



The Need for Corporate Guardrails in US Industrial Policy

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Lenore's research centers on corporate power, stakeholder corporations, shareholder primacy, and the relationship between corporate governance and the labor market. She has also written on financial transaction taxes, employee ownership, and the rise of fintech. She has published in *Politics & Society*, the *International Review of Applied Economics*, the *Yale Journal of Regulation*, and *Fordham Journal of Corporate and Financial Law*, as well as the *Financial Times* and *State Tax Notes*. Lenore frequently works with policymakers, media, and advocates on corporate and financial policy, and has testified on the impacts of stock buybacks before the House Financial Services committee.

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INTRODUCTION

Proactive industrial policy—in which the federal government is making loans, loan guarantees, or grants to build up the productive and innovative capacity of private US businesses—has emerged as a major focus for the Biden-Harris administration and Congress in 2022. The external shocks of the pandemic, the realities of climate change, and geopolitical challenges like the war in Ukraine have had major impacts on production, exposing the brittle supply chain and the slow pace of economic transformation toward renewable energy. Economists outside the neoliberal mainstream have for years called for renewed attention to industrial policy, and now explicit US industrial policymaking that does not rely on the traditional neoliberal toolbox is ramping up in a way not seen for at least a generation. **But, any new industrial policies in the 2020s will necessarily be layered on top of decades of neoliberal decision-making by US businesses. Without specific course corrections by policymakers, US industrial policy will be embedded in the existing corporate orientation toward shareholder primacy.**

On July 25th, 2022, the US Department of Energy announced its intent to loan \$2.5 billion to a joint venture of General Motors and LG Energy Solutions to support construction of lithium-ion battery cell manufacturing facilities (Shepardson 2022). Panasonic Energy of North America had announced its decision to invest in a major new battery plant in Kansas a few weeks earlier (Evergreen 2022). The recent passage of the CHIPS Act—a major public investment in the semiconductor industry—and the Inflation Reduction Act (IRA)—which includes critical investments in renewable energy and clean technologies, and gives the Department of Energy authority to issue up to \$250 billion in loans to private businesses—are both being hailed as milestones in US industrial policymaking.

As economists and policymakers (from all sides of the political spectrum) have increased their support for conscious American industrial policymaking, it is necessary to consider what kinds of “guardrails”—rules that condition public support on limits to extractive corporate behavior—must be in place in any industrial policy efforts to prevent these needed investments from dissipating if corporations continue to prioritize shareholder value maximization at the expense of true

innovation. Without attention paid to “guardrails,” companies like GM may continue to prioritize making shareholder payments even while receiving public funding intended to support investment in innovation (Lazonick and Hopkins 2015). The Biden-Harris administration can use its focus on industrial policymaking to encourage a broader reorientation of US businesses away from extractive shareholder primacy and toward innovation and productivity. Indeed, as the IRA reportedly gets the US only 70 percent of the way toward its Paris goals (Meyer 2022), the president will want to look to executive action to close the remaining gap. Implementing the IRA and the needed supplemental executive action both offer an opportunity to push decarbonization while also reorienting corporations toward true productive innovation.

In order to enable a resilient and sustainable expansion of productive capacity, we need to use public power to change the dynamics within corporations that keep them focused on shareholder value maximization instead of carrying out industrial policy goals with broad public benefits. Public market-crafting contained in discrete industrial policy programs can be the impetus for a broader reorientation of corporate decision-making toward productive innovation that will outlast particular infusions of public money.

It is crucial to clarify at the outset that structural reform to corporations and markets away from extraction and toward real productivity will require far more than what can be implemented by the executive branch or through legislation that is mainly federal appropriations and budgetary in nature. Corporate law continues to be determined at the state level in the US. The majority of large corporations are chartered in Delaware, keeping rulemaking over the social control of business concentrated in a state that relies on such charters for a large share of state revenue (Strine Jr. 2017). Transformational reforms like straightforward reformation of the corporate tax code, proposals to rebalance corporate decision-making such as those put forward in Senator Warren’s Accountable Capitalism Act and Senator Baldwin’s Reward Work Act, and a wide set of proposals to constrain the power of financial institutions over the nonfinancial sector are needed. However, the urgency of industrial policy—as policymakers seek to address the economic scars of the pandemic and the

growing harms of climate change—may enable a first set of guardrails to be put in place to curb corporate extraction even while the political will to pass more structural reforms is lacking.¹

This issue brief lays out the argument for why all industrial policy must include “guardrails” to limit damaging corporate practices, as well as initial examples of how guardrails can be implemented. First, we offer a brief background on the purpose of industrial policy. We then discuss the leading corporations’ orientation toward shareholder primacy in key sectors in which US industrial policy is focused, including broadband and the electric sector. Next, we outline recent corporate guardrails in the CARES Act, the Infrastructure Investment and Jobs Act, and the more recent CHIPS and Science Act, along with those in the Inflation Reduction Act. Finally, we close by summarizing several types of opportunities for corporate guardrails in legislation and regulatory policymaking.

What Is Industrial Policy?

“Industrial policy,” in its broadest sense, refers to the deployment of policy tools with the intent of influencing how we create value—what goods (and services) we produce and how we produce them.

As Tucker and Sterling (2021, 3) point out, there are varied scholarly understandings of industrial policy. Economist Ha-Joon Chang (2003, 112), for example, describes it as “a policy aimed at particular industries (and firms as their components) to achieve outcomes that are perceived by the state to be efficient for the economy as a whole.” Mario Cimoli, Giovanni Dosi, and Joseph Stiglitz (2009, 7-8) argue that industrial policies “come together with processes of ‘institutional engineering’ shaping the very nature of the economic actors, the market mechanisms and rules under which they operate, and the boundaries between what is governed by market interactions, and what is not.” The common thread

¹ This brief focuses on the opportunities for a reorientation away from extractive practices within industrial policy; for further resources on corporate power, corporate governance, and taxation, see: <https://rooseveltinstitute.org/publications/program/corporate-power/>.

in these different understandings of industrial policy is a recognition of the role of government as a key actor in shaping the world of production in line with public interest objectives.

