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Industrial Policy and National Security: The Old and the New

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As discussed in some detail by Pickel (2005), Reinert (2025a) and others, economic nationalism has moved from an antiquated ideology to mainstream status. It has succeeded in both reworking national policies and undermining the multilateral, rules-based system of international economic relations. Ironically, one of the main players in these changes, the US government, was at the center of the project to construct the multilateral system in the aftermath of World War II (Ikenberry, 1992). While economic nationalism has its own dynamic, it is also related to and indeed inspired by questions of industrial policy and national security. The economic nationalism-industrial policy-national security nexus, what we will refer to in this chapter as the "Nexus," has its intellectual roots in the work of Friedrich List but has also evolved into more modern ideological constructs with multiple and evolving justifications.

Evenett et al. (2024) defined industrial policy as "any targeted government intervention aimed at developing or supporting specific domestic firms, industries or economic activities to achieve national economic or non-economic… objectives" (p. 2763). Similarly, Juhász, Lane and Rodrik (2024) defined industrial policy as "those government policies that explicitly target the transformation of the structure of economic activity in pursuit of some public goal" (p. 216). As noted by these researchers, standard justifications for industrial policy are related to positive intra- and inter-industry externalities, coordination issues and informational spillovers across firms, and public input provision. Externalities/spillover arguments can in principle support the application of Pigovian subsidies as a first-best policy response. Indeed, Juhász, Lane and Rodrik (2024) stated that "subsidies are the most obvious type of industrial policy" (p. 216). Nonetheless, evaluation of industrial policies can be complicated and characterized by a lack of information (Bown, 2024, Evenett et al., 2024, Juhász, Lane and Rodrik, 2024, and Lane, 2020).

Studies such as these represent important starting points and lenses through which to view industrial policy and its relationship to national security. However, they leave out the ideological component inherent in the Nexus. For example, Bown (2024) concluded that "governments seem intent on using industrial policy to tackle the world's most pressing market failures and externalities and to at least tweak the footprint of global supply chains" (p. 264). This is not the whole story.[1] To better understand why, we will first review the legacy of Friedrich List, as well as its influence on Meiji Japan. We will then briefly consider the US-Japan rivalry of the 1980s before turning to what has been called "modern" or "new" industrial policy.[2] We will find that the "old" still has some influence on the "new" and that the Nexus is less modern than sometimes suggested.[3]

List's Legacies

The Nexus had its origins in the writing of Friedrich List (1917, orig. 1885). Helleiner (2021) stated that "List certainly deserves a prominent place in the intellectual history of economic nationalism because he was one of the first thinkers to express very eloquently the core belief of economic nationalists: that the economy should serve nationalist goals" (p. 230). Beyond economic nationalism, List's writings also explicitly addressed the Nexus. For example, as stated by Spallettiv (2016), "for List there is no confusion between economic and military matters or between defense and economic security matters" (p. 182). List was an originator of the Nexus.

Born in 1789 in Germany, List began writing essays for the Pennsylvania Association for the Promotion of Manufacturing Industry in the early 1820s. He was thereby associated with protectionist industrial policy from the start.[4] Lists essays advocated the protection of

[1] One way around this issue is to just define national security as another type of externality as in Juhász, Lane and Rodrik (2024), but this again misses some relevant ideological content. This chapter partly reflects the point of view of Donnelly (2024), who "posit(s) that trade preferences of producers and voters are insufficient on their own to drive foreign economic policy, but that political parties seek to combine their support with other voters through political ideas…, particularly… narratives" (p. 80).
[2] There is also the pressing issue of the relationship of industrial policies in the form of subsidies under the World Trade Organization's Agreement of Subsidies and Countervailing Measures (SCM). This chapter does not address this issue but see Bown (2024) and Mavroidis (2025).
[3] As extensively detailed by Capri (2025), what has changed is the technological content of the Nexus and the role of China in it.
[4] For a positive review of List's time in the United States, see Notz (1926). As described by Bell (1942), List's task was to rebut the "free trade" arguments of Cooper (1826).

manufacturing and the building of railroads, always with an eye on his native Germany.[5] In 1841, he gathered his essays in a book first published in German and subsequently in English as *The National System of Political Economy* (1917, orig. 1885). This work earned List the title "apostle of economic nationalism," bestowed by Jacob Viner (2014, orig. 1950).

