sen-cruz-issues-statement-on-chips-plus-vote.

97 Some Republican Members may also make the argument that since the *CHIPS and Science Act* was passed with bipartisan support and signed by a Democratic President, then the extension of the CHIPS Investment Tax Credit should be handled on a bipartisan basis outside of reconciliation, which would allow Republicans to dedicate their reconciliation bills to partisan priorities.

harder than it sounds. During his first term in office, there was broad bipartisan support for a comprehensive infrastructure bill but Democrats have argued that the Trump White House was unable to marshal the discipline and goodwill necessary to seriously engage with both parties on the Hill. The result was a repeated proclamation of "infrastructure week," which former Speaker of the House Nancy Pelosi once described as "little more than a Trojan horse."[98]

The disciplined nature of Trump's 2024 presidential campaign, managed by veteran operatives Susie Wiles and Chris LaCivita, has led many observers to anticipate a more structured, professional White House for Trump's second term, which will have the experienced staff and think tank partnerships necessary to draft and implement a bold legislative agenda.[99] Be that as it may, Trump retains his penchant for unpredictability and it remains to be seen whether he will wish to spend his time in office pushing through legislation that may require tedious drafting and negotiations with a range of Members and committee leaders.

Bipartisan Outreach

If President Trump seeks to advance manufacturing subsidies during his last two years in office, and if Democrats retake the House during that period, Trump's willingness to negotiate in good faith may also be a cause for concern with congressional Democrats. For all the reasons stated earlier, we assess that congressional Democrats will be willing to provide votes for a fresh manufacturing subsidies policy, but only if they feel like they have a seat at the table in formulating the policy and helping it advance.[100]

In recent years, support for targeted industrial policy has become the consensus position among nearly all Democratic thought leaders, even those who championed free markets during the Clinton Administration.[101] Robert Rubin's recent endorsement of targeted industrial policy matches a larger trend in center-left economic thought, which has recently become more comfortable with efforts to leverage state capacity to promote strategically important industries. This convergence suggests that congressional Democrats will support manufacturing initiatives under a second Trump administration as long as the proposals remain focused on core strategic objectives such as supply chain resilience and domestic industrial capacity.[102] By the same token, should President Trump include partisan provisions in any such

In recent years, support for targeted industrial policy has become the consensus position among nearly all Democratic thought leaders, even those who championed free markets during the Clinton Administration.

98 Katie Rogers, *How "Infrastructure Week" Became a Long-Running Joke*, N.Y. Times (May 22, 2019), https://www.nytimes.com/2019/05/22/us/politics/trump-infrastructure-week.html.

99 *See* Jasmine Wright, *This Trump White House Already Looks Radically Different Than the Last*, NOTUS (Jan. 2, 2025) ("Aides who were part of the 2016 transition team, and those watching from outside, have already seen a substantial difference in how Wiles is crafting the new White House.").

100 In a February 2024 working paper, one of us explored the political dynamics animating congressional Democrats' deep commitment to industrial policy. Constanza Vidal Bustamante & Doug Calidas, Working Paper, Unraveling the Political Dynamics Shaping the U.S. Strategy for Technology Leadership, Belfer Center for Science and International Affairs, Harvard Kennedy School (Feb. 20, 2024).

101 *See* Jonathan Weisman, *How Democrats Lost the Working Class*, N.Y. Times (Jan. 4, 2025) ("None other than Robert Rubin, the former Clinton Treasury secretary most associated with the Democratic shift toward promoting economic growth and market stability, called the Biden recalibration 'constructive.' The president largely confined his 'industrial policy' to promoting domestic manufacturing in arenas like semiconductors, which are vital to economic and national security, and to combating climate change, which unfettered free markets have failed to address, Mr. Rubin said in an interview.")

102 Zaid Jilani, *Democrats Should Work With Trump*, Compact Magazine (Jan. 21, 2025) ("The first obvious area where cooperation makes sense is trade and industrial policy . . . By engaging with Trump on trade and industrial policy, Democrats have an opportunity to distance themselves further from the neoliberal economics that directed their party's policies for so many years. As the Biden administration's partial embrace of Trump's economic nationalism showed, tariffs and protectionism don't have to be all-or-nothing.").

proposal (such as right-wing labor or environmental law provisions that are anathema to most Democrats in Congress), they will likely find a way to avoid cooperating. Trump can accrue the political benefits that come to a President who shepherds a widely popular bipartisan proposal through Congress, but only if Democrats perceive him as engaging in good faith.