Although neoliberal ideology attempted to frame industrial policy as a renegade measure undertaken only by those nations that unwisely refused to leave the functioning of the economy to the “free market,” today there is growing awareness that all nations carry out industrial policy on an ongoing basis, whether or not they acknowledge it as such (Cherif and Hasanov 2019). Many conventional policy measures—from public investment allocations and trade measures to environmental regulations and procurement rules—influence which industries and production methods thrive and decline, which economic (and social) actors win and lose power, who creates value, and who captures it. Therefore, whether or not policymakers frame such policy measures as industrial policy, that is precisely what they are.

However, the presence of “industrial policy” does not necessarily imply the existence of an “industrial strategy.” An industrial strategy requires clearly defined goals—or what economist Mariana Mazzucato (2021) calls “missions”—and the degree to which nations succeed in aligning their manifold policy interventions with clear public-interest goals marks the success or failure of their industrial strategy. The “missions” policymakers select as north stars, in turn, can be as diverse and varied in ambition as incentivizing vaccine production in a pandemic, achieving an economy-wide clean energy transformation, or eradicating poverty.

The Importance of Industrial Policy

Today, the importance of industrial policy hardly warrants a defense. Growing recognition of the pervasiveness of industrial policy across nations and the consequences of failing to implement effective industrial strategy—from unemployment and community disinvestment to supply chain vulnerabilities and inflation—has engendered a broad political consensus around the need for proactive industrial policy. Dani Rodrik (2022) describes the paradigm shift inherent in this emerging

consensus as “productivism”—an approach that “emphasizes the dissemination of productive economic opportunities throughout all regions and all segments of the labor force [and] gives governments and civil society a significant role in achieving that goal.” This approach is not only a rejection of neoliberalism but also a departure from the emphasis of the Keynesian welfare state on “redistribution, social transfers, and macroeconomic management” in favor of “supply-side measures to create good jobs for everyone.”

In this new, post-neoliberal context, discussions about industrial policy in the US are decreasingly about its desirability and increasingly about how best to design it. Some have proposed ambitious institutional innovations aimed at ramping up state capacity to effectively administer industrial policy across the economy in the service of a broad set of well-being objectives (Omarova 2020).² Others, including most policymakers, have focused on more narrow, immediate “missions,” like the rebuilding of the domestic production capacity to bolster supply-chain resilience and reduced dependence on foreign suppliers. Consequently, industrial policy measures have largely targeted heavy industry, the energy sector, and the manufacturing of the strategic products most relevant to those missions (*e.g.*, steel, semiconductors, inputs for solar technologies).

However, as Andreoni and Chang (2019, 141) point out, as industrial policy discussions have moved into the mainstream, questions of policy design have been “increasingly framed simply as a technical problem delinked from any contextual and political economy considerations.” This neglects the fact that industrial policy—like any other policy—has socio-political implications. Our attempts to influence what goods and services we produce, and the way we produce them, can either support or undermine broadly shared goals like a safe climate, universal access to clean water, quality jobs, and greater equity. In order to contribute to as many of these goals as possible (and to avoid unreasonably undermining any of them), policymakers need to follow a careful process of policy design that takes into account the systemic and intersectional impacts of each potential industrial policy measure and weighs the tradeoffs between potentially competing public interest goals or missions.

² For more technical detail, see [the National Investment Authority bill based largely on Saule Omarova's proposal](#).

For example, policies aimed at promoting strategic industrial sectors often imply providing substantial support—tax credits, grants, subsidies, loans, procurement preferences, etc.—to private firms, raising several challenges and potential pitfalls:

- **Equity challenges.** As discussed below, since private firms generally follow the logic of shareholder primacy, industrial policy could shift income to certain firms only to see that income extracted by a small group of privileged beneficiaries.
- **Environmental justice challenges.** A firm may receive funding to ramp up production of a particular product deemed strategic for supply chain resilience, but which is produced using methods that undermine the goal of reducing toxic pollution in communities suffering from related health impacts.
- **Challenges to workers' rights.** A firm at the technological frontier of a particular strategic industry may be a great candidate to receive incentives for further innovation, but it may also actively fight unionization, undermining workers' rights and ability to organize for better wages, benefits, and safe working conditions.
- **Corporate investment challenges.** The financial orientation of non-financial businesses has meant that without a broad restructuring away from shareholder primacy, even those businesses applying for public funding will continue to face pressure to increase share prices and make the highest possible shareholder payments. This prioritization of shareholder payments has had negative effects on research and development and capital expenditures across US companies.

Though the tradeoffs between different policy objectives may not always be solvable, they must at least be carefully weighed on a case-by-case basis and policymakers need to be proactive, comprehensive, and creative to develop standards, conditions, and guardrails³ capable of ensuring that industrial policy supports broad public interest goals and not merely narrow private interests.

³ Advocacy groups have increasingly sought to attach such standards and guardrails to public investments. See Sierra Club (2022).

HOW INDUSTRIAL POLICY INTERACTS WITH THE POLITICAL ECONOMY OF CORPORATIONS AND MARKETS

Industrial policy focuses on how the governmental and private entities that carry out comprehensive policies are organized and how communication and debate between key sectors are structured (Andreoni and Chang 2019). Vogel (2021, 6) points out that successful industrial policy requirements for government institutions are important “to limit political capture and maximize policy effectiveness.” This issue brief focuses on the requirements that should be placed on large corporations that operate according to the governance framework of “shareholder primacy.” Unless there are rules that stop corporate and financial executives from focusing on value extraction in the name of maximizing shareholder payments—which, uncoincidentally, also maximize executive compensation and financial sector earnings—industrial policy could shift income to certain sectors only to see that income be extracted by a small group of shareholders, who are predominantly white, wealthy households.⁴ Without guardrails on corporate actions, excessive financial extraction could undermine the very purpose of industrial strategy over time. In this section, we provide a brief overview of the harms of the dominant corporate governance framework of shareholder primacy and offer a brief orientation to a more useful understanding of the political economy of innovation and production—the social conditions necessary for true innovative businesses.