In *The National System*, List considered the relationship between Germany and Britain as one of inequality in need of redress. In his policy confrontation with Britain, List pushed back on British economic thought, what he referred to as "cosmopolitical economy." Instead, he proposed a "true political or national economy" involving nationalist catch-up via manufacturing. In the catch-up process, "those nations which feel themselves to be capable… of *developing manufacturing power* of their own must adopt the *system of protection* as the most effective means for this purpose" (p. 60, emphases added). Along with the system of protection, List's other central idea was what he called "productive power." List sets this idea in opposition to Smith's division of labor, including in it nearly everything else that we would currently describe as technology, institutions, and culture.[6]

For List, it is manufacturing that unleashes productive power, including in agriculture and services. In one of many examples, he stated that "manufacturing power developed in all its branches forms a fundamental condition of all higher advances in civilization, material prosperity, and political power in every nation" (p. 65). What List is most known for is his advocacy of what we now refer to as *infant industry protection*, and List's suggestions in this regard were quite valid. He specifically called for protection that is targeted, is phased out, and has a terminal date. This is entirely consistent with current economic thinking on the infant industry policy (e.g., Messerlin, 2006).[7]

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[5] In the assessment of Ince (2016), "List was not a professional scholar of political economy but a publicist whose self-proclaimed goal was to influence the economic policies of what he called 'second- and third-rate industrialized nations' like the USA, Germany, France and Russia in their endeavor to catch up with Britain" (p. 381).

[6] While most attribute the productive power idea to List, Adam Smith (1937, orig. 1776) used the phrase in his chapter on "the wages of labor." He stated: "The same cause… which raises the wages of labor, the increase in stock, tends to increase its productive powers, and to make a smaller quantity of labor produce a greater quantity of work" (p. 86).

[7] The studies of Notz (1926), Earle (1986) and Gerybadze (2018) suggested that List drew on Alexander Hamilton's famous *Report on Manufacturers* for his infant-industry idea, so the idea was not original to him.

In his early advocacy of the Nexus, List explicitly linked manufacturing to national security. Indeed, in List's view, productive power was to serve political power. Here is just one of many examples of this theme:[8]

> Power is more important than wealth. And why? Simply because national power is a dynamic force by which new productive resources are opened out, and because the forces of production are the tree on which wealth grows, and because the tree which bears the fruit is of greater value than the fruit itself. Power is of more importance than wealth because a nation, by means of power, is enabled not only to open up new productive resources, but to maintain itself in possession of former and of recently acquired wealth and because the reverse of power—namely feebleness—leads to the relinquishment of all that we possess (p. 31).

For List and some of his followers, passages such as these lead to a link between war and manufacturing. There is a quotation often attributed to List, namely that "war or the very possibility of war makes the establishment of a manufacturing power an indispensable requirement for a nation of the first rank."[9] National security thereby requires industrial policy, and this can feed into productive power. List wrote that:

> The equipment of armies… may… under certain circumstances, very greatly conduce to increase of the productive powers of a nation. Strictly speaking, material wealth may have been consumed unproductively, but this consumption may, nevertheless, stimulate manufacturing to extraordinary exertions, and lead to new discoveries and improvements, especially to an increase of productive powers (p. 34).

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[8] Levi-Faur (1997) interpreted productive power in the standard terms of natural, physical and human capital, but Spalletti (2016) specifically interpreted List's work as an alternative to the standard factors of production view. Whatever the interpretation, political power was of great importance to List. He stated: "Political power not merely secures to the nation the increase of its prosperity by foreign commerce…, it also secures to it the possession of internal prosperity, and secures to it its own existence, which is far more important than material wealth" (p. 79).

[9] Interestingly, this statement is also sometimes attributed to the historian Paul Kennedy who used it in his book *The Rise and Fall of the Great Powers* (1987).

What List identified here is the idea of military "spin-offs," described by Samuels (1994) as follows:

> The general idea of spin-off rests on the view that military spending can have a pervasive positive impact on the civilian economy…. The performance requirements of technologically sophisticated military systems directly boost the innovative capabilities of the supplier firms, who thereupon develop and license technologies of broad commercial benefit (p. 18).

