Geopoliticized Industrial Policy: Power Rivalries and the Allocation of Government Subsidies*

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Abstract

In this paper, we examine the political economy of industrial policy in the United States amid an evolving global geopolitical environment. We argue that federal industrial policy reflects a dual logic: it functions as an instrument of statecraft to enhance strategic and technological advantages vis-à-vis global rivals, while simultaneously serving as a vehicle for domestic political distribution. Using a novel firm-level dataset that combines information from the Subsidy Tracker and Orbis databases, We analyze the allocation of federal subsidies across more than 2 million firm-year observations from 2010 to 2021. Our results show that firms more exposed to Chinese import competition and those operating in industries targeted by the "Made in China 2025" initiative are significantly more likely to receive federal support, while political connections also play a critical role. We develop a comprehensive framework for understanding the new wave of industrial policy and demonstrate that contemporary U.S. industrial policy is shaped by both global strategic rivalry and domestic political considerations.

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1 Introduction

On August 9, 2022, former President Joe Biden signed the *CHIPS and Science Act* into law. The Act authorizes approximately $280 billion in federal funding to strengthen domestic research and manufacturing capacity in semiconductors—a sector viewed as critical to both economic security and technological leadership. Beyond industrial competitiveness, the legislation is explicitly motivated by the need to enhance supply chain resilience and counter China's growing influence in advanced technologies (The White House, 2022*a*). In the same vein, the United States has enacted other major legislative initiatives in recent years, including the *Infrastructure Investment and Jobs Act* (IIJA) of 2021 and the *Inflation Reduction Act* (IRA) of 2022, which aim to revitalize the domestic manufacturing base in critical sectors, create employment opportunities, and accelerate the transition to clean energy.

Similar trends are evident globally. Other major economies have introduced ambitious industrial strategies to boost innovation and competitiveness. In the European Union, the *European Green Deal*, launched in 2019, seeks to transform the EU into a resource-efficient, low-carbon, and globally competitive economy (European Commission, 2019). China, meanwhile, announced the "Made in China 2025" strategic plan in 2015 to reduce reliance on foreign technology imports and move up global value chains in advanced manufacturing and high-tech industries (Kennedy, 2015).

These new initiatives mark a global resurgence of industrial policy and a significant departure from its conventional role. Historically, industrial policy—often contested—was primarily implemented in developing countries as part of late industrialization strategies to promote infant industries, nurture national champions, and address market imperfections (Haggard, 1990; Wade, 1990; Aiginger and Rodrik, 2020). Yet, after three decades of neoliberal orthodoxy, industrial policy has re-emerged as a central instrument of statecraft in both advanced and emerging economies, reflecting the shifting balance between market liberalism and state intervention in an era of geopolitical and technological rivalry. This renewed wave of industrial policy raises several interrelated questions. Why are governments once again embracing state intervention after decades of economic liberalization? How does the evolving geopolitical environment—marked by great power rivalry and geo-economic competition—shape industrial policy at the domestic level? What role does domestic politics play?

In this paper, we analyze industrial policy in the United States against the backdrop of intensifying

geopolitical competition and great power rivalry. We trace both the geopolitical and domestic political roots of industrial policy through the lens of federal subsidies. We argue that global power competition motivates governments to allocate targeted public resources to critical industries and firms to strengthen strategic advantages, address vulnerabilities, and counter foreign rivals in economic, technological, and security domains. However, industrial policy also carries significant distributional consequences and is subject to political capture. Politicians, therefore, face strong incentives to deploy such policies to build electoral support and/or reward political allies.

To test these arguments, we construct a novel firm-level dataset on federal subsidies, combining data from the *Subsidy Tracker* and Bureau van Dijk's *Orbis Historical* database from 2010 to 2021. Using a unique machine learning approach, we match firms across the two databases and supplement them with a wide range of covariates. Our final sample covers more than 2 million firm-year observations, among which roughly 0.35% received federal subsidies.

Empirically, we estimate a rare-event logistic regression model. Our results show that firms located in areas more exposed to import competition from China (*geo-economic consideration*) and those operating in industries prioritized under the "Made in China 2025" initiative (*geo-technological consideration*) are significantly more likely to receive federal subsidies. In contrast, firms associated with the military-industrial complex (*geo-military consideration*) do not appear to benefit disproportionately. We also find strong evidence of political favoritism: firms with lobbying connections to either the Democratic or Republican Party are more likely to receive government support. Electoral considerations do not seem to play a significant role. Overall, our findings indicate that U.S. industrial policy embodies a dual logic—advancing the strategic objectives of geopolitical competition while simultaneously serving the domestic political imperatives of rent-seeking and partisan favoritism.

Our paper makes several important contributions to the literature. We speak to the growing body of scholarship that examines the geopolitical and security dimensions of industrial policymaking (Juhász, Lane and Rodrik, 2024; Aggarwal and Reddie, 2025; Aiginger and Sieber, 2006). Although this emerging literature recognizes the increasing salience of geopolitical and security considerations in shaping the new wave of industrial policy, the precise mechanisms linking these factors to policy design and resource allocation remain underexplored. Much of the existing evidence is anecdotal or relies on case studies that provide limited micro-level insights into how geopolitical rivalry influences state intervention in the economy.

We address this gap by developing a theoretical framework that integrates geopolitical and security logics into the conventional model of distributive politics. Our framework highlights industrial policy as an instrument of statecraft through which governments respond to strategic competition and national security challenges. This perspective underscores how international rivalries and strategic dependencies shape the domestic political economy of state support, influencing which firms, industries, and regions are prioritized in the allocation of economic benefits.

Empirically, we are among the first to leverage large-scale firm-level data to analyze the geopolitical economy of federal subsidy allocation in the United States. Our study moves beyond aggregate or constituency-level analyses to reveal how geopolitical and security concerns manifest in the actual distribution of state resources across firms and industries, providing more nuanced insights into the political economy of industrial policy in an era of renewed great-power competition.

More broadly, this paper bridges international political economy (IPE) and American politics in the study of industrial policy. Research in IPE has traditionally emphasized how global economic structures and strategic competition shape state behavior, whereas scholarship in American politics has focused on domestic distributive politics, interest-group influence, and the role of electoral incentives in policy design. We connect these two fields of literature by incorporating the geopolitical and security dimensions of international competition into the analysis of federal spending and industrial policy. As we demonstrate, new industrial policy operates at the intersection of international pressures and domestic political constraints. Global strategic rivalries motivate state intervention in the economy, but the distribution of economic benefits is filtered through domestic institutions and political incentives—particularly electoral geography, party networks, and political connections. In so doing, we offer a more comprehensive analytical framework for understanding the new wave of industrial policy.

In what follows, we first provide an overview of the evolution of industrial policy in the Global South, unpacking its institutional logic within the developmental state model. We then illustrate the resurgence of industrial policy in the Global North, driven by both domestic and external factors. Next, we explain why geopoliticized industrial policy emerges and how global power competition and electoral considerations shape the allocation of domestic subsidies. Additionally, we present our empirical strategy and findings. We conclude by outlining new research directions for future studies as well as policy implications for policymakers and corporate leaders.

2 The Evolution and Resurgence of Industrial Policy

2.1 Industrial Policy in the Global South

How to balance the degree of government intervention and market freedom is a classic topic in the literature of political economy, macroeconomics, and business management (von Hayek, 1976; Stiglitz, 2002; Vogel, 2018; De Haan, Lundström and Sturm, 2006; Mushtaq et al., 2022; Hung, Oanh and Trang, 2024; Gwartney and Lawson, 2003; Michie and Prendergast, 1998; Brewer, 1993; Park, Li and Tse, 2006; Cuervo-Cazurra, Gaur and Singh, 2019). In the Global South, industrial policy serves as a crucial component in the "development state model." In this model, nation states are the primary policy entrepreneurs in designing and implementing domestic development agendas. Governments allocate needed resources to the chosen sectors and establish industrial clusters (Haggard, 1990; Slattery and Zidar, 2020), hoping that these "picked winners" could generate economic growth, propel technological innovation, and create new employment opportunities (Chen and Xie, 2019; Bloom, Van Reenen and Williams, 2019; Bartik, 2020; Bai et al., 2025). Decisions on who qualifies to receive government support are a combination of economic, political, developmental, and environmental considerations. For instance, Global South countries often begin with the industries where they have rich natural resources. Moreover, higher-capacity states, such as the Four Asian Tigers, are more capable to implement wider—and often more ambitious—industrial policy tools (Haggard, 1990).[1] Developmentally, industries such as electronics, which have greater potential for technological upgrading and spillovers, tend to be favored in industrial policy. Developing countries like Nigeria, South Africa, and Indonesia also increasingly promote renewable energy and green industries (Babayomi, Dahoro and Zhang, 2022; Li, Zhang and Li, 2022; Kaze, Balta-Ozkan and Shrimpton, 2025). In return, private sector actors, including firms, entrepreneurs, innovators, and investors, act in line with the directed policy change (Juhász, Lane and Rodrik, 2024). On a global scale, governments in the Global South subsidize domestic industries and protect them from global competition by imposing tariffs and other trade barriers (Benito and Meyer, 2024).

