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Unintended Consequences of Industrial Policy: The Dilemma of the US Inflation Reduction Act's FEOC Guidelines

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"Industrial policy is back."[1] The rise of industrial policy has changed the global trade environment. It is now common for governments to set out their gigantic visions and plans to tackle climate change, achieve green and digital transition, and finally boost the domestic economy. With these initiatives, a strategic competition agenda dominates the free-trade legacy. This has led to government-led nationalism and an isolationist approach to policymaking.[2] The rally of industrial policy is not only a byproduct of US and China conflict, but also a manifestation of nations seeking to protect national interests.

However, the impact of industrial policy combined with such an isolationist motive is uncertain. The objective and target of industrial policy is more comprehensive than place-based, R&D, and other traditional types of policies.[3] Policymakers intend to change sectoral allocation,[4] but this occurs slowly. The complex, interdependent structure of global value chains makes it even

[1] Many articles have used this expression to address the returning trend of industrial policy in the recent 2-3 years. One of the recent articles is Ilyina, Pazarbasioglu, and Ruta (2024).
[2] Suesse (2023), pp. 1-7.
[3] Juhász et al. (2023), pp. 4.
[4] For instance, the US Inflation Reduction Act's objective is to increase domestic shares of battery and clean energy manufacturing.

harder to achieve the intended goals, especially for reshoring initiatives. Before discussing the effectiveness of isolationist industrial policy,[5] we should first note the rising popularity of new policy instruments. The famous quote, "Economic Security is National Security,"[6] linked economic conflicts with national interests. This led the US government to start a trade war in the Trump administration and brought back industrial policy as a main agenda in the Biden administration. Since 2022, many guidelines have been published to rule out unjust recipients of US subsidies, accelerating national security goals in line with the industrial policy agenda. On Dec 4, 2023, the US Department of Energy (DOE) published the interpretation guidelines for foreign entity of concern (FEOC).[7] Obviously, the FEOC guidelines address the concrete plan of ruling out FEOCs and make clear the US government's wariness of an FEOC exerting authoritarian power in the battery and associated supply chain.

Would these guidelines really work as they intended? In the published draft, they confidently state that "…governments of covered nations cannot evade the FEOC restriction simply by establishing a U.S. subsidiary, while otherwise maintaining ownership or control over that subsidiary," in the definition of foreign entities. In the meantime, public commentators think differently. Overall, all those public commentators pointed out uncertainties within the current proposed rule, and possible loopholes to hinder the original objective of this rule.[8] For instance, the current rule does not address the case of intra-company resale.[9] The 25% ownership threshold can potentially be circumvented by reducing the ownership share between two contractors.[10] More notably, a private company could just establish a joint venture outside of FEOC jurisdiction, with the government authority still influencing the major decisions of the company. The ownership share may be irrelevant in terms of *de facto* control.[11] Could all relevant stakeholders provide trustworthy information on FEOC compliant material?[12] Current guidelines newly defined "senior political figures."[13] Who qualifies

[5] In historical context, economic nationalism has two approaches, expansionism and isolationism, according to Suesse (2023). The current trend of industrial policy aimed at protecting domestic economies is linked to an isolationist approach rooted in economic nationalism.

[6] US Department of Commerce (2017), pp. 16.

[7] US Department of Energy (2023).

[8] These are public comments uploaded between Dec 4, 2023 and Jan 3, 2024 at regulations.gov, https://www.regulations.gov/document/DOE-HQ-2023-0067-0001/comment

[9] Clean Fuels Development Coalition, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0006

[10] Clean Fuels Development Coalition, same as above.

[11] EVelution Energy LLC, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0005; Brown Brothers Energy and Environment LLC, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0007; Battery Materials and Technology Coalition, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0016

[12] Zero Emission Transportation Association (ZETA), https://www.regulations.gov/comment/DOE-HQ-2023-0067-0012; Hyundai, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0020; Volkswagen, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0025; Alliance for Automotive Innovation, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0013

[13] See the definition of senior political figures in "C-II. Government of a Foreign Country" in the Department of Energy (2023) guidelines.

as a senior political figure? Will they still be counted as FEOC relevant people even after retirement?[14] While toll manufacturing arrangement service is a long-standing business type, it is uncertain whether they will be compliant.[15] Also, the timing of termination from FEOC to non-FEOC status is not specified.[16]