C. Economic Headwinds

The final set of considerations involve macroeconomic factors, especially inflation. When the *CHIPS and Science Act* was enacted, the nation was still in the grip of the COVID-19 pandemic and inflation was not yet a cause for concern. That era is over, and Trump owes his election win in large part to voters' dissatisfaction with the rise in consumer prices that occurred during President Biden's time in office. Ordinarily, this would be a major reason to expect a comprehensive subsidies policy to sit on the shelf, since—with rare exceptions—subsidies are inflationary on balance.

In light of Trump's fondness for tariffs, the customary analysis may not apply. Tariffs both restrict the volume of imports and add to the prices charged to users of imported goods, and are thus are typically more inflationary than subsidies—especially subsidies intended to increase long-term supply. If Trump continues pursuing his tariff agenda, then the inflationary effect of targeted manufacturing subsidies will likely pale in comparison to any inflation engendered by his tariff project. But he has paid close attention to market and economic indicators during both his time in office and his most recent campaign, and he may find a reason to back away from both his tariff agenda and domestic industrial policy if inflation returns and the public sours on policy measures that exacerbate inflation.

D. Fiscal Considerations

The impact of budget deficits and the ever-increasing national debt may also be considerations in the debate over industrial policy. As stated above in the reconciliation discussion, many congressional Republicans remain opposed to deficit spending, especially deficits that are driven by anything other than tax cuts. These Members will create headaches for Speaker Johnson throughout the reconciliation process because Republicans' margin in the House is so thin that any handful of Members can band together to withhold their votes and block legislation they do not support.

For bipartisan bills, the situation is different. Even if this group of Republican Members withholds support from a subsidy package in protest of the budgetary cost—and subsidies cost money by definition—Democrats who support any such package for all the reasons stated above can replace their votes to reach a simple majority necessary for passage. While President Trump has voiced a desire to balance the federal budget and reduce debt, we assess that it is unlikely he would refrain from advancing a subsidies package solely because of concerns over its budgetary impact.[103]

103 During his first term, President Trump reportedly stated that he did not care about the national debt because he'd be out of office by the time any consequences arose. Lachlan Markay & Asawin Suebsaeng, *Trump on Coming Debt Crisis: 'I Won't Be Here' When It Blows Up*, The Daily Beast (Dec. 5, 2018). "Several people close to the president, both within and outside his administration, confirmed that the national debt has never bothered him in a truly meaningful way, despite his public lip service. 'I never once heard him talk about the debt,' one former senior White House official attested." *Id.*

VIII. Conclusion

The U.S. industrial policy landscape, particularly in strategic technology industries, has undergone a remarkable shift since 2016. A revolt against free-market orthodoxy has transformed into a sophisticated policy framework endorsed by new conservative institutions and a wide-ranging coalition of voters. While the future of manufacturing subsidies remains unclear on account of President Trump's recent criticism of the *CHIPS and Science Act*, we believe the political and economic forces that gave rise to the passage of the law are still very much in place and will likely impel Trump to embrace his own version of manufacturing subsidies during the last two years of his second term.

There are several reasons for this conclusion, but two dynamics—political and geopolitical—stand above the rest. First, the widespread political support for manufacturing subsidies among broad swathes of the electorate overlap seamlessly with Trump's core campaign promises and electoral coalition. His base of working-class voters in manufacturing areas strongly supports industrial policy, while venture capitalists in the new Republican donor class recognize the strategic importance of preserving U.S. manufacturing capabilities in advanced industries. Second, the geopolitical environment that gave rise to the *CHIPS and Science Act* remains largely unchanged: other countries, particularly in East Asia, continue to generously subsidize advanced manufacturing, which kneecaps the prospects of private manufacturers based in any nation—including the United States—that fails to do the same.

The road ahead is not without its challenges. Republican leaders in Congress remain skeptical of industrial policy, and President Trump's first two years in office may be overtaken by partisan imperatives, particularly tax reform. The newly salient political risk of inflation could also restrict policy options, though this particular problem could be overwhelmed by President Trump's expansive tariff agenda. Yet given Trump's dominance of the Republican Party and the widespread popularity of manufacturing subsidies among voters in both parties, these challenges appear surmountable.

Ultimately, we expect President Trump to distinguish his manufacturing subsidy program from that of his predecessor while preserving the overarching shift toward a long-term embrace of advanced manufacturing subsidies. While there are reasons this policy outcome may not come to pass, a clear combination of political incentives and geopolitical dynamics continue to set conditions that would make these policies viable and politically desirable. Just as President Trump's disruptive first term created the space for a new coalition to form in support of industrial policy, his second term may well cement a long-term embrace of industrial policy and manufacturing subsidies in particular.