By virtue of industrial policy, government regulation and intervention in national economy was prevalent from the 1960s to the 1990s, particularly in East Asia and Latin America (Haggard, 1990; Wade, 1990). The East Asian economic success, which often is referred as the "East Asian Miracle," demonstrated a

[1] The Four Asian Tigers refers to Hong Kong, Singapore, South Korea, and Taiwan, and they experienced rapid economic growth and industrialization from the 1960s to the 1990s.

quick and effective industrialization path, leading to 6-8% annual GDP growth rates (Krueger, 1995; Hsiao and Hsiao, 2003). Targeted industries and companies as national champions stood out among worldwide counterparts. For instance, Taiwan's semiconductors, such as the Taiwan Semiconductor Manufacturing Company (TSMC), MediaTek, and United Microelectronics Corporation (UMC), play a major role in the global advanced chips market.[2] The Japanese government adopted a combination of protectionist and export-oriented policies to nurture homegrown, world-class automakers and electronics companies, including Toyota, Honda, Nissan, Panasonic, and Sony (Whitfield, 2024). Additionally, Thailand's automative and electronics industry prospered thanks to the establishment of joint ventures and private-public partnerships (Natsuda and Thoburn, 2013; Kohpaiboon, 2020). In Latin America, Brazil adopted an oil-based industrial approach, embedding state-owned enterprises—such as the energy giant, Petrobras—in political interventions to strengthen technological capacity and expand local supply chains (Massi and Nem Singh, 2018).

National champions and infant industries have long been central to the allocation of subsidies and the implementation of industrial policy in the Global South. Governments first identify and protect infant industries—sectors with high potential for technological upgrading, employment generation, and export competitiveness—through targeted fiscal support and trade protection, allowing them to develop production capacity and technological know-how (Haggard, 1990; Bloom, Van Reenen and Williams, 2019; Chen and Xie, 2019). Subsidies are often directed toward strategically significant sectors such as electronics, renewable energy, and green technology, reflecting developmental, political, and environmental priorities (Babayomi, Dahoro and Zhang, 2022; Li, Zhang and Li, 2022; Kaze, Balta-Ozkan and Shrimpton, 2025). As these protected industries mature, they often evolve into national champions that consolidate domestic supply chains, anchor industrial ecosystems, and compete in international markets. These firms—often state-supported or strategically favored—serve as vehicles for channeling subsidies, coordinating sectoral development, and promoting technological upgrading (Massi and Nem Singh, 2018; Agarwal, 2023). Examples include Taiwan's semiconductor giants such as TSMC, MediaTek, and UMC; Japan's automakers and electronics producers nurtured through export-oriented strategies; and Brazil's Petrobras, which leveraged subsidies to expand technological capacity and local supply chains (Massi and Nem Singh, 2018; Chen, 2023; Whitfield, 2024). The evolution from infant industries to national champions fosters learning-by-

[2] Taiwan's semiconductor industry accounts for an 18% share of the global market, second only to the United States' global market share (39%). See Chen (2023).

doing, technological spillovers, and integration into global value chains (Juhász, Lane and Rodrik, 2024), while also sustaining economic optimism and reinforcing political legitimacy by linking state intervention to visible economic progress (Lamounier and Moura, 1984; Pinheiro et al., 2004). Although the developmental state model carries risks of rent-seeking, inefficiency, and environmental strain (Mamica and Dolfsma, 2022; Benito and Meyer, 2024; Evenett et al., 2024), evidence from East Asia and Latin America suggests that when subsidies are strategically deployed to nurture infant industries and cultivate national champions, they can effectively balance state control and market dynamism, driving long-term industrialization in the Global South (Cimoli, Dosi and Stiglitz, 2009).

2.2 Industrial Policy in the Global North

In the Global North, economic neoliberalism dominated over the past three decades. It was characterized by limited government intervention in regulating markets and addressing "market failures," while international organizations reinforced market-oriented policies through conditional lending and structural adjustment programs (Wade, 2012). However, more recently, the Global North witnesses a new wave of nation states avidly designing and implementing industrial policies to serve national goals (Agarwal, 2023). For instance, notably, in 2022 the United States introduced two sweeping initiatives—the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act, and the Inflation Reduction Act—designed to boost domestic critical infrastructures in semiconductors, biotechnology, clean energy technologies, and critical minerals (Tobin, 2024; Goetzel, 2025). Not only the United States, but other countries in the Global North are speeding up investments in emerging technologies, such as artificial intelligence. For instance, as is shown in Figure 1, advanced democracies have allocated substantial public funds to artificial intelligence, with the United States taking the lead by awarding more than five billion dollars in AI-related contracts.

At the international level, industrial policy serves as a key instrument of economic statecraft amid global power competition.[3] Powerful states, which sit at the center of global financial, production, and information networks, can exploit control over critical nodes to impose costs on competitor states, a phenomenon characterized as "weaponized interdependence" (Farrell and Newman, 2019; Drezner, Farrell and Newman, 2021; Farrell and Newman, 2023).[4] Industrial policy is a prominent enabler to advance dual strategic

[3] According to Baldwin (1985, 39), economic statecraft refers to a broad range of state actions that "subsume all of the economic means by which foreign policy makers might try to influence other international actors."

[4] In a later study, Chen and Evers (2023) find that in addition to global networks, economic coercion also manifests through

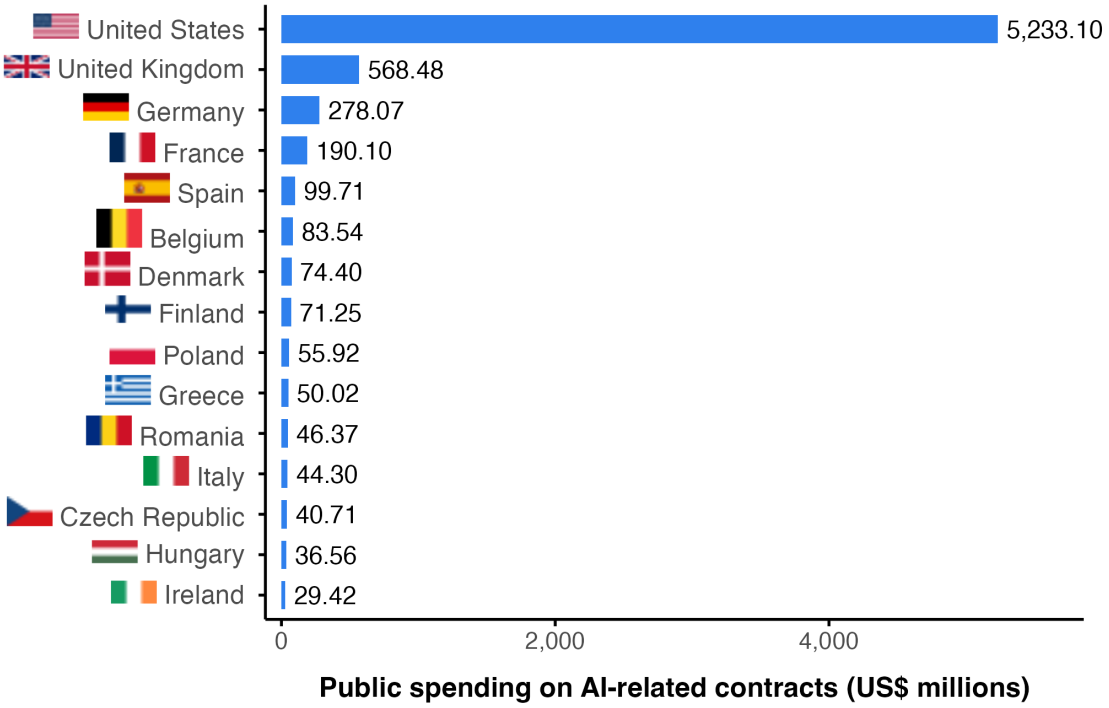

Figure 1. Total Public Spending on Artificial Intelligence Investment in USA and OECD (2013-23)