The Harms of Shareholder Primacy

Business corporations are entities that bring together inputs to produce outputs: goods and services that go on sale in the product marketplace. No good or service offered for sale simply exists—at some point in time, a group of humans worked together to figure out how to wrestle the inputs into more

⁴ For more on the relationship between shareholder primacy and the racial wealth gap, see Palladino (2020), “The Contribution of Shareholder Primacy to the Racial Wealth Gap,” in *The Review of Black Political Economy*.

than the sum of their parts. And at another point in time, either the same group or their competitors improved the production process so that the same sets of inputs could produce more and better products, or figured out how they could produce the same products with fewer inputs, either with less human effort or with less physical or technological effort. Resources are not just lying around waiting to be used: The alchemy of innovation is in trying new ways to utilize such resources, even though some new methods will succeed while some will fail. The theory of innovative enterprises lays out the social conditions that make innovation possible: The ability for corporate leaders and workers to engage in collective and cumulative learning requires a strong organization, a clear sense of strategy, and financial commitment to take necessary risks (Lazonick and Shin 2020).⁵

US businesses have operated for the last 40 years to maximize shareholder value under the theory that shareholders are the main actors within corporations that deserve the benefits from innovation, based on the false claims that shareholders are the residual risk takers, and, in today's economy, that they contribute anything at all of value to large, publicly traded corporations (Palladino 2022). Corporations with publicly traded equity face enormous pressure to maximize shareholder value from the financial institutions that are the asset owners and managers of pooled funds, as well as so-called "activist" shareholders who seek short-term profits. As a result of such pressures, corporations spent \$6.3 trillion on open-market share repurchases in the decade from 2010 to 2019 (Palladino and Lazonick 2021), and are projected to spend \$1 trillion in 2022 (Banerji 2022). Shareholder payments—including buybacks and dividends—have been rising for decades, and executive compensation is now completely wrapped up in constantly appreciating share prices. Companies that do not offer their equity for trading on the public markets face similar dynamics as they engage with private equity and venture capital firms (Appelbaum and Batt 2014).

The orientation of business toward constantly increasing share prices has increased economic inequality and furthered the climate crisis, as well as harming corporate investment and innovation

⁵ For a complete description of the Theory of the Innovative Enterprise, see William Lazonick's body of work, including, "Is the Most Unproductive Firm the Foundation of the Most Efficient Economy? Penrosian Learning Confronts the Neoclassical Fallacy," in *International Review of Applied Economics* (2022).

(Lusiani 2022; Palladino and Lazonick 2021). “Investment” refers to two discrete processes: investment that is required to offset depreciation in the current period, and investment intended to improve the firm’s productivity over time.⁶ Accurately measuring the impact of rising shareholder payments on corporate investment is complicated by rising corporate debt, the impact on corporate finances of the Tax Cuts and Jobs Act (TCJA), and the fact that the foundation of innovation is financial commitment over time, which cannot be measured in a single balance sheet. Nevertheless, many studies at the aggregate, sectoral, and firm level have demonstrated a relationship between rising shareholder payments—primarily stock buybacks—and stagnant innovative investment. Analysis at the firm level for publicly traded firms shows a major transition toward shareholder payments and away from net new investment over the last few decades (Davis and McCormack 2021; Gutierrez and Philippon 2016). While it is hard to estimate counterfactuals with precision, it is critical for policymakers to reduce the incentives that currently exist for corporate leaders to prioritize financial metrics over sustainable investment and prosperity—especially when their own compensation is directly linked to such metrics.

Discrete investments of public funds in specific corporations should be conditioned on limits to excessive financial extraction so that industrial policy has the best chance of success. The next section will offer several examples in which industrial policy that is currently being implemented through the 2021 Infrastructure Investment and Jobs Act is focusing on crucial product markets for the health and resilience of the economy and society, but where the investments will run through large business corporations, given the current structure of production. By providing examples of past extractive behavior by the relevant companies, it becomes clear that without public guardrails, the same behavior is likely to continue even after government commitments have been made.

⁶ Trading securities on secondary markets is not, under this definition, investment.

THE INFRASTRUCTURE INVESTMENT AND JOBS ACT & EXTRACTIVE CORPORATE PRACTICES

The Infrastructure Investment and Jobs Act (IIJA), signed into law by President Biden in November 2021, provided \$1.2 trillion of government investment in critical US physical infrastructure sectors, from transportation to electric vehicles and high-speed internet (The White House 2021). The IIJA focuses on physical investments in updating US infrastructure for the 21st century, for example, investing \$65 billion into reliable high-speed internet, \$66 billion into Amtrak, \$7.5 billion for a national network of EV chargers, \$65 billion for the clean energy grid, and \$90 billion for public transit.

While some of these federal investments go to infrastructure services that are publicly provisioned by either the federal or state and local governments, given the current state of US infrastructure, many of the investments run through large corporations in telecommunications and utilities. This means that public investments in these sectors have the potential to be utilized in extractive practices by the recipient corporations. Clear, bright-line limits on extractive corporate practices therefore need to be in place. In this section, we review specific examples of extractive corporate practices in sectors that are primary recipients of the IIJA: the broadband and electricity sectors. Then, in the next section, we present common-sense guardrails that would help make industrial policy effective and would more broadly help reorient the corporate sector away from extraction and toward innovation.