This shows an inherent dilemma in the design of industrial policy, pronounced in FEOC guidelines. First of all, the stronger guidelines are created, the less stakeholders will be able to meet the administrative requirements. This issue has already arisen with the 30D consumer tax credit in the Inflation Reduction Act, where projections show no automakers will meet the 100% critical minerals requirements when it takes full effect.[17] In a similar context, the proposed FEOC guidelines may create unwanted side effects where FEOC stakeholders can hide behind the strategy of disguising the ownership structure while maintaining their influences. Next, once companies learn how to circumvent the rules, the next policy instruments must be more "articulated."[18] Authorities may put in place more regulatory requirements or try to minimize any possible loopholes. This raises administration costs and may distort the impact of industrial policy.[19]

While it is too early to assess the success or failure of the FEOC guidelines in the IRA, which incorporate national security concerns and are a small part of a broader industrial policy, recent evidence suggests that industrial policy may not achieve its intended outcomes. The Peterson Institute for International Economics evaluated 18 cases of industrial policy carried out between 1970 and 2020 in the US. In their scorecard, industrial policy through trade measures and subsidies to targeted firms received a lower score than support for research and development.[20] According to the New Industrial Policy Observatory data set, the US, China, and EU show a "tit-for-tat" pattern in their government interventions. This implies how a new industrial policy shows up in a short period to counter other governments' policies.[21] Criscuolo et al. (2022) criticize "national champion

[14] ZETA, Hyundai, Volkswagen, Hyundai, same as above; Australian Government, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0015

[15] Livent Corporation, https://www.regulations.gov/comment/DOE-HQ-2023-0067-0017; See their explanation of toll manufacturing service

[16] Hyundai, same as above. This is important because when a company is no longer classified as a FEOC, it is unclear whether the old inventory products produced when they were a FEOC are still considered FEOC-compliant or not, as the current rules do not clarify this.

[17] Trost and Dunn (2023). pp. 640, Figure 1, pp. 641, Figure 2.

[18] The DOE or other US agencies may create increasingly complicated guidelines in an attempt to reshore the battery supply chain. However, this could make the guidelines less clear and raise uncertainties for supply chain participants.

[19] The DOE (2024) published its responses to these comments and finalized the proposed draft with minor corrections. The definition of "effective control" was slightly modified to narrow the scope of entity relevance but the rest remained unchanged. By the "due diligence measures" in separate guidance published by the Internal Revenue Service (2024), the cost of administrative burden might vary in practice. Additionally, the DOE interpreted the intended goal of the IRA as "onshoring and friend-shoring of critical minerals, battery components, and battery materials."

[20] Peterson Institute for International Economics. 2021. pp. 96.

[21] Evenett et al. (2024). pp. 6, table 1.

initiatives" that encourage domestic firms by suppressing their competitors, whereas carefully designed support for R&D would be the best instrument within the framework of industrial policy.[22] What is worse, the recent rise of industrial policy in the US, EU or other economies may provoke a domestic demand for a new scale of industrial policies. For instance, the EU started the Green Deal Industrial Plan responding to the US IRA and other government-led industrial policies.[23] The French government adopted a similar subsidy scheme for electric vehicles.[24] The Japanese government has subsidized the nation's semiconductor industry on a large scale.[25] The Korean government has been under pressure to expand tax credits for the semiconductor industry.[26]

These nations are like-minded countries, but their industrial policy responses are now designed to disrupt the global value chains. The impulsive expansion of support packages may end up wasting resources rather than enhancing industrial competitiveness. The US government already experienced massive failures in the solar energy and automotive sectors during the 2010s.[27] Researchers have warned of the chaotic rise of industrial policy, even among like-minded countries. This coordination failure shows the limitation of the current government-led, isolationist approach to industrial policy. Of course, governments often need concrete action to combat external risks and boost their economies. However, what would be a smarter design of such a "visible hand"?[28] One option is to target universal values, such as environmental protection, inclusive economy, and all humanitarian survival issues, rather than subsidizing specific big firms or sectors. Better industrial policy schemes will minimize market distortion and harmful effects in the long term. Moreover, a targeted industrial policy might stop the "tit-for-tat" trend of industrial policy and encourage international discussions for coordinating policies between value-sharing allies.KIEP

22 Criscuolo et al. (2022), pp. 3-4.
23 European Commission (2023).
24 Recently, French government decided to downsize the amount of EV subsidy due the budget limit (Bourgery-Gonse, 2023; Reuters, 2024).
25 The Japan Times (2024. 2. 16.), "Japan boosts aid to chip projects amid global race."
26 Reuters (2024. 1. 15.), "South Korea's Yoon pledges to extend tax benefits for chip investments."
27 See Table 5.1 in Hufbauer and Jung. 2021. pp. 96.
28 Chandler (1977) used this figurative expression to argue the structured hierarchy in bigger business enterprises can be more productive than smaller, diverse organizations.

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