Notes: this Figure compares public spending on AI–related contracts across OECD countries and the United States from 2013 to 2023. The United States predominantly leads (over $5.2 billion), far surpassing the United Kingdom, Germany, France, and other OECD countries, whose spending ranges from over $550 million to around $30 million. This Figure is adapted from Maslej et al. (2025, 354).

objectives. On the one hand, via investing in critical sectors like semiconductors, clean energy, and artificial intelligence, governments aim to secure a first-mover advantage in emerging technologies (Zhang 2025). This is consistent with the European Commission launching the European Chips Act with "strengthening research and technological leadership" as a key objective (European Commission 2022), as well as the Biden administration promoting the CHIPS and Science Act as a means to "keep the United States the leader in the industries of tomorrow, including nanotechnology, clean energy, quantum computing, and artificial intelligence" (The White House 2022). On the other hand, with the development of domestic industrial policies, states will be able to reduce reliance on external suppliers and the "chokepoints" dominated by rivals, while simultaneously strengthening their own control over strategic supply chains.[5] Hence, rather

companies and supply chains.

[5] For example, chokepoints and supply chain control in the global economy include extreme ultraviolet lithography systems

than merely promoting domestic developmental goals, industrial policy also helps countries maintain a competitively advantageous position in global economy.

The resurgence of industrial policy in the Global North can be attributed to concerns in both technological uncertainties and strategic defense. This includes global competition in semiconductors (Luo and Van Assche, 2023), artificial intelligence (e.g., ChatGPT v.s. DeepSeek), military and aerospace (e.g., the current NASA plan to go to the moon with U.S. allies), and green technologies (e.g., clean energy and rare earth supply chains), illustrating how industrial rivalry is increasingly framed as a national security concern rather than merely an economic one. The reframing has led states to consider leadership in critical sectors as keys to national survival, intervening to secure supply chains, restrict technology transfers, and insulate domestic capabilities from foreign influence. The shift is evident in industrial policy and foreign policy instruments, especially with the growing usage of sanctions as economic tools. In Figure 2, the total amount of sanctions issued by the United States have increased significantly from 1950 to 2022, with a recent trend of over 180 total sanctions in each year. In particular, financial and trade sanctions have dominated, experiencing rapid growth, while military sanctions have seen more consistent fluctuations. This reflects a broader shift toward *economic* tools of coercion, where industrial and financial policies increasingly complement military instruments of statecraft to exert influence over foreign enemies.

At the domestic level, industrial policy reflects a combination of organized interest and public preference. Business interest groups have historically exerted substantial influence on policies (Gilens and Page, 2014). Resourceful industry associations and technology consortia, such as those in the automotive and steel sectors, often lobby governments for pro-subsidy measures that serve their own interests. This effort can be observed in the Semiconductor Industry Association's campaign for the CHIPS and Science Act's manufacturing incentives (Semiconductor Industry Association, 2022) and the American Iron and Steel Institute's filing pressing policymakers to employ protective, pro-subsidy measures countering foreign subsidies and trade distortions (American Iron and Steel 2023). Public opinion also provides an important constraint: surveys show that American voters consistently support government action to preserve domestic jobs and technological leadership, especially when framed in terms of competition with China. Support for industrial policy measures remain strong across political affiliation: 79% of American respondents to

monopolized by ASML (Netherlands), dominant foundry capacity in TSMC (Taiwan) and Samsung (South Korea), and heavy rare earths elements refining and processing concentrated in China. In response, the United States has subsidized domestic semiconductor manufacturing to lessen reliance on foreign chip producers (Galeano and McSwigan, 2022).

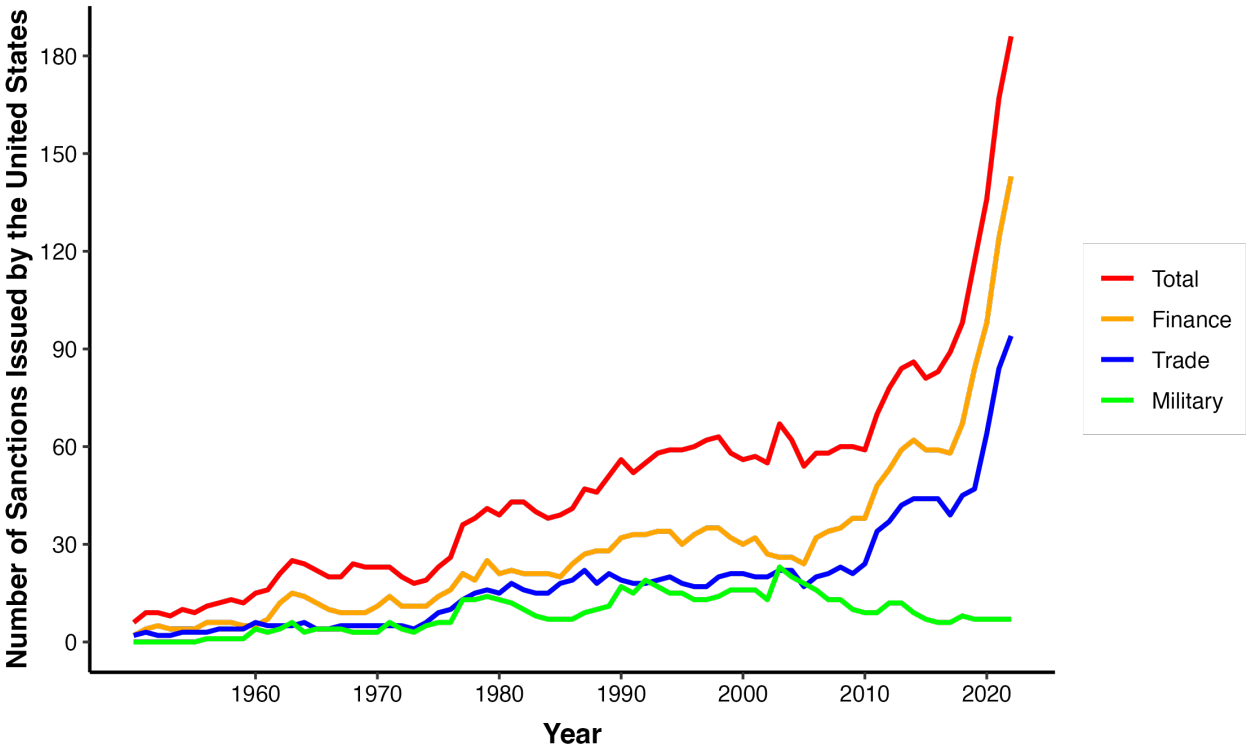

Figure 2. Trends in U.S. Sanctions Across Finance, Trade, and Military Domains (1950–2022)

Notes: this Figure depicts the overall trend of sanctions imposed by the United States from 1950 to 2022. While military sanctions have remained steadily low in recent years, total U.S. sanctions have risen sharply, driven primarily by increases in finance and trade measures. We compiled this Figure based on data from the Global Sanctions Database (Felbermayr et al., 2020; Kirilakha et al., 2021; Syropoulos et al., 2024).

the 2021 Chicago Council supported government funding of emerging technologies to gain an edge over foreign competitors, and 57% of respondents advocated for bans or limited imports of goods from foreign competitor companies. The majority of Americans aligned on prohibiting US companies from selling sensitive high-tech goods to China, increasing tariffs on Chinese goods, and even reducing trade relations at their own cost (Chicago Council of Global Affairs 2021). As more Americans view maintaining a technological and economic edge over China as a top governmental priority, political receptivity towards economic nationalist tools have grown. Economic nationalism underscores the priority of safeguarding national economic interests through measures such as tariffs, investment restrictions, and preferential policies favoring domestic workers and industries (Helleiner, 2002; Helleiner and Pickel, 2005; Clift and Woll, 2012; Luo, 2024; Chaudoin and Mangini, 2025).