However, Samuels also considered the alternative possibility, namely "spin-away." He stated that "it is far from clear that the military acts primarily as an agent of technological innovation" and "has had a pervasive positive impact on the civilian economy" (p. 22). We will return to this issue below.

List in Meiji Japan

List's ideas on the Nexus spread far and wide, including to Japan.[10] Here we briefly consider the Meiji Restoration in Japan during the 1860-1880 period. As stated by Woo-Cummings (2005), "the Meiji oligarchs… were assiduous students of the Prussian military state" (p. 100), and representatives of the Japan's Meiji government were sent to Germany to study its manufacturing sector and military. Samuels (1994) noted that Japan's samurai Finance and Home Minister Ōkubo Toshimichi "was exposed to List's neomercantilism during his visit to Germany in the early 1870s" and that "List's ideas suffuse Ōkubo's 1874 economic program, Japan's first formal rejection of laissez-faire principles" (p. 56). Ericson (2018) noted that, while a full translation of List's *National System* was not available in Japan until 1889, the main message had been translated in summary form in 1872. Further, Brown (1962) reported that:

> Flattered by the eminent Iron Chancellor's personal attention and impressed by Bismark's realistic advice to rely on national power above all else to elevate Japan's

[10] While we focus on Japan here, List's unfortunate impacts were acutely felt in Europe. As stated by Spalletti (2016), "from 1866, with formation of a conservative-liberal Prussian-dominated German state, List's national project became a concrete application combined with Bismark's foreign policy and wars" (p. 183). Condliffe (1950) was more succinct, stating that "Bismarck, and later the Nazis, could find in List's writings authority for practically all of their policies" (p. 278), and Earle (1986) described List as a "patron saint" of the Nazis.

> status, Ōkubo felt a spiritual kinship with German leaders. He did much to establish a German orientation in the new bureaucracy (p. 190).

Ōkubo was assassinated in 1878, but Listian policies were carried on by Finance Minister Matsukata Masayoshi. Ericson (2018) quoted Matsukata's granddaughter as saying: "Throughout his life, Matsukata often referred to the protectionist policies of… List as more suitable for Japan than Adam Smith's ideas" (p. 501). Ericson also reported that Matsukata's reforms "differed from classical and neoliberal economic orthodoxy with regard to industrial policy" (p. 502) and that "spending on the military was indispensable" (p. 503). Ericson also concluded that the industrial policies of Ōkubo and Matsukata were quite similar in their having common origin in List.

There was also a direct connection between the industrial policies of the Meiji period and the Pennsylvania Association for the Promotion of Manufacturing Industry in which List had been involved. As noted by Notz (1926) and Earle (1986), List took over from the protectionist pamphleteer Mathew Carey, Carey's son Henry Carey also carried forward the protectionist message. As reported by Lee (2008) and Gerybadze (2018), Norikazu Wakayama, a Ministry of Finance economist, drew upon and translated the writings of the father and son and incorporated them into his own 1871 book. Further, as reported by Gerybadze (2018), the economist Sadamashu Oshima translated List's book *twice*, once in 1886 and again in 1895, becoming known as the "Friedrich List of Japan." So, the transmission took place directly from the source as well as via Germany.[11]

These Listian ideological developments during the Meiji period were carried forward in time to the Imperialist Period (1920-1940). As outlined in detail in Samuels (1994), this trajectory was encapsulated in the ideologies of *fukoku kyōhei* (rich nation, strong army) and *shokusan kōgyō* (industrial promotion). In Samuels view:

> Friedrich List… anticipated the mercantilist thread in Japanese technology ideology. List's argument that a nation's independence and security depend on the independence and vitality of its manufacturers is isomorphic to Japan's relentless

[11] Ericson (2018) dates the first translation to 1889, while Gerybadze (2018) dates it to 1886. In the large scheme of things, this discrepancy does not matter.

> acceleration toward autonomy and its unflagging commitment to nurturance and technological diffusion (p. 56).

As a result, industry in Meiji Japan and beyond was a military affair. For example, as stated by Kobayashi (1922):

> In Japan (military) industry has the greatest influence on the general industry of the country…. The advancement of science and arts, the diffusion of education, the protection of laborers—in these matters also, the military industry of Japan has been an important factor. In short, the degree of development of a nation's military industry… also serves as the indicator of the progress of its general industry and its economic status (pp. 161-162).