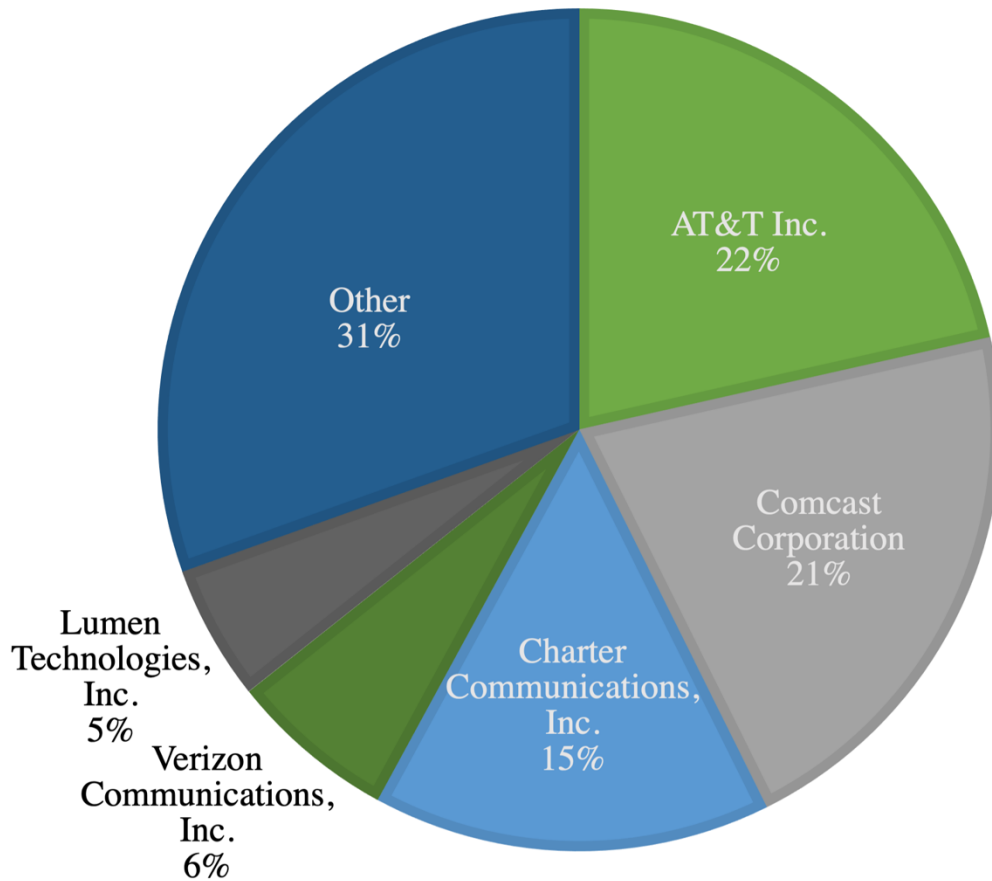
Affordable Access to the Internet and the IIJA's Investment in the Internet Service Provider Industry

Ensuring access to broadband internet service is one component of the IIJA that will be channeled through large business corporations. The Biden-Harris administration launched the Affordable Connectivity Program (ACP) and [GetInternet.gov](https://www.getinternet.gov) in May 2022 to expand access to high-speed broadband internet for all US households. Access to broadband is heavily stratified by income, race,

and geography: Rural households, low-income households, and households of color are disproportionately likely to lack access or adoption of broadband (Communication Workers of America Union 2021). The \$65 billion investment recognizes the reality that access to high-speed affordable internet is as necessary for today's households as other basic services like electricity and water, though the IIJA does not attempt to reorient the internet infrastructure toward public provision of basic services. Instead, the program provides eligible households \$30/month off their internet bill. The administration also announced that it had worked with internet service providers to offer plans to certain households that are fully covered by the ACP (The White House 2022). As of July 2022, the program had signed up over 1 million new households (out of the 48 million potentially eligible households). In other words, this program focuses on subsidizing the costs of high-speed internet to households, which means that while the program can meet the critical goal of affordable internet access, it is vulnerable to the shareholder primacy orientation of the large Internet Service Provider (ISP) companies through which the program must run.

Public investment in affordable broadband raises the question about how the major ISPs will utilize the government subsidies that will flow to them from the IIJA, as without clear rules reorienting behavior, past corporate practices are indicative of future priorities. The ISP industry is profitable and growing, taking in \$132 billion in annual revenue and \$13.2 billion in profits, and is dominated by five large corporations that accounted for 70 percent of industry revenue in 2021: AT&T, Comcast, Charter, Verizon, and Lumen (see Figure 1) (Curtis 2022). Most households have no choice when it comes to internet service. Because of the networked nature of internet service, barriers to entry are extremely high, and companies maintain their market power through network dominance. Bundled internet service—cable, phone, and high-speed internet—from full-service telecommunications carriers make competition for customers even less common. The ISP sector has a large employment footprint and is relatively unionized compared to the private sector workforce at large: The Communications Workers of America (CWA) represents more than 150,000 workers at AT&T and 30,000 at Verizon (in broadband and other units).

FIGURE 1. MAJOR CORPORATIONS IN THE ISP INDUSTRY



Source: IBISWorld

Despite the growing recognition that high-quality internet access is an essential public utility for US households to participate in work, school, and community life, and attempts by reformers to seek public recognition of internet access as a public utility, the large ISP companies act to maximize their own shareholders' wealth in line with the broader corporate governance framework of shareholder primacy (Rozic 2021). Comcast spent \$36.25 billion on stock buybacks over the last decade and authorized an additional \$10 billion in 2022 (Marcattilio-McCracken 2022). AT&T spent \$850 million on stock buybacks from July 1, 2021 to June 30, 2022, with the vast majority (\$673 million) spent in the second quarter of 2022. This followed pressure in 2020 from activist investor Elliott Management to have AT&T engage in \$4 billion in stock buybacks to raise short-term share prices, even as AT&T was

engaged in tough contract negotiations with its workforce (Hardesty 2020). The largest shareholders of ISPs are large asset managers such as BlackRock and Vanguard: BlackRock holds 6.9 percent of Comcast's common stock, while Vanguard holds 8.7 percent, and they hold 7.6 and 7.0 of Verizon's stock, respectively (Fintel.io 2022). Without clear guardrails in place, dominant ISPs will therefore gain public subsidies with no commitment that they will improve service, invest in innovation, or curb their focus on short-term share price appreciation.