Although industrial policies may be subject to political benefits for career-concerned politicians and bureaucrats (Slattery, 2024), they have achieved substantial social and economic outcomes: job creation; economic achievements; Programs such as the CHIPS and Science Act have been justified not only in terms of national security but also as engines of job creation, regional revitalization, and technological upgrading. President Biden, for example, framed the CHIPS Act as a means to "win the economic competition of the 21st century" (The White House 2022*b*). Congressman Hakeem Jeffries further touted it as "bringing domestic manufacturing jobs back to America" (Jeffries 2022). A similar logic of combining industrial policy with strategic competitiveness also drives Europe's recent industrial policy efforts. For example, the European Commission's Green Deal Industrial Plan (The European Commission 2018) and the Versailles Declaration (European Council of the European Union 2022) both advocated for clean-tech manufacturing to increase market competitiveness. French President Macron's contribution to the EU Strategic Agenda with Germany proclaimed a push into green and digital technologies as necessary to cement Europe's standing as an "industrial and technological powerhouse" and to "fundamentally transform our economies. This means huge market opportunities for the industries of tomorrow, creating new, well-paid and secure jobs" (Elysée 2024). The European Parliament packaged all of these priorities as "EU green strategic autonomy" (European Parliament 2023), a concept used to defend increasing green technology investments. These statements from world leaders illustrate the political elasticity of industrial policy, especially as they're framed through multiple narratives. Industrial policies can be justified as a measure against threats to national sovereignty and technological leadership, a strategy for modernizing the national economy, or an instrument of economic nationalism supporting domestic workers.

In sum, the revival of industrial policy in the Global North reflects dual considerations for projecting international power and responding to domestic demands. Unlike in the classical developmental states, contemporary industrial policy has become a crucial arena for pursuing technological leadership, critical infrastructure, and security rivalry. Ultimately, it will contribute to reshaping the distribution of power in the international system.

Taken together, industrial policy reflects evolving state strategies to reconcile market efficiency with national priorities. Despite differences in historical context and developmental stage, both the Global South and the Global North converge on a shared understanding: markets alone cannot ensure technological leadership or equitable growth. Industrial policy—whether developmental or for strategic defense—has re-

emerged as a central instrument of economic development and statecraft in the twenty-first-century global economy.

2.3 Global Power Competition and Geopoliticized Industrial Policy

In this paper, we adopt a geopolitical perspective, arguing that the current burgeon of industrial policies reflects fundamental considerations about relative gains in global power competition. The concept of relative gains captures states' concern not only with their absolute welfare but also with how their gains compare to those of others (Grieco, 1988; Snidal, 1991; Powell, 1991; Grieco, Powell and Snidal, 1993; Morrow, 1997). As Grieco (1988) and subsequent works emphasize, states operating under anarchy worry that unequal gains from cooperation may shift future power balances, thereby undermining their security. This positional logic means that even mutually beneficial cooperation can be constrained if one side's benefits are expected to translate into greater capabilities or bargaining leverage later (Powell, 1991; Grieco, Powell and Snidal, 1993). Thus, states aim to strike a balance in mutually beneficial cooperation between improving one's capabilities while not improving a rival's too much (Grieco, 1988). Building on this insight, Snidal (1991) and Morrow (1997) show that relative-gains concerns are most binding in interactions involving few major players, especially in sectors with high strategic or technological stakes. In such oligopolistic settings with increasing returns, small capability differentials can compound into significant long-term advantages (Snidal, 1991).

This logic applies directly to the domain of industrial policy. Even when global efficiency favors specialization and open supply chains, states may rationally constrain openness and cooperation when technological advancement and production capacity underpin future bargaining strength. Such interdependence can heighten dependence or disproportionately enhance a rival's capabilities. Understanding relative gains thus offers insight into why states are willing to incur short-term efficiency costs in order to safeguard long-term autonomy and bargaining power in the international system.

Geopolitical rivalry incentivizes national leaders to channel subsidies toward firms in strategically critical sectors to gain a competitive edge. From this perspective, industrial policy is not just an economic instrument but a geopolitical strategy that translates technological and economic advantages into state power. We conceptualize these geopolitical objectives across three dimensions: economic, technological, and military. First, the logic of relative gains implies that states seek to strengthen the resilience of domestic

firms in sectors exposed to foreign competition, particularly where import surges or unfair subsidies from rivals erode domestic firm competitiveness. Subsidies thus compensate firms politically and strategically for exposure to asymmetric exposure. For example, the "China shock" (i.e., China's import penetration into U.S. industries) not only displaces domestic workers and firms but also heightens perceptions of economic vulnerability and dependence (Commission, 2018). These local economic disruptions by the China shock have translated into political incentives for policymakers to use subsidies as a visible countermeasure to mitigate domestic losses and to signal politicians' responses in the face of Chinese competition.

Second, industrial policy is also used to address concerns about relative gains in technological leadership. Industrial policy is often designed to boost countries' global competitiveness in high-tech, high-value sectors. In sectors with strategic importance, such as biotechnology and advanced chips, industrial policy helps companies, sectors, and states secure first-mover advantages while reducing their exposure to technological chokepoints controlled by foreign actors. The "Made in China 2025" initiative, for instance, represents the type of foreign industrial strategy that intensifies these concerns. The plan explicitly aims to achieve self-sufficiency and global dominance in multiple advanced manufacturing sectors including robotics, aerospace, and next-generation information technology, all of which challenge the U.S. technological edge (Chen, Chen and Dondeti, 2020). In response, U.S. industrial policy is expected to target subsidies toward industries that overlap with or compete directly against China's strategic priorities, seeking to prevent relative decline in technological capabilities and to secure autonomy from foreign-controlled supply chains.

Finally, industrial policy plays an important role in national defense. Defense equipment and supplies, including weapons, aircraft, and critical minerals, can be vulnerable to disruption or restructuring of global supply chains. Dependence on foreign imports in critical minerals or weapons systems poses direct security risks. Consequently, firms located in defense industrial bases play crucial roles in maximizing a country's military readiness, and governments are more likely to channel subsidies toward such firms to ensure self-sufficiency and resilience in military supply chains. Hence, we derive the following hypotheses:

> **Hypothesis 1 (Geo-economic Objective):** *U.S. firms located in localities more exposed to Chinese import competition are more prone to receive federal subsidy support.*

> **Hypothesis 2 (Geo-technological Calculation):** *U.S. firms operating in industries competing with those targeted by China's "Made in China 2025" initiative are more likely to gain*

federal subsidy support.

Hypothesis 3 (Geo-military Goal): *U.S. firms in the military-industrial complex are more likely to receive federal subsidy support.*

Moreover, domestic political incentives also shape the allocation of industrial resources. Two mechanisms are especially salient: electoral particularism and political favoritism. Elected officials are primarily motivated by the pursuit of electoral success and political survival. To remain in office, they must secure sufficient voter support, which they do not only through campaign promises and ideological appeals, but also by demonstrating tangible benefits delivered to their constituents. The capacity to direct federal resources toward specific localities provides incumbents with a powerful tool for building electoral advantage. In particular, legislators engage in what scholars describe as particularistic or distributive politics—steering government spending, projects, and contracts toward their districts to claim credit and cultivate a personal vote (Cain, Ferejohn and Fiorina, 1987; Levitt and Snyder Jr, 1997; Stein and Bickers, 1995). Through such targeted allocations, members of Congress can signal effectiveness, responsiveness, and influence within the political system, all of which reinforce their reputation among constituents and increase their chances of reelection.

The president likewise participates in distributive politics, though through different institutional channels. While Congress controls appropriations, the executive branch often wields significant discretion in how funds are distributed across states and localities. Research shows that presidents strategically deploy federal spending to reward politically supportive constituencies or to target pivotal swing states that can determine electoral outcomes (Berry, Burden and Howell, 2010; Kriner and Reeves, 2015). This presidential use of distributive policy underscores the electoral logic that pervades fiscal decision-making at multiple levels of the U.S. government. Taken together, this literature highlights a core feature of American political institutions: the blending of policy and politics through the selective allocation of federal resources. Therefore, we expect electoral considerations play a role in the allocation of federal subsidies. However, there is an ongoing debate in the literature regarding whether federal spending is primarily allocated to reward core constituencies or to cultivate political support in swing constituencies (e.g. Lindbeck and Weibull, 1987; Kriner and Reeves, 2015; Stein and Bickers, 1994). We subject this to empirical examination and test the following alternative hypotheses.