As a result of this Listian ideology, two centuries of peace for Japan came to an end. As stated by Samuels (1994), the *fukoku kyōhei* ideology "brought war and devastation" to Japan and Asia (p. 319). Further, "military techno-nationalism destroyed the state and nearly the nation itself" (p 341). Ironically, given the focus of List on wealth as well as power, one fourth of the tangible capital in the country was destroyed (Thorbecke, 2023, p. 14). Unless significantly tempered, the Nexus does not always bode well for healthy international relations and can cause serious socio-economic setbacks.

The US-Japan Rivalry

What is now called the "modern" or "new" industrial policy had a dress rehearsal in the 1980s in the context of US-Japan rivalry that related directly to the Nexus. Indeed, one of the first uses of the term "techno-nationalism" took place in this context (Reich, 1987). Battlegrounds emerged in the steel, aircraft, semiconductor and automobile sectors, as is the case today. While Gerybadze (2018) tried to link Japan's moves in this era to List, the connections here are a bit more tenuous than in other contexts.[12]

In the case of the semiconductor industry, and as documented by Irwin (1998), Janow (1984), Thorbecke (2023), Mavroidis (2025, Chapter 1), Japan's prowess began to emerge in the

[12] As discussed by Janow (1984), Japan did employ Listian infant industry protection during the 1945-1965 period.

late 1970s.[13] As described by Irwin (1998), this involved Japan shifting "away from government purchases for the military and space programs toward commercial applications such as consumer electronics" (p. 178). In 1976, Japan had instituted its Very Large-Scale Integrated Circuit Project (VLSI), and the US countered in 1979 with its Very High-Speed Integrated Circuit Project (VHSIC). However, as detailed in Samuels (1994), the restrictions placed by the US government on its contractors within VHSIC limited commercial applications. This difference between the Japanese and US markets led to increasing vertical integration in Japan (USGAO, 1987). Consequently, as stated by Irwin (1998), "large and diversified Japanese firms with deep financial resources… were pitted against undiversified, medium size firms in the United States" (p. 178). Meanwhile, as detailed by Thorbecke (2023), both Taiwan and South Korea began developing their own semiconductor industries.

In the mid-1980s, the US government began to initiate anti-dumping (AD) measures against Japanese semiconductor exports. Japan was forced to abide by US-determined price floors and to abide by voluntary exports restraints (VERs), including to third-county markets. All of this was formalized in the 1986 "Arrangement between the Government of Japan and the Government of the United States Concerning Trade in Semiconductor Products."[14] Ironically, Irwin (1998) concluded that "Japanese semiconductor firms benefitted from the implicit VER" (p. 193). Within the VERs, some Japanese semiconductor firms coordinated among themselves and planned investments to maximize long-term success. The VERs also inspired lower-wage Taiwanese and South Korean firms to enter the market.[15]

1n 1988, with Japan suppling more than half of the world's semiconductors, the United States began to subsidize a project called SEMATECH (Semiconductor Manufacturing Technology). The subsidy came from the US government's Defense Advanced Research Projects Agency (DARPA), initially at a level of US$100 million, but would eventually total US$500

[13] As discussed in Thorbecke (2023), the roots of this go back to the 1950s when the Japanese company Totsuku (later Sony) formed a transistor study group using the US Bell Labs manual *Transistor Technology*, and subsequently, the *Bell System Journal*.

[14] Regarding this agreement, USGAO (1987) stated that "the strength of will behind its development and enforcement is buttressed by national security concerns." However, "it would be unrealistic to see it as a complete solution to the semiconductor industry's current problems" (p. 9).

[15] The original arrangement was in force through 1991, although it ran afoul of the GATT's prohibition on quantitative restrictions. It was replaced by a new arrangement under the US Bush administration.

million. By some accounts, this initiative was a success, but US government funding ended in 1996. Reflecting the global nature of semiconductor technology, and with US funding coming to an end, SEMATECH eventually became an international membership organization and ceased to exist in 2015.[16]

Regarding defense spin-offs/spin-aways in this era, Samuels (1994) stated that "the Japanese commitment to defense research and development has never flagged, has borne significant benefits, and has been more extensive than many acknowledge" (p. 189). However, "Japan's technological resources were directed at commercial products, and defense technology was intended to supplement but not displace civilian development" (p. 191). Indeed, Samuels repeatedly refers to the Japanese defense industry as *embedded in the commercial economy* rather than the other way around.[17] This is an important clarification and indeed modification of standard interpretations of List that echo to this day.[18]