Updating the Power Infrastructure

The IIJA also makes a \$65 billion investment to upgrade the US power grid and lower costs in service of the transition to a zero-emission economy. According to the Department of Energy, a major focus of the IIJA is to boost competitiveness in the clean energy supply chain, with a focus on batteries, clean hydrogen, advanced manufacturing, and other critical supplies like critical minerals and zero-carbon technologies for transportation (Department of Energy 2021). Just as with investment in broadband, the Biden-Harris administration's investments will work through a mix of public and private utilities that currently provide power to the nation's households and businesses: Private companies that offer publicly traded securities provide electricity to three-quarters of US households (Lusiani 2022).

Electricity utilities whose shares are publicly traded have prioritized shareholder payments over other uses of net income over the past decade, despite the urgent need for deep investment in the transformation and resilience of the electric grid. According to recent research by Niko Lusiani (2022), the 39 publicly listed electric utilities spent 86 percent of their earnings, totaling \$250 billion, on shareholder payments in the last decade—mainly in dividends. The intensity of shareholder payments has increased in the last decade, as companies increased annual shareholder payments by 65 percent, including a 10 percent increase between 2019 and 2020. Meanwhile, electricity continues to become more expensive: The price of electricity rose 4.3 percent in 2021 and was up 15 percent in key states like Florida and New York.

The problems of this prioritization of shareholder wealth maximization in electric utilities are not only the usual challenges that arise from shareholder primacy (namely a misunderstanding of the actual process of value creation within corporations and a contribution to widening economic inequality). Electric utilities are responsible for one-third of greenhouse gas emissions in the United States, and shareholder primacy in the electricity sector has an impact on the speed and equity of a clean energy transition. Whether and how quickly the electric grid becomes a net zero contributor to climate change has implications far beyond the sector itself, as Lusiani describes:

“[R]ather than choosing to retain and reinvest earnings in a more resilient, affordable, just, and zero-carbon electricity system, these findings indicate that US electricity companies have chosen to extract profits and pass those on to already-wealthy shareholders—not to consumers, not to neighboring communities, and not to future generations.” (Lusiani 2022, 2)

CORPORATE “GUARDRAILS” ARE NECESSARY FOR SUCCESSFUL INDUSTRIAL POLICY

In this section, we outline recent examples of “guardrails” in industrial policy from the CARES Act and the CHIPS and Science Act. We then propose different, non-mutually-exclusive mechanisms for preventing corporate extraction in industrial policy, both substantively—in terms of limiting shareholder extraction, supporting workers, and ensuring a public interest orientation along with public investment—and procedurally, in terms of both inclusion in legislation and in regulation. We close with a discussion of the need to keep in mind that the aperture for public policymaking must stay open and should include reorienting toward wholly public infrastructure for critical sectors, though this longer-term structural transformation is not the focus of this issue brief (see Darity Jr., Hamilton, and Mabud 2019 for proposals to further public power).

Guardrails in the CARES Act

The CARES Act (Coronavirus Aid, Relief, and Economic Security Act) was passed March 27, 2020 and signed into law by then-President Donald Trump in the first weeks of the COVID-19 pandemic. It temporarily banned stock buybacks and dividends by recipients of direct loans for loan guarantees from the Treasury, though legislators did not place the same restrictions on companies receiving support from the Federal Reserve (CARES Act §4003). The [CARES Act](#) specified that recipients of Treasury funding “will not pay dividends with respect to the common stock of the eligible business, or repurchase an equity security that is listed on a national securities exchange of the recipient or any parent company of the recipient while the direct loan is outstanding, except to the extent required under a contractual obligation that is in effect as of the date of enactment of this Act.” Airlines, which were also specifically targeted in the American Rescue Plan and received a \$50 billion bailout in the CARES Act §4113, were not able to spend funds on new rounds of stock buybacks. The legislation included such restrictions out of the recognition that, for example, the largest four airlines had spent \$43.7 billion on buybacks since 2012. (For more background on spending on stock buybacks by major recipients of the CARES Act, see Palladino 2020.)

The CHIPS and Science Act: Why Guardrails Matter

Another example of the need for corporate guardrails is the US experience with the semiconductor industry and the recently passed CHIPS and Science Act (House Committee on Science, Space and Technology 2022), which authorizes the federal government to direct \$52 billion in subsidies and tax credits to chip manufacturers fabricating in the United States. Semiconductors are essential inputs for products from computers to cars, and the US was the global leader in semiconductor fabrication for the several decades after their invention in the 1950s. As has been carefully documented by William Lazonick and Matt Hopkins (2021), the rise of “fab-less” companies—meaning those that designed chips but did not produce them—made US corporations like Apple and Qualcomm

dependent on companies like TSMC in Taiwan and Samsung in South Korea for the actual production of chips. As Lazonick and Hopkins document, Intel was once the leader in US chip fabrication.

The largest companies lobbying for the bill—Intel, IBM, Qualcomm, Texas Instruments, and Broadcom—spent 71 percent of their net income on stock buybacks alone from 2011 to 2020, totaling \$249 billion—nearly \$200 billion more than the federal subsidies proposed in the CHIPS Act. The Semiconductor Industry Association (SIA) claimed that the decline in US semiconductor manufacturing dominance was due to the incentives offered by competitor governments. However, the SIA neglected to discuss the costs of spending on buybacks, which have the effect of rewarding executives through their stock-based compensation arrangements (Shilon 2021).

Intel, once the leader in semiconductor production, spent 100 percent of its net income on shareholder payments from 2011 to 2015, which, as Lazonick and Hopkins (2021, 9) put it, resulted in “Intel’s failure in organizational integration [that] lies in the financialized character of *strategic control* within the company.” Just as Jack Welch transformed GE from an industrial powerhouse to a company where senior leadership focused first and foremost on manipulating GE’s share price, so too has Intel been led in recent years (before 2021) by CEOs focused on share prices. CEO Bob Swan, who led the company from 2016 to 2021, raised buybacks 186 percent as compared to his predecessor. In a sign of a reorientation toward productive investment inside the business community, Intel is led today by Pat Gelsinger, an engineer who, immediately upon his appointment as CEO, declared: “We will not be anywhere near as focused on buybacks going forward as we have in the past” (Reuters 2021).