Hypothesis 4 (Electoral Particularism): *Government subsidies are more likely to target firms in swing or core constituencies.*

Elected officials, while dependent on voter support for electoral survival, are also incentivized to maintain close relationships with organized interests that provide essential financial and informational resources. From the perspective of firms, political giving constitutes a strategic investment aimed at cultivating ties with policymakers and securing access to decision-making arenas that directly affect their commercial interests (Hillman, Zardkoohi and Bierman, 1999; Cooper, Gulen and Ovtchinnikov, 2010; Weymouth, 2017). Beyond campaign contributions, lobbying serves as a more sustained and institutionally embedded channel through which firms establish and nurture political connections. By engaging regularly with legislators and regulatory agencies, firms accumulate relational capital—trust, familiarity, and access—that enhances their capacity to shape policy outcomes affecting their operations and profitability (Hillman, Zardkoohi and Bierman, 1999; de Figueiredo and Richter, 2014; Weymouth, 2017).

The interaction between business and politics is often conceptualized as a political marketplace in which lobbying and campaign contributions function as currencies of influence (Denzau and Munger, 1986; Grossman and Helpman, 1994; Snyder, 1990). Within this framework, political engagement generates reciprocal expectations that may translate into preferential treatment once policymakers are in office (Baron, 1989; Snyder, 1990). Such benefits can take multiple forms, including favorable regulatory rulings, targeted subsidies, tax advantages, or privileged access to congressional hearings and executive consultations. Accordingly, we expect that firms with established political ties to policymakers are more likely to be favored in the allocation of federal subsidies.

Hypothesis 5 (Political Favoritism): *Government subsidies are more likely to be granted to politically connected firms.*

3 Empirical Strategy

To evaluate these hypotheses, we focus on the U.S.–China geopolitical rivalry as a critical case and examine the allocation of U.S. federal subsidies at the corporate level amid this context.

3.1 Dependent Variable

Our dependent variable—federal subsidies—is constructed from the Subsidy Tracker database. Subsidy Tracker, launched in 2010, compiles information on subsidy recipients from more than 1,000 state, local, and federal economic development programs, as well as other forms of financial assistance to businesses. Subsidy Tracker standardizes such information into a consistent set of categories, allowing users to search across multiple states and programs simultaneously. To our knowledge, this is the most comprehensive dataset of government subsidies available in the United States.

The Subsidy Tracker data on federal subsidies allocated by various agencies.[6] Federal subsidies are broadly classified into two categories: grants and loans. The Grant category includes grant and allocated tax credit, while the Loan category includes loan or loan guarantee, insurance, tax-exempt bond.

To create a standardized measure of federal subsidies, we construct a dichotomous variable equal to 1 if a firm received any type of subsidy from the federal government and 0 otherwise. Subsidy Tracker also reports the monetary value of individual subsidies—such as loans, tax credits, or insurance guarantees. However, because these amounts represent substantively different types of financial assistance, it is not possible to aggregate them into a single comparable measure. In the empirical analysis, we therefore include a full set of subsidy-type and granting-agency dummy variables to account for potential heterogeneity across subsidy forms and sources.

To construct our sample of U.S. firms, we draw on Bureau van Dijk's Orbis Historical Database, an industry-leading product that compiles company-level information from both official and proprietary sources (Bajgar et al., 2020). Orbis provides historical coverage beginning in 2007. We queried all U.S. firms with a unique identification number (BvD ID) in the database. A firm is defined as an independent legal entity (e.g., subsidiaries), and corporate branches are excluded. We also exclude entities classified under public administration (NAICS 2-digit code 92).[7] Our analysis focuses on large and very large firms, which possess the technological capabilities and production capacities most likely to support government geopolitical objectives and are also among the most politically active. As such, they are the firms most

[6] They include Department of Agriculture, Department of Commerce, Department of Energy, Department of Housing and Urban Development, Department of the Treasury, Department of Transportation, Export-Import Bank of the U.S., Federal Deposit Insurance Corporation, Federal Reserve, Internal Revenue Service, Small Business Administration, and U.S. International Development Finance Corporation.

[7] We additionally exclude organizations in "Religious, Grantmaking, Civic, Professional, and Similar Organizations" (NAICS 3-digit code 813), as they are less relevant to our hypotheses.

likely to receive government subsidies.[8] One caveat is that Orbis's coverage of U.S. firms varies over time, with more recent years exhibiting substantially better coverage than earlier years.[9]

One empirical challenge involves matching firms recorded in the Subsidy Tracker database with those in the Orbis database. This task presents a major obstacle for researchers working with firm-level data from multiple sources, as no standardized firm identifier exists across datasets. To address this challenge, we developed a novel machine learning–based matching procedure grounded in the SPLINK probabilistic record linkage framework (Lindsay et al., 2023). Specifically, we tokenized company names into distinctive brand, technical anchor, and auxiliary modifier components, and then applied a probabilistic scoring model to evaluate potential firm matches. By combining SPLINK's Bayesian linkage logic with customized tokenization and blocking strategies, our approach enhances both accuracy and scalability, ensuring that firms in Subsidy Tracker are reliably matched to their counterparts in Orbis.[10]

Our final sample includes 2,480,143 firm-year observations from 2010 to 2021.[11] Among these, 8,650 firm-years (5,375 unique firms) are recorded as recipients of federal subsidies, representing approximately 0.35% of all firms in the sample. Specifically, Figure 3 illustrates that many subsidy recipients are concentrated in the manufacturing industry, and Figure 4 presents a breakdown of firm recipients within the manufacturing sector. Within the manufacturing sector, the figure suggests that companies in capital- and technology-intensive industries are more successful in securing federal subsidies than low-tech and labor-intensive manufacturing industries.

3.2 Independent and Control Variables

Regarding independent variables, we construct new measures to capture the three dimensions of geopolitical competition: economic, technology, and military. First, we use the exposure to Chinese import competition at the congressional district level to measure geo-economic rivalry. We follow the commonly used approach in the "China Shock" literature (e.g. Ballard-Rosa, Jensen and Scheve, 2021; Autor, Dorn and Hanson, 2013; Colantone and Stanig, 2018) and disaggregated U.S. national-level imports from China into county-level. This variable is lagged to deal potential endogeneity and logged to address skewed distribution.

[8] The total number of firms in the United States is vast, and the majority are small or medium-sized enterprises. For instance, in 2021, Orbis recorded more than 10 million U.S. firms.

[9] This pattern may also reflect an actual increase in the number of firms over time, given the expansion of economic activity.

[10] See Fuca, Lin, and Zhu (2025) for technical details.

[11] We exclude years 2007–2009 because the HUD USPS ZIP Code Crosswalk Files are available only beginning in 2010. We also exclude firms located in American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands.

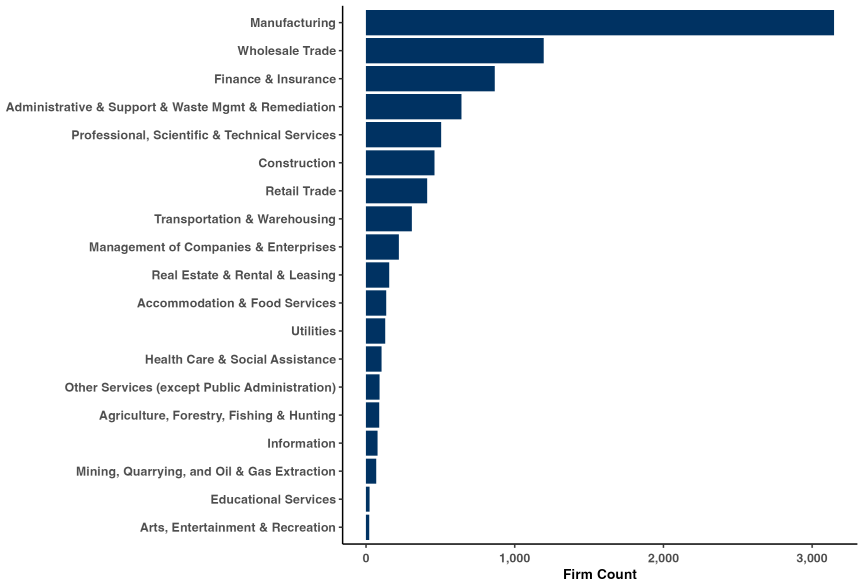

Figure 3. Distribution of Federal Subsidy Recipients across Industries (2010-2021)

Notes: this Figure depicts the distribution of firm recipients of federal subsidies across industries categorized by the first two digits of NAICS codes.