Contemporary Echoes

In the contemporary era, industrial policy is on the rise (e.g., Aiginger and Ketels, 2024, Bown, 2024, Evenett et al., 2024, Mavroidis, 2025 and Reinert, 2025b), often in the form of the Nexus. In some assessments, however, there is something "new" about "modern" industrial policy that sets it apart from both the Listian tradition and the previous US-Japanese rivalry. In the words of Aiginger and Ketels (2024), for example, industrial policy has been "reloaded." In this vein, Bown (2024) provided the following characteristics of modern industrial policy:

- It is mostly pursued by high-income countries.

[16] As noted by Hufbauer and Hogan (2025) and Mavroidis (2025), this US industrial policy episode (which also extended to automobiles) was undertaken by the Reagan administration that was ideologically "free market." As stated by Mavroidis (2025), "the voices of industry had fallen on welcoming ears, as the Reagan administration had decided to part company with its hands-off, free-trade rhetoric and take drastic action" (p. 26).

[17] Reich (1982) similarly stated that "the US Department of Defense and NASA have no interest in the successful marketing of new products. Indeed, defense and aerospace programs may have jeopardized the international competitiveness of American manufacturers" (p. 867). Janow (1984) stated that, in contrast, Japanese "government support for science and technology-related products have been heavily concentrated in the development of technologies with commercial applications" (pp. 120-121).

[18] Samuels (1994) ultimately positioned the success of the Japanese economy in this era on institutions, namely, on "reciprocal consent," reinforced through norms, protocols, and future orientation, supporting long-run skill building. In contrast, Reich (1982) noted that "the United States does not have institutions designed to negotiate adjustment policies among those who may be affected by them" (p. 874).

- It is less focused on initial learning processes.
- It has the reshoring of global value chains (GVCs) as an explicit objective.
- It is techno-nationalist in that its goal is to maintain technological supremacy over geopolitical rivals.[19]

All of this is true, but it is also the case that Nexus-based ideas continue to influence policies in the current era. We briefly consider a few examples.

United States. The first US Trump administration leaned heavily into steel and aluminum tariffs based on national security arguments. Ideologically, however, the focus was broader. For example, explicitly citing List, Lind (2019) called for a merging of US international trade and national security policies. He stated that "any country which hopes to be an independent great power must be able to obtain and maintain its own state-of-the-art manufacturing sector." In a List-inspired passage, Lind continued:

> Many of the same factories that produce capital goods or civilian consumer goods can be converted to produce weapons. It is not enough for rival powers to monitor each other's standing armies, navies, fleets and stocks of weaponry; they must also monitor the overall industrial capacity of their actual or potential rivals.

As discussed in Lee (2019) and Reinert (2024), the first Trump administration metals protection policies interpreted national security in terms of a vaguely defined "economic security" that did not pass legal muster.[20] The subsequent US Biden administration continued to promote metals protection, but it added into the mix large-scale industrial subsidies and protection of advanced semiconductors and artificial intelligence, again on national security grounds. The purpose was to undercut China in all "foundational technologies."[21] This led to the Infrastructure

[19] Techno-nationalism was described by Luo (2022) as "a strain of systemic competition thinking that links cross-border technological exchanges directly to a nation's national security" (p. 553). See also Capri (2025).

[20] Mavroidis (2025) stated that "the US lost its argument… from A to Z and appealed into the void", that is, to the Appellate Body that it would not allow to function (p. 278). Reinert (2024) labeled the US as a "bad-faith actor" in this regard.

[21] This had its origins in Biden Administration's National Security Advisor Jake Sullivan's oft-noted speech: https://bidenwhitehouse.archives.gov/briefing-room/speeches-remarks/2022/09/16/remarks-by-national-security-advisor-jake-sullivan-at-the-special-competitive-studies-project-global-emerging-technologies-summit/.

Investment and Jobs Act, the CHIPS and Science Act, and the Inflation Reduction Act, all of which contained industrial subsidies.[22] This was part of a broader global focus on industrial policies supporting semiconductors, illustrated in Figure 1.