The semiconductor sector successfully sought major public investment to support the “re-shoring” of semiconductor fabs in 2022, resulting in the CHIPS and Science Act. The Act provides \$52 billion in subsidies to domestic semiconductor manufacturing and hundreds of billions more in funds for research and development in order to re-shore production and reestablish US dominance in the next wave of technological development (with support for the bill coming from some legislators based on fears about Chinese economic and political dominance). The bill does provide for a set of guardrails

on corporate value extraction, with it limiting companies from using public funds for stock buybacks and dividends. Yet because money is fungible—in other words, public funds cannot be cleanly separated from the rest of corporate funds—the legislation itself does not provide clear overall limits on shareholder payments.

The Department of Commerce’s National Institute of Standards and Technology has put out guidelines for “Taxpayer Protections” as part of its responsibility for the implementation of the CHIPS Act, which is intended to “sustain, over the long term, a vibrant domestic semiconductor industry” (NIST 2022). The Department of Commerce has committed itself to growing a commercially successful semiconductor industry while ensuring that “CHIPS funds [do] not create windfalls for the companies that receive them” (NIST 2022). This includes a clear commitment to prefer companies that “commit to make future investments that grow the domestic semiconductor industry (such as through research and development, workforce training, or manufacturing investments) and not engage in stock buybacks” (NIST 2022). As of this writing, the Department of Commerce has laid out clear guardrails with respect to investments in foreign countries of concern, and has held the door open for “other guardrails, as needed and consistent with the law, to maximize the public purposes of federal investments and prevent companies from seeking to evade statutory requirements” (NIST 2022).

The Inflation Reduction Act

The Inflation Reduction Act (IRA) includes the largest industrial policy interventions in the renewable energy sector in US history, though it is “still a far cry from the scale of public investment needed to contend with the magnitude of the crisis we face, and from what’s needed for a truly just and equitable transition to a world beyond fossil fuels” (Bigger et al. 2022). Even with the IRA’s flaws (some due to it being a political compromise) the allocation for industrial policy highlights the importance of corporate guardrails in economic policymaking—what is at stake with the IRA is how the rewards for such public investment will flow. The IRA includes a proposal for \$250 billion in loans that would

be made by the Department of Energy’s Loan Programs Office.⁷ As macroeconomic conditions change with higher interest rates, companies will be even more inclined to pursue public loans, which makes the importance of attaching guardrails to reduce extractive behavior even more important.

Substantive Guardrails on Extractive Corporate Practices

In this section, we outline a set of options to place guardrails around corporate behavior when companies are receiving direct public investment. Of course, all private business entities utilize the US public infrastructure, and arguing that large corporations especially should recognize the essential role of the public sector by paying taxes and reducing activity that is harmful to society is not new. The Inflation Reduction Act includes an important renewed commitment to a corporate minimum tax—which is a necessary component of industrial strategy such that companies cannot avoid taxation through accounting tricks or through tax breaks intended to incentivize real investment—as part of industrial policy approaches (Huang, Richman, and Yan 2022). More broadly, public investments should include climate and environmental standards and equity standards as part of a whole-of-government approach to resilience and equity (see Sierra Club 2022).

Implementation of such guardrails is necessary to ensure that the US fully meets its climate commitments, since, as noted above, the investments outlined in the Inflation Reduction Act are not sufficient to meet the Paris climate commitments nor to avoid large-scale disaster. While it is difficult to put specific figures on how the guardrails outlined below would contribute to reducing carbon emissions, they would alleviate the costs that the focus on financial extraction has had in terms of a commitment to the renewable energy transformation that is so desperately needed (Baines and Hager 2022).

Here, we focus on the specific options available to policymakers when engaging in direct financial commitments to business entities (also distinct from when the government is acting as a purchaser

⁷ The IRA also includes a proposed \$27 billion green bank, though that is focused on reducing household consumption of fossil fuels.

and standards are covered by procurement rules and regulations.) We first review specific substantive guardrails to limit extractive behavior, though we note that this is simply an illustrative list and certainly not exhaustive. Then, we review different procedural mechanisms for legislation and regulation, again to provide illustrations, though not a comprehensive assessment of the range of options available.

Limiting Shareholder Payments and Corporate Insider Benefits

One straightforward step that policymakers implement is to ensure that when corporations with stock trading on open markets are beneficiaries of US industrial policy, they cannot engage in stock buybacks at the same time. While structural reform will require a more comprehensive approach to fully reorient corporations toward innovation, it is crucial for all public investments in private corporations to include limits on stock buybacks—especially because no actual limits currently exist in securities regulation (for more discussion of the lack of regulation of stock buybacks, see Palladino 2019).

As discussed above, stock buybacks are a corporate practice in which corporations repurchase their own shares on the open market from willing sharesellers, with the goal of raising the price of the shares that remain outstanding. Stock buybacks totaled \$6.3 trillion from 2010 to 2019, and corporations are on track to spend \$1 trillion on them in 2022. Buybacks serve to manipulate the market price of a company's stock, providing an opportunity for corporate insiders to personally benefit because insiders are aware of when they actually transact buybacks before they have to disclose the transactions publicly and can thus sell their own personal shares to benefit from the share price bounce. Perhaps most importantly, stock buybacks have become a focus of corporate activity at the expense of investment in productivity and innovation (for a complete discussion of the harms of stock buybacks, see Palladino and Lazonick 2021). Because the Securities and Exchange Commission's Rule 10b-18 purports to regulate stock buybacks, but in practice places no limits or

liability for companies attempting to manipulate the market price of their own stock, it is even more crucial that all industrial policy agreements include clear, bright-line limits on stock buybacks.