Second, to measure geo-technological competition, we construct an industry-level indicator identifying whether a U.S. firm operates in an industry that benchmarks those in the "Made in China 2025" (MIC 2025) initiative. Specifically, we benchmark U.S. industries at the four-digit NAICS level against the those in the ten prioritized strategic sectors in MIC 2025, including advanced information technology, high-end numerical control machinery and robotics, aerospace equipment, ocean engineering equipment, advanced rail transportation, energy-saving and new-energy vehicles, power equipment, agricultural machinery, new materials, and biopharmaceuticals (State Council of the People's Republic of China, 2015). Industries that correspond to or overlap with these Chinese priority sectors are coded as being subject to direct geo-technological competition with China. Appendix 0.4 provides a detailed classification of MIC 2025 industries at the four-digit NAICS level.

Third, to measure geo-military rivalry, we focus on whether a U.S. firm is located within the U.S. military-industrial complex. The military-industrial complex encompasses firms that provide products and services essential to national defense and military readiness, including sectors such as aerospace, shipbuilding, electronics, armaments, and advanced materials. Firms embedded in these industries are

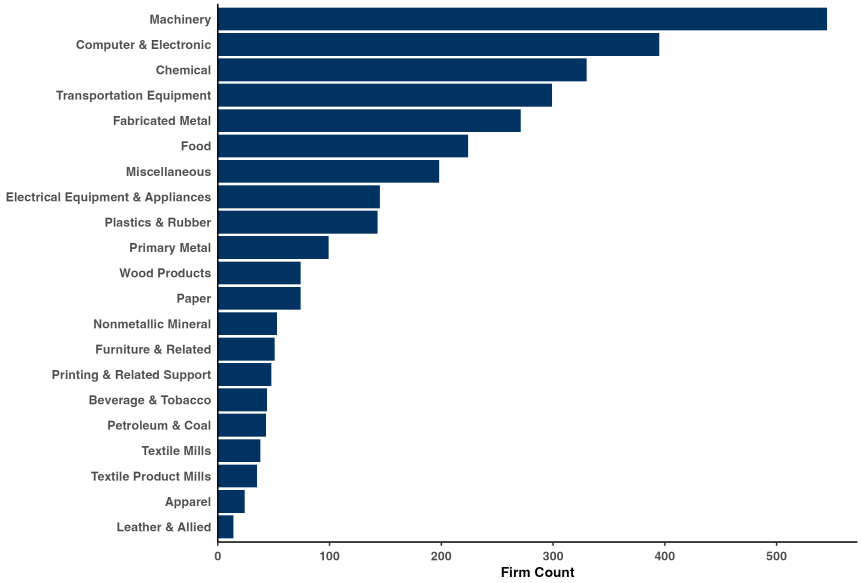

Figure 4. Distribution of Federal Subsidy Recipients within Manufacturing (2010-2021)

Notes: this Figure depicts the distribution of firm recipients of federal subsidies within the manufacturing industry, categorized by the first three digits of NAICS codes. NAICS codes for the broad manufacturing sector are 31, 32, and 33.

strategically significant because they contribute directly to the production, maintenance, and innovation of military capabilities. The military-industrial complex is coded at four-digit NAICS level (Jeon et al., 2025).[12]

To examine the domestic political considerations of federal subsidy allocation, we focus on two key mechanisms: *electoral particularism* and *political favoritism*. The distribution of federal subsidies may be strategically shaped either to mobilize electoral support in politically competitive jurisdictions—electoral particularism—or to reward loyal constituencies and political allies, reflecting political favoritism. Following established approaches in the literature, we classify each congressional district and state into one of three mutually exclusive categories based on the president's vote share in the most recent election. *Swing districts (or states)* are defined as those in which the president's vote share falls between 45% and 55%, indicating high electoral competitiveness. *Core districts (or states)* are those where the president received more than 55% of the vote, reflecting strong partisan alignment and electoral security. The remaining jurisdictions, where the president's vote share was below 45%, are coded as *hostile districts (or states)* and serve as the

[12]See Appendix 0.2.

reference category in the empirical analysis (Kriner and Reeves, 2015).

Measuring political connections poses a persistent empirical challenge due to their often covert, informal, and multidimensional nature. We proxy firms' political connections using their prior lobbying activities (Kim and Kunisky, 2021). Specifically, a firm is coded as connected to the Republican Party if it lobbied on any bill sponsored by a Republican legislator, and to the Democratic Party if it lobbied on any bill sponsored by a Democratic legislator. This operationalization aligns with the conception of lobbying as a form of "legislative subsidy" (Hall and Deardorff, 2006), whereby organized interests provide information and resources to sympathetic lawmakers to support their policy goals. It is also consistent with empirical evidence that interest groups tend to lobby legislators who are ideologically aligned with their preferences rather than those who are indifferent or opposed (Hojnacki and Kimball, 1998). The lobbying data is drawn from LobbyView (Kim, 2018). To capture the stable and enduring nature of political connections, we average these party-specific lobbying measures over the preceding five years.

We also include a set of commonly used socio-economic control variables to account for local economic conditions that may independently influence policy activity. First, we include income per capita to control for the overall level of economic development and fiscal capacity within each area. Second, we add population size and population growth rates to capture differences in market size, labor supply, and demographic change. Finally, we control for unemployment rates to account for variation in local labor market distress. The data sources include the United States Census Bureau, the Bureau of Labor Statistics, and the Bureau of Economic Analysis.

4 Empirical Results

As discussed at the end of Section 3.1, given the structure of our dataset, we estimate a rare-events logistic regression model. All specifications include two-digit NAICS and year fixed effects (FEs), and some models additionally control for state FEs. Standard errors are clustered at the two-digit NAICS level across all specifications.

Table 1 reports the results. In the baseline specification (Model 1), we include three key variables that capture the distinct dimensions of great-power rivalry discussed above: China Import Competition, Made in China 2025 (MIC2025), and Military-Industrial Complex. We also include two indicators

Table 1. Determinants of Federal Subsidy Allocation

	(1)	(2)	(3)	(4)
China Imports (log)	0.01***	0.01***	0.01***	0.01**
	(0.00)	(0.00)	(0.00)	(0.00)
MIC 2025	0.50***	0.50***	0.50***	0.50***
	(0.13)	(0.13)	(0.13)	(0.13)
Military Industrial Complex	0.11	0.11	0.11	0.11
	(0.15)	(0.15)	(0.15)	(0.15)
Swing District	0.06			−0.02
	(0.07)			(0.09)
Core District	0.07			0.10
	(0.06)			(0.07)
Swing CD in Core ST		0.11		
		(0.08)		
Swing CD in Swing ST		0.05		
		(0.07)		
Core CD in Swing ST		−0.02		
		(0.05)		
Core CD in Core ST		0.13		
		(0.09)		
Copartisan CD			0.03	
			(0.04)	
Swing State				−0.04
				(0.11)
Swing CD × Swing State				0.05
				(0.09)
Core CD × Swing State				−0.16***
				(0.06)
Democratic Ties	0.60***	0.60***	0.61***	0.61***
	(0.17)	(0.17)	(0.17)	(0.17)
Republican Ties	0.79***	0.80***	0.79***	0.80***
	(0.09)	(0.10)	(0.09)	(0.09)
Comparative Advantage	0.28**	0.28**	0.28**	0.28**
	(0.14)	(0.14)	(0.14)	(0.14)
Income PC (County, log)	−0.13	−0.14*	−0.13	−0.17**
	(0.09)	(0.09)	(0.08)	(0.08)
Population (County, log))	−0.02	−0.02	−0.02	−0.02
	(0.02)	(0.02)	(0.02)	(0.03)
Population Growth (County)	−2.33***	−2.41***	−2.28***	−2.78***
	(0.65)	(0.67)	(0.65)	(0.80)
Unemp. Rate (County, log)	0.27	0.26	0.29	0.15
	(0.23)	(0.23)	(0.24)	(0.26)
Firm Size (Very Large = 1)	0.36***	0.36***	0.36***	0.35***
	(0.13)	(0.13)	(0.13)	(0.13)
Listed	−0.31	−0.31	−0.31	−0.33
	(0.25)	(0.25)	(0.24)	(0.25)
Constant	−3.42***	−3.33***	−3.51***	1.79
	(0.93)	(0.91)	(0.93)	(5.06)
2-Digit NAICS FEs	Yes	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	No
State-Level Covariates	No	No	No	Yes
Year FEs	Yes	Yes	Yes	Yes
N	2411058	2411058	2411058	2411058

Notes: Firth's Bias-Reduced Logistic Regression.
Robust standard errors clustered at the 2-digit NAICS level.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

for electoral particularism, Swing District and Core District, along with two measures of partisan political connections, Dem Connections and Rep Connections, which capture firms' lobbying ties to the Democratic and Republican parties, respectively.