The headline US policy was the subsidization of the Taiwan Semiconductor Manufacturing Company to commit to new projects in the US. However, the CHIPS and Science Act was also a salvo in its conflict with China in that it placed restrictions on recipient firms from dealing with China (so-called "guardrails").[23] Finally, towards the end of the Biden administration, there was a flurry of activity on controls of advanced semiconductor chips related to artificial intelligence development, put into place by the US Bureau of Industry and Security (e.g., Harithas and Schumacher, 2024).[24]

Moving to the second US Trump administration, the "Reciprocal" Tariff Executive Order was explicitly Nexus-based.[25] This protective policy was first concocted by Navarro (2023), who stated that "it is critical that the United States strengthen its manufacturing and defense industrial base" (p. 765). In a March 2025 interview as the "reciprocal" tariffs went into effect, Navarro was more concise, stating simply that "tariffs are national security." The executive order itself reflected Navarro's Nexus language, stating that "it is critical to scale manufacturing capacity in the defense-industrial sector so that we can manufacture the defense materiel and equipment necessary to protect American interests at home and abroad." This language mirrors that of List in a remarkable way.

China. China is pursuing its own industrial policy across a broad array of technologies to establish "self-reliance" and, to this end, has funded the Made in China 2025 and China Standards

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[22] Much of the focus was on semiconductor fabrication or "fab." The limitations of this strategy are apparent in a sentence from Hufbauer and Hogan (2025): "Under East Asian conditions, it is possible to construct substantially more fab capacity with a billion dollars… than under US conditions" (p. 11).

[23] Luo and Van Assche (2023) stated that the CHIPS and Science Act represented a "policy shift to pro-subsidy industrial interventions" and an "attempt to weaponize global value chains in strategic industries" (p. 1426). Mavroidis (2025) stressed the national security motivation of the act: "US subsidies aim… to lure Taiwan's industry into the US. Support to relocate the production is probably cheaper than defending Taiwan in the case of Chinese aggression" (p. 44). Wei (2022) disagreed with this view.

[24] For an analysis of differences between the two US political parties in their approach to economic nationalism, see Donnelly (2024).

[25] https://www.presidency.ucsb.edu/documents/executive-order-14257-regulating-imports-with-reciprocal-tariff-rectify-trade-practices. Importantly, these tariffs were *non-reciprocal* based on bilateral trade balances in goods alone.

2035 initiatives (*The Economist*, 2022). Bown (2024) noted that these policies have "dispelled any notion that China would transition into a market-oriented economy and that the associated challenges to the trading system of its nonmarket system would dissipate organically over time" (p. 255).[26] As discussed in Ling and Naughton (2016), the turning point in this trajectory took place in 2003 and consisted of "fundamental changes in the mode of operation and outcomes of China's innovation system" (p. 2138). These changes included a significant increase in R&D expenditures, including government expenditures, and including "mega-projects." There was also an increase in support for firms (including state-owned enterprises or SOEs), sectors and technologies.[27] On this dramatic change, Ling and Naughton (2016) stated:

> China's policymakers made a momentous choice after 2003… They could have framed the goal of "becoming an innovative nation" in terms of the technological infrastructure and market environment that would best foster creativity, innovation, and globally competitive industries, or in terms of a more traditional conception of technology development and specified technology and industrial objectives. They chose the latter (p. 2143).

Why chose a "traditional" approach over a more modern approach to technology development? The reasons are many, but the chapters by Junjie (2018) and Gerybadze (2018) suggest that it would not be entirely erroneous to suggest that some Listian thinking has played a part. As Junjie stated, for example, "List is by no means fading away on the Chinese stage" (p. 221).

European Union. The EU has its New Industrial Strategy for Europe, the EU CHIPS Act, and the European Green Deal, and these policies set a new Nexus-related course. For example, the EU CHIPS Act has been couched in terms of "sovereignty" (Mavroidis, 2025, p. 24). Similarly, despite nods to multilateralism, a goal of the New Industrial Strategy is "industrial and strategic autonomy," namely, "reducing dependence on others for things we need the most: critical materials and technologies, food, infrastructure, security and other strategic areas" (European Commission,

[26] This point was also forcefully made by Mavroidis and Sapir (2021) who also offered important legal solutions that have unfortunately been largely ignored.
[27] As extensively discussed in Mavroidis and Sapir (2021), these subsidies and the role of SOEs are problematic under the rules of the World Trade Organization.