Policymakers engaging in direct investments—through either loans or grants—to private corporations with publicly traded shares can include clear preferences in the regulatory process for the goals that Congress has laid out in a given statute. One clear approach is what was contained in the CARES Act: clear, bright-line restrictions on corporations making shareholder payments for a certain time period. Title IV §4003(c)(2)(E) of the CARES Act, “Economic Stabilization and Assistance to Severely Distressed Sectors of the United States Economy,” which was directed at the airline industry, states plainly that loan agreements must provide that:

“[U]ntil the date 12 months after the date the loan or loan guarantee is no longer outstanding, neither the eligible business nor any affiliate of the eligible business may purchase an equity security that is listed on a national securities exchange of the eligible business or any parent company of the eligible business, except to the extent required under a contractual obligation in effect as of the date of enactment of this Act.”

The statute further limited dividends or any other capital distributions for holders of common stock (4003(c)(2)(F)). Title IV §4003(c)(3)(A)(ii)(I-III) limited the Treasury Secretary from making loans, loan guarantees, or other investments under CARES Act programs only if the recipient business agreed:

“[U]ntil the date 12 months after the date on which the direct loan is no longer outstanding, not to repurchase an equity security that is listed on a national securities exchange of the eligible business or any parent company of the eligible business while the direct loan is outstanding...[and] not to pay dividends or make other capital distributions with respect to the common stock of the eligible business.”

If such limits are not contained in statute, the regulators carrying out the policymaking can construct lending or grant programs such that companies that make voluntary commitments to prioritize investments during the investment period receive a preference for the federal program. While this raises critical questions about enforcement if companies break their commitment once the loan or

grant has been made, it does create incentives for corporate leaders to demonstrate their commitments to innovation in a clear and pragmatic way.

Public Funds Must be Conditioned on Respecting Workers' Rights & Including Workers' Voices

One of the primary reasons to engage in industrial policy is to support “good jobs.” The strongest approach to doing this is federal policymaking that raises the minimum wage to a living wage, strengthens collective bargaining rights through passage of the PRO Act, and supports working families with high-quality and affordable options for childcare, home health care, and paid leave. These same provisions must be written into all public investments in the private sector. Public investments should contain prevailing wage agreements where appropriate, which are a staple of local and municipal economic development policymaking. Union neutrality should be a clear commitment made by any company receiving public funds, whether loan or grant. However, monitoring and enforcement presents a challenge: Considering what kinds of clawback provisions are appropriate if companies break their commitments to workers' rights minimum standards and what monitoring for compliance is possible raises questions about whether standards need to be enforced for companies or loans and grants over a certain threshold, either in terms of the size of the business, the size of the investment, or another set of clear thresholds.

An element of industrial policy that has been underutilized, especially during the COVID-19 pandemic, has been requiring that companies engage workers in health and safety discussions to the extent permissible under current labor and health and safety law.⁸ While the National Labor Relations Act contains important provisions to preserve workers' rights to collectively bargain free from “company unionism,” former National Labor Relations Board Chair Wilma Liebman has proposed that US labor law does permit labor-management committees formed for the purpose of

⁸ For structural reforms to engage workers in the “zone of entrepreneurial control,” see Palladino (2021).

health and safety that would otherwise be impermissible under NLRA §8(a)(2).⁹ There are a number of states that require a set of employers to create safety and health committees (SHCs) that include management and employee representatives (Liebman 2017). Federal legislation was proposed in the 1990s to establish joint safety and health committees at all establishments with more than 11 employees (Liebman 2017, 16). If the establishment of joint SHCs was a requirement for federal loans and grants, and the conditions for the committees were well-specified in the contracts, it is plausible that it would not run afoul of §8(a)(2) because *employers* would not have unlawful control over the committees, which is the focus of the prohibition of employer-dominated organizations under the NLRA. Such a requirement could strengthen the potential for public funds supporting resilient workplaces in the face of current and future public health crises.

Another set of safeguards in industrial policy should ensure that executive compensation—already at historically high multiples over average worker pay—does not rise as a result of public investment. CARES Act §4004, “Limitation on Certain Employee Compensation,” laid out guardrails to reduce the ability of executives to increase their compensation over what it had been before the onset of the pandemic for officers or employees earning over \$425,000 (with additional limits for those executives earning over \$3 million). Another approach for policymakers to take would be to restrict corporate insider share-selling during periods of public investment and to condition public investment on the disparity between executive compensation and median employee compensation below a certain threshold, because otherwise public funds are supporting excessive inequalities in compensation (though there are measurement issues that would matter for policymakers determining an appropriate threshold, such as the fissured workplace and the internationalization of production).

⁹ NLRA §8(a)(2) is generally interpreted to prohibit company management from unilaterally forming works councils-type organizations, because of the very real concern that “employers would establish and control in-house labor organizations in order to prevent organization by autonomous unions,” *Electromation, Inc.*, 309 N.L.R.B. No. 163, 1010 (Dec. 16, 1992), enforced, 35 F.3d 1148 (7th Cir. 1994).

A Public Stake: Public Equity and “Golden Shares”

A public financial investment in a private company could be accompanied by a public equity stake with rights in corporate governance, just as such a financial investment does for private financiers (and even shareholders who simply purchase shares on secondary markets, never contributing directly to a firm’s available financial resources at all) (Palladino 2022). Public equity stakes could be structured such that the federal government receives a variable financial return on an investment; could enable involvement in governance, including the ability to veto certain kinds of company actions; or could be accompanied by both economic and governance rights. Public equity stakes could be tied to the scale of financial commitment, or could be established through “golden shares,” which are specific types of equity that have specified governance authority (Omarova 2020). A recent example of the use of such shares is in the privatization of previously public entities in the UK, in which the government held onto a certain “golden share” even as private stockholders came to hold the shares of the newly privatized business. This enabled the UK government to essentially keep veto power over core entity decisions, like mergers and acquisitions, as a hedge against foreign government control (Pretorius 2019). In addition to the general limit on buybacks and dividends in the CARES Act, a separate provision required the Treasury Department to receive warrants or equity grants for loans, loan guarantees, or other investments to airlines and other businesses critical to maintaining national security (§4003(d)(1)). The statute required that the “terms and conditions shall be designed to provide for a reasonable participation by the Secretary, for the benefit of taxpayers, in equity appreciation . . . or a reasonable interest rate premium” (§4003(d)(2)(A)). In other words, the CARES Act provided for economic rights, though not the right for the government to participate in decision-making.