In addition, we control for whether a firm operates in a comparative disadvantage (CA) industry,[13] which could confound the effects of MIC2025, as prioritized industries in that program are typically high-tech and skill- and knowledge-intensive, in which the US enjoys a comparative advantage. We further include a battery of county-level economic and demographic controls. At the firm level, we control for firm size (1 = very large; 0 = large)[14] and whether the firm is publicly listed. Finally, all models include two-digit NAICS, state, and year fixed effects.

The results largely align with our expectations regarding the geopolitical dimensions of federal subsidy allocation. All three variables—China Import Competition, MIC2025, and Military-Industrial Complex—have positive coefficient signs, although only the first two reach statistical significance. Firms located in counties exposed to greater import competition from China and those operating in industries prioritized under MIC2025 are significantly more likely to receive federal subsidies. Substantively, holding all other covariates at their medians, a one–standard-deviation increase in China Import Competition increases the probability of receiving a federal subsidy by 0.025 percentage points, while operating in a MIC2025-prioritized industry raises this probability by 0.17 percentage points. These effects are sizable given that the baseline probability of receiving a federal subsidy is only 0.35% in the sample. For the lack of a statistically significant effect of the Military-Industrial Complex, there are at least two plausible explanations. First, the nature of great-power competition between the U.S. and China differs fundamentally from that of the Cold War. Contemporary U.S.–China rivalry is waged primarily on economic and technological fronts—through trade, investment, and innovation policies—rather than through direct military confrontation (Zhang, 2024). Second, federal support for defense-related industries may be channeled predominantly through military procurement and contracting mechanisms rather than through the types of federal subsidies analyzed in this study (Gansler, 2011).

We find more mixed evidence regarding the domestic political determinants of subsidy allocation. On the one hand, the coefficients for Swing District and Core District are positive but statistically in-

[13]We follow Mayda and Rodrik's (2005) approach to classify comparative advantage industries.

[14]We are unable to include firm revenue or employment size as control variables due to missing data across years. Orbis provides comprehensive financial information only for 2021, which precludes consistent longitudinal measurement of firm-level characteristics.

significant, suggesting limited evidence of targeted distributive spending based on electoral considerations. On the other hand, political connections with both the Democratic and Republican parties have positive and highly significant effects. Substantively, when holding all other variables at their medians, political connections to the Democratic and Republican parties increase firms' probability of receiving federal subsidies by 0.21 and 0.28 percentage points, respectively. Taken together, these findings suggest that firm-level political connections play a more decisive role than electoral dynamics in shaping the distribution of federal subsidies.

Regarding the control variables, firms operating in comparative-advantage industries are significantly more likely to receive federal subsidies. This finding is consistent with prior research suggesting that industrial policy often seeks to nurture national champions and promote globally competitiveness (Haggard, 1990; Agarwal, 2023). The results also indicate that very large firms are more likely to be favored than their large counterparts. Finally, firms located in counties with higher population growth are less likely to receive federal subsidies. All other control variables do not appear to exert a statistically significant influence on the allocation of federal subsidies.

In Model 2, we further distinguish core and swing districts based on whether they are located in a swing or core state, while still maintaining state FEs. The results indicate no significant differences across these district types. In Model 3, we introduce an alternative measure capturing whether the legislator representing a district is a copartisan of the president. Although the coefficient on this variable is positive, it does not reach statistical significance. Finally, in Model 4, we relax the state FEs and include two interaction terms between district type ("core" or "swing") and swing state status. There is some evidence that firms located in core districts of swing states are less likely to receive federal subsidies. Across these different model specifications, our main findings regarding China import competition, the MIC 2025 initiative, and political ties with the Democratic and Republican parties remain consistent and robust.

5 Conclusion

Industrial policy has a long and contested intellectual history. Traditionally, it has been understood within the framework of late industrialization and market imperfections, justified as a means to correct coordination failures, nurture infant industries, and promote structural transformation in developing economies

(Haggard, 1990; Rodrik, 2004; Wade, 1990). In recent decades, however, industrial policy has re-emerged as a prominent instrument of economic management and strategic competition in advanced economies. The twenty-first century has witnessed its transformation from a developmental tool into a central instrument of statecraft, increasingly employed to achieve geopolitical, technological, and security objectives (Aiginger and Rodrik, 2020; Andreoni and Chang, 2019).

In this paper, we examined the practice of industrial policy in the United States by analyzing the allocation of federal subsidies across firms, industries, and electoral constituencies. Leveraging a unique firm-level subsidy dataset, we find that both international and domestic political factors play critical roles in shaping subsidy distribution. On the geopolitical front, our results suggest that federal subsidies are strategically deployed to mitigate import competition from China and to support firms operating in industries identified as priorities under the "Made in China 2025" initiative. On the domestic front, we find strong evidence of political favoritism: firms with established lobbying ties to either the Democratic or Republican Party are significantly more likely to receive federal support. Together, these findings demonstrate that U.S. industrial policy operates as a dual-purpose instrument—advancing national competitiveness and strategic objectives while simultaneously reflecting the dynamics of political influence and rent-seeking.

We believe these results carry important implications for both policymakers and business leaders. For policymakers, our findings underscore the need to design industrial policies that reconcile national strategic goals with institutional safeguards against political capture. Effective industrial policy needs to strike a balance between fostering innovation and resilience on the one hand, and maintaining transparency, accountability, and allocative efficiency on the other. For firms, the results highlight the growing importance of political engagement and institutional literacy in an era where state intervention in the economy is once again expanding. The capacity to navigate the evolving geopolitical environment will be a key determinant of firms' ability to secure and effectively leverage government support.

Future research can build on these findings in several directions. First, if the evolving geopolitical environment profoundly shapes the practice of industrial policy in advanced economies, similar considerations are likely to influence the design and implementation of other areas of economic policy. This is already evident in the use of tariffs during ongoing trade wars, government initiatives to strengthen supply chain resilience and diversification, and the tightening scrutiny of foreign investment. Exploring the geopolitical foundations of these policy domains and developing a unified theoretical framework that links them would

represent a fruitful avenue for future research.

Second, it would be valuable to examine how industrial policy operates beyond the federal level. State and local governments account for a large share of industrial incentives and subsidies in the U.S., yet their objectives, constraints, and exposure to geopolitical pressures may differ substantially from those of the federal government. Investigating whether and how geopolitical considerations shape subsidy allocation at subnational levels—and how these interact with intergovernmental competition and fiscal federalism—would yield a more comprehensive understanding of the multilevel dynamics of industrial policy.

Third, future research could compare how industrial policy tools are used for geopolitical purposes across emerging and advanced economies. One important question is whether regime type shapes the allocation of strategic resources—do democratic and authoritarian countries intervene in similar ways, or do their institutional incentives diverge? Further work might also examine how geopolitical pressures interact with regime characteristics and whether resource and institutional constraints in developing countries limit their policy capacity.

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Appendix

0.1 Classification of Firm Size in Orbis

Table 0.1. Orbis Firm Size Criteria

Very Large	(1) Operating Revenue >= 100 million EUR (130 million USD); (2) Total assets >= 200 million EUR (260 million USD); (3) Employees >= 1,000; (4) Listed.
Large	(1) Operating Revenue >= 10 million EUR (13 million USD); (2) Total assets >= 20 million EUR (26 million USD); (3) Employees >= 150; (4) Not Very Large.
Medium	(1) Operating Revenue >= 1 million EUR (1.3 million USD); (2) Total assets >= 2 million EUR (2.6 million USD); (3) Employees >= 15; (4) Not Very Large or Large.
Small	(1) Not included in another category.