2020). Implicitly, Listian thinking creeps in. For example, Reinert and Kattel (2018), supporters of the role of Listian thinking in the EU, stated that "the role of manufacturing as being key to wealth is found all over Europe" (p. 138).[28] This sentiment was echoed in the first sentence of the New Industrial Strategy: "Europe has always been the home of industry."

The European Green Deal has come under a lot of criticism, and it has elements of both greenwashing and rearranging existing expenditures. It is not limited to industry and echoes the themes of the US-originated Green New Deal framework (e.g., Mastini, Kallis and Hickel, 2021). However, it is far reaching, and the EU appears to be committed to it (e.g., Leonard et al., 2021). While the whole package is not Nexus-based, it has elements that are Nexus-adjacent.

India. India has its own Make in India and Production Linked Incentive (PLI) campaigns. Banerjee, Hussain and Karwal (2025) have defended India's use of industrial policy, citing China's violation of WTO rules on subsidies. These authors stated that "unlike China, which strategically shaped its industrial policies to become a GVC leader, India's domestic market-oriented approach has constrained its ability to compete globally" (p. 30). However, the history of industrial policy in India is long and contentious. Regarding industrial subsidies, for example, Bhattacharjea (2022) noted the recent use of PLIs mostly target large firms and took a dim view of their effectiveness. As discussed in Choudhury (2022), the Make in India campaign seems to have had little impact, largely because it has not changed the fundamentals of the Indian economy. Nonetheless, India has provided PLI subsidies to numerous information technology firms, including Dell, HP, Foxconn and Lenovo in its efforts to boost electronics manufacturing (*Times of India*, 2023). Despite these government efforts, it will probably be the shift of production out of China (including Foxconn's recent announcement of a new display driver chip plant) that will have the larger impact.

South Korea. The Republic of Korea has its K-Chips Act, which grants tax benefits to semiconductor firms. For South Korea, the semiconductor sector is very much Nexus-related. Semiconductors are the country's largest export, but more importantly, are implicated in its national security in multiple ways. As stated by Sayakina (2024), "as the country's technological expertise is often used as leverage in national security issues, including diplomacy and defense cooperation, the semiconductor industry creates a significant advantage for Korea's middle power

[28] In a terminological slight of hand, these authors expand the scope of "industry" to include the "knowledge-intensive service sector," ignoring the extensive research literature on services.

status" (p. 332). From the South Korean perspective, the US CHIPS and Science Act, and the Inflation Reduction Act were seen as an affront, indicating that "the goal of the US is to strengthen its domestic industries rather than to ensure the security of global supply chains and point in the direction of South Korea's growing self-reliance in matters of security including investments into military applications of its semiconductors" (p. 339). The US Trump administrations 25 percent (non)reciprocal tariff against South Korean exports (in violation of the South Korea-US Free Trade Agreement) would reinforce this view.

These modern Nexus-based policies have spawned what Mavroidis (2025) and Reinert (2025b) called "subsidy wars." For example, in the case of semiconductors, Mavroidis (2025) stated that "China and the US have not only been engaging in parallel subsidization of their industries but also in outright economic warfare in order to consolidate their place in this market" (p. 23). This economic warfare has third-country effects. For example, Banerjee, Hussain and Karwal (2025) stated that "the vast majority of developing countries are now being squeezed by the twin pressures of continued trade distortion by Chinese industrial policies… and the return of aggressive industrial policy in industrialized economies" (p. 56). Even smaller high-income countries (e.g., Switzerland, New Zealand) will not be able to play this game due to lack of resources. While there will be benefits to importing cheaper, subsidized goods, low- and middle-income countries (LMICs) are the ones where actual learning-based manufacturing subsidies might make some economics sense, but these counties will not be able to pursue this policy path, either for alleged national security benefits or for general economic development. These subsidy wars constitute another fracture in an increasingly splintered global economy.

Conclusion

There are multiple issues to confront regarding both old and new economic nationalism-industrial policy-national security Nexus. Historically, this Nexus has coalesced into ideological episodes with disastrous results, particularly in the case of Germany and Japan in World War II. As discussed in Reinert (2025a), there are signs of turmoil regarding this Nexus in the contemporary era, including the complete hobbling of the WTO's dispute settlement mechanism (DSM) and the violation of its most-favored nation (MFN) principle. But looking more narrowly at the Nexus itself, there are at least five pressing concerns.