Golden shares are not common in the United States, though they are not prohibited under Delaware corporate law. Entity forms that are seeking to preserve a “mission” orientation have begun to discuss using golden shares as a way to maintain the pro-social character of a corporation (Pretorius 2019). Professor Saule Omarova has proposed Golden Shares in the context of a National Investment

Authority (NIA).¹⁰ If issued through congressional authorization as part of the NIA for critical sectors or as part of specific public support packages for the private sector, the government could “receive and hold, on a permanent basis, a special ‘golden share’ in each such firm” (Omarova 2020, 4). Omarova distinguishes between a passive monitoring role in “normal” situations and specifically triggered crisis situations, in which the golden share would grant its holder—in her proposal, the National Investment Authority itself—control over certain kinds of corporate transactions, all with a public interest orientation. Notably, this would require the directors serving as representatives of the public to have a different set of fiduciary duties than corporate directors do under Delaware law (see Kassoy, Palladino, Alexander and Ensign-Barstow [2020] for a discussion of corporate director fiduciary duty reforms).

Procedural Options for Corporate Guardrails in Industrial Policy

Substantive guardrails create financial conditions that corporations must adhere to while they are recipients of direct public financial commitment. The most straightforward approach to implement clear guardrails is to include them as specifically as possible in legislative text, as was done with the CARES Act’s prohibition on companies engaging in shareholder payments while receiving public support at the beginning of the pandemic. However, legislation is written in broad enabling language that then delegates authority to relevant governmental agencies to carry out the purpose of the statute.¹¹ For example, the CHIPS Act directs the Commerce Secretary to make the determination of which applications for the authorized funding should be granted “in the economic and national security interest of the United States.”

One opportunity for relevant administrative branches of government to explore is how to craft loan, loan guarantee, and grant program applications such that preferences for limited funding can be

¹⁰ See also Omarova’s previous work on Golden Shares in the context of financial sector bailouts (2016).

¹¹ Of course, determining the authority for administrative agencies has been complicated by the recent Supreme Court ruling *West Virginia v. EPA*.

given to companies that agree to the substantive conditions described above in their contracts with the relevant agency. For example, in the CHIPS and Science Act, the Commerce Secretary has discretion to choose among applicants and to tailor the “amount and funding type for each financial assistance award” under §9902(a)(3)(A) in the public interest. Announcements of Funding Opportunities by federal entities regularly include preferences for certain types of entities and certain behavior by business entities, from the Small Business Administration’s preferences for Minority-Owned Businesses to commitments by businesses to Buy American in their procurement practices. Expressing a preference for business entities that commit to engaging in productive real investment when receiving public funding—not just with those specific public funds, but across the business—clearly supports the intent of industrial policy programs that are meant to strengthen the “economic interest” of the United States.

Because financially extractive policies are not only not in the public interest but actively divert from the purpose of industrial policy programs like the CHIPS and Science Act and the Inflation Reduction Act, policymakers have discretion to place conditions in the contracts to which businesses agree. The terms and conditions of any given financing agreement will be substantially more specific than what is laid out in enabling legislation. Public investment agreements can include prohibitions on extractive behavior when they are conducting financing under the terms of legislation that broadly provides for supporting productive innovation by US private businesses. Such agreements can also include specific steps for monitoring—requiring the submission of financial reports, for example—and for clawbacks if the terms of the agreement are violated. For programs like the IRA’s proposed \$250 billion in loans and guarantees that would be issued by the Department of Energy’s Loan Programs Office, specifying clear guardrails—including limits on extractive behavior, and preferences for companies that include workers and the public in the innovative process—to limit corporate extraction and promote public benefit will be crucial to ensure that the goals of the IRA are met.

CONCLUSION

This issue brief has proposed corporate guardrails for industrial policy within the framework of how critical sectors are currently structured in the United States: Necessary services—from broadband to electricity and from health care to housing—are provided by large dominant business corporations. Because industrial policy is taking place in a landscape of corporations oriented toward raising their share prices as quickly as possible, it is urgent and necessary to put guardrails in place so that public investment serves the public good. However, it is important to note that the public interest would be best served by fully public infrastructure in far more corners of the economy. For example, broadband does not need to be provided by large corporations that are managed with shareholder value maximization in mind. Municipal broadband and cooperative broadband should be a much bigger part of our digital ecosystem, and federal industrial policy should focus on supporting these networks rather than subsidizing dominant private corporations. Municipal broadband networks charge lower prices and provide faster connectivity than the large private companies (ILSR 2021; Talbot and Hessekiel 2018). Though it is beyond the scope of this brief to fully develop proposals for public infrastructure, no discussion of industrial policy can consider reining in corporate behavior without naming the reality that the balance between public and private production needs to be fully reconsidered for critical sectors that serve public needs.

This issue brief has also offered the argument that policymakers engaging in industrial policy must acknowledge the reality that the dominant corporate paradigm of shareholder primacy has been enormously destructive and inimical to productive innovation in the United States. Reversing the intensive focus on share price appreciation at the expense of the social conditions necessary for innovation requires many structural reforms—and the federal government has the opportunity to deepen the guardrails that govern corporate behavior through programs that invest public funds into private companies. This brief has laid out several initial possibilities for policymakers to explore in terms of limiting extractive behavior, situating workers at the center of the innovation process, and ensuring that the public has a voice in and benefits from the investment of public funds. Policymakers can and should include such guardrails both in legislation and in the administrative

process of running industrial policy programs. Future research will continue to deepen such ideas and proposals, all with the aim of strengthening the public commitment to a productive and resilient economy.

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