0.2 Military-Industrial Complex

Table 0.2. Four-Digit NAICS Codes Related to Military-Industrial Complex (Jeon et al. 2025)

Code	Category Name	Description
2211	Electric Power Generation, Transmission, and Distribution	Energy providers for military bases
3311	Iron and Steel Mills and Ferroalloy Manufacturing	General iron and steel production, including defense
3321	Forging and Stamping	Metal forging and stamping for various applications
3322	Cutlery and Handtool Manufacturing	Production of cutlery and handtools, potentially for military use
3323	Architectural and Structural Metals Manufacturing	Manufacturing of structural metals for various applications
3324	Boiler, Tank, and Shipping Container Manufacturing	Production of containers and tanks, potentially for military use
3325	Hardware Manufacturing	Manufacturing of hardware components
3326	Spring and Wire Product Manufacturing	Production of springs and wire products
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	Manufacturing of machined parts and fasteners
3328	Coating, Engraving, Heat Treating, and Allied Activities	Surface finishing and treatment of metal products
3329	Other Fabricated Metal Product Manufacturing	Ordnance and accessories manufacturing
3331	Agriculture, Construction, and Mining Machinery Manufacturing	Machinery used in military construction projects
3332	Industrial Machinery Manufacturing	Production of industrial machinery, potentially for defense applications
3333	Commercial and Service Industry Machinery Manufacturing	Manufacturing of machinery for various industries
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	Production of HVAC systems, potentially for military installations
3335	Metalworking Machinery Manufacturing	Manufacturing of machinery for metalworking
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	Production of engines and power transmission equipment
3339	Other General Purpose Machinery Manufacturing	Manufacturing of other general-purpose machinery
3341	Computer and Peripheral Equipment Manufacturing	Computer equipment for military applications
3342	Communications Equipment Manufacturing	Radios, satellites, and other military communication equipment
3343	Audio and Video Equipment Manufacturing	Production of audio and video equipment
3344	Semiconductor and Other Electronic Component Manufacturing	Manufacturing of electronic components
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	Defense-related instruments and systems
3346	Manufacturing and Reproducing Magnetic and Optical Media	Production of data storage media
3351	Electric Lighting Equipment Manufacturing	Manufacturing of lighting equipment
3352	Household Appliance Manufacturing	Consumer appliances, sometimes procured by military bases
3353	Electrical Equipment Manufacturing	Production of electrical equipment

Continued on next page

Table 0.2 – continued from previous page

Code	Category Name	Description
3359	Other Electrical Equipment and Component Manufacturing	Manufacturing of other electrical components
3361	Motor Vehicle Manufacturing	Manufacturing of vehicles, including military vehicles
3362	Motor Vehicle Body and Trailer Manufacturing	Production of vehicle bodies and trailers
3363	Motor Vehicle Parts Manufacturing	Manufacturing of vehicle parts
3364	Aerospace Product and Parts Manufacturing	Aircraft, missiles, and space vehicles manufacturing
3365	Railroad Rolling Stock Manufacturing	Production of railroad equipment
3366	Ship and Boat Building	Building and repairing military ships
3369	Other Transportation Equipment Manufacturing	Defense-related transportation equipment manufacturing
3391	Medical Equipment and Supplies Manufacturing	Manufacturing of medical equipment and supplies
3392	Sporting and Athletic Goods Manufacturing	Tactical gear manufacturing
3399	Other Miscellaneous Manufacturing	Various manufacturing activities
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	Wholesalers of military vehicles and parts
4812	Nonscheduled Air Transportation	Air transport services for military logistics
4841	General Freight Trucking	General freight transportation, including military goods
4854	School and Employee Bus Transportation	Transportation services for military bases
4881	Support Activities for Air Transportation	Support activities for military air transportation
5112	Software Publishers	Development of software, potentially for military applications
5174	Satellite Telecommunications	Satellite communication services
5179	Other Telecommunications	Other telecommunication services
5182	Data Processing, Hosting, and Related Services	Data processing and hosting services
5413	Architectural, Engineering, and Related Services	Engineering firms involved in defense projects
5415	Computer Systems Design and Related Services	IT and cybersecurity for military applications
5416	Management, Scientific, and Technical Consulting Services	Consulting services for various industries, including defense
5417	Scientific Research and Development Services	R&D in physical, engineering, and life sciences
5418	Advertising, Public Relations, and Related Services	Public relations and recruitment for military
5419	Other Professional, Scientific, and Technical Services	Various professional services
5612	Facilities Support Services	Managing and operating military bases
5613	Employment Services	Staffing and recruitment for defense contractors
5616	Investigation and Security Services	Private security firms and defense-related intelligence
6221	General Medical and Surgical Hospitals	Hospitals, including military facilities
7115	Independent Artists, Writers, and Performers	Content creation for military recruitment or propaganda
8112	Electronic and Precision Equipment Repair and Maintenance	Maintenance and repair of electronic and precision equipment
9221	Justice, Public Order, and Safety Activities	Domestic law enforcement collaborating with military

0.3 China Import Shock

Following the approach developed by Autor, Dorn, and Hanson (2013), we construct a measure of exposure to Chinese import competition across U.S. congressional districts. We combine global trade data with industry-level employment data in the following procedure.

First, we obtain yearly trade data from the United Nations Comtrade database, covering all six-digit Harmonized System (HS) product codes for the years 2001 through 2024. We extract the value of imports from China to the United States for each product-year combination. This produces a comprehensive time series of Chinese import penetration across industries.

Second, we collect corresponding U.S. employment data from the Census County Business Patterns (CBP), which report annual employment by industry. We aggregate the CBP data to the desired spatial level (e.g., congressional districts) and calculate total employment within each industry and year. Such data characterizes the industrial composition of local economies and generates relative weights for each industry in the U.S. economy.

Since global trade data and U.S. employment data use different classification systems (i.e., HS codes versus NAICS codes), we harmonize them using the `concordance` package (Liao et al. 2020). By doing so, we transform the HS-based trade data into the NAICS-based industrial classification, thereby aligning the trade and employment datasets.

Additionally, we aggregate the transformed trade data to the six-digit NAICS level to obtain the total annual value of Chinese imports for each industry. We calculate the employment share of each industry within the U.S. economy by dividing its total employment by overall U.S. employment in the same year. The employment share serves as an industry weight, capturing how heavily the national economy depends on each sector. We multiply the industry-level import values by their respective employment weights to generate weighted import exposure for each industry-year observation.

Finally, we aggregate the weighted import exposure measures across all industries within a congressional district to produce a district-level measure of exposure to Chinese import competition for each year. Repeating this procedure for all years between 2002 and 2023 yields a panel dataset that reflects changes in local import exposure over time. This measure provides a standardized, comparable indicator of the China import shock that can be used to analyze its economic and political effects across U.S. districts and over time.

0.4 Made in China 2025

Table 0.3. Mapping of MIC 2025 Industries to NAICS Codes

Industry List	**NAICS Code**
Advanced Rail Transit Equipment	3321, 3339, 3342, 3344, 3353, 3365
Agricultural Equipment	3331, 3332, 3334, 3336, 3345
Next-Generation Information Technology Industry	3251, 3259, 3332, 3341, 3342, 3344, 3345, 5112, 5115, 5172, 5174, 5182, 5191, 5415
New Materials	3132, 3133, 3149, 3241, 3251, 3252, 3254, 3259, 3261, 3262, 3279, 3311, 3314, 3329
Marine Engineering Equipment and High-Tech Ships	3331, 3332, 3336, 3339, 3342, 3345, 3366
Biopharmaceuticals and High-Performance Medical Devices	3254, 3341, 3345, 3391
Power Equipment	3324, 3332, 3334, 3336, 3339, 3341, 3345, 3353
Aerospace Equipment	3342, 3344, 3345, 3364, 5174, 5417
Energy-Saving and New Energy Vehicles	3342, 3345, 3353, 3359, 3361, 3363, 5112, 5172, 5174, 5415
High-End CNC Machine Tools and Robots	3331, 3332, 3333, 3335, 3336, 3339, 3341, 3345, 3353

Notes: we extract ten broad industries from the "Made in China 2025" initiative and convert them into NAICS codes (2012 version). Since each industry category contains numerous subindustries, we only present 4-digit NAICS codes for legibility purposes. The original report is from the Chinese National Advisory Committee for Building a Manufacturing Power (2015).