First, the "national security" component of the Nexus remains both underdefined and inadequate for the current era. The concept of national security used in the Nexus is largely one from the two World Wars, focused on the manufacturing of weapons. Even the national security community itself has moved beyond this realm, into that of non-traditional security threats and human security (e.g., climate change and water scarcity) and the linkages to conflict (e.g., Falk and Milonova, 2025 and Reinert, 2018). With its intellectual roots planted in the work of Friedrich List, the Nexus is woefully outdated on this score.[29]

Second, as major players pursue their own interpretations of the Nexus, overall security is declining. This is not entirely new. As Spallettiv (2016) stated regarding List, "the only unwelcome effect of his theory is the consequence is the revival of mercantilism in the unstable Europe in the economic nationalism after 1870, that is, totalitarian economics, totalitarian states and finally totalitarian war" (p. 182). In the current era, Aiginger and Ketels (2024) called for "a new international architecture… to anchor national industrial policies in a stable global context" (p. 8), but they offered *no suggestions* in this regard. Few researchers or policymakers do, and we are consequently left with instability. Stability requires relaxing Nexus considerations and returning to some form of multilateralism and recognition of global public goods (e.g., Reinert, 2025, Chapter 10 and Sachs, 2023).

Third, the Nexus has spawned the above-discussed subsidy wars on an annual order of magnitude of hundreds of billions of US dollars. This is ironic because List originally opposed the manufacturing hegemony of England, calling for England to "give up the idea that she is designed to monopolize the manufacturing power of the whole word" (p. 80). However, List's followers in the Nexus are attempting to develop competing industrial hegemonies. List (1917, orig. 1885) actually called for a "law of nations… that in all such countries the commerce of all manufacturing nations should have equal rights" (p. 81). That ideal is being dramatically undermined in a destruction of multilateralism and what Mavroidis (2025) called a "race to lawlessness" (p. 276).

Fourth, the Nexus can be a cover for delaying what Reich (1982) called "managed adjustment." In the case of the United States, for example, the metals and automotive protection of the second Trump administration, and its more general single-minded obsession with tariff

[29] The Nexus view of national security also downplays the role of services in military preparedness and operations (e.g., Moore, 2017).

protection, are a testament to avoidance of managed adjustment. Reich (1982) specifically noted that industrial policy in the United States was unable to "think strategically about… economic development" (p. 879). Reich stated:[30]

> The only model of national strategy which we possess derives from national defense. It is hardly surprising that many adjustment policies over the years have been presented as aspects of national security…. This reasoning has impoverished the political dialogue, blinding us to long-term economic issues that require strategic thinking (pp. 879-880).

In addition, tariff protection is not a development strategy. As plainly stated by Chan (2025) regarding the US-China rivalry, for example, substituting protection for development strategy is doomed to fail.

Fifth, the Nexus diverts attention from factors that contribute to long-run growth and real security. These are nothing more than the fundamentals of mainstream economic policy: skills and talent (flagged as far back as Adam Smith), science and innovation, adequate infrastructure, effective regulatory environment, the forging of international commercial ties, all in support of maximum value added in whatever sector or production task it is found (Smith again). The focus on "industry" or "manufacturing" is misplaced, described by Reinert (2023) and *The Economist* (2025) as a set of *misconceptions* that can prove to be costly, particularly in the long run. What is missing is what Zedillo (2017) referred to as "taking responsibility for domestic political choices" in support of broad-based improvements in wellbeing.

In his review of Friedrich List's life, Bell (1942) stated: "List was a dreamer gifted with a vision far ahead of his time. He was a powerful propogandist of almost fanatical zeal. This is partly responsible for a one-sidedness to his arguments which often lacked certainty and balance" (p. 83). Two centuries after List's flight from Germany and arrival in the United States, these qualities of List influence the world, particularly via the Nexus. While from a standard political economy perspective, governments offer industrial policy for political benefits, the argument made in this

[30] Writing at about the same time, Janow (1984) noted the adjustment challenges addressed by Japanese industrial policy.

chapter is that some of these political benefits are ideological in nature with List is an unfortunate touchstone. The "new" of industrial policy is also "old," and the world is poorer for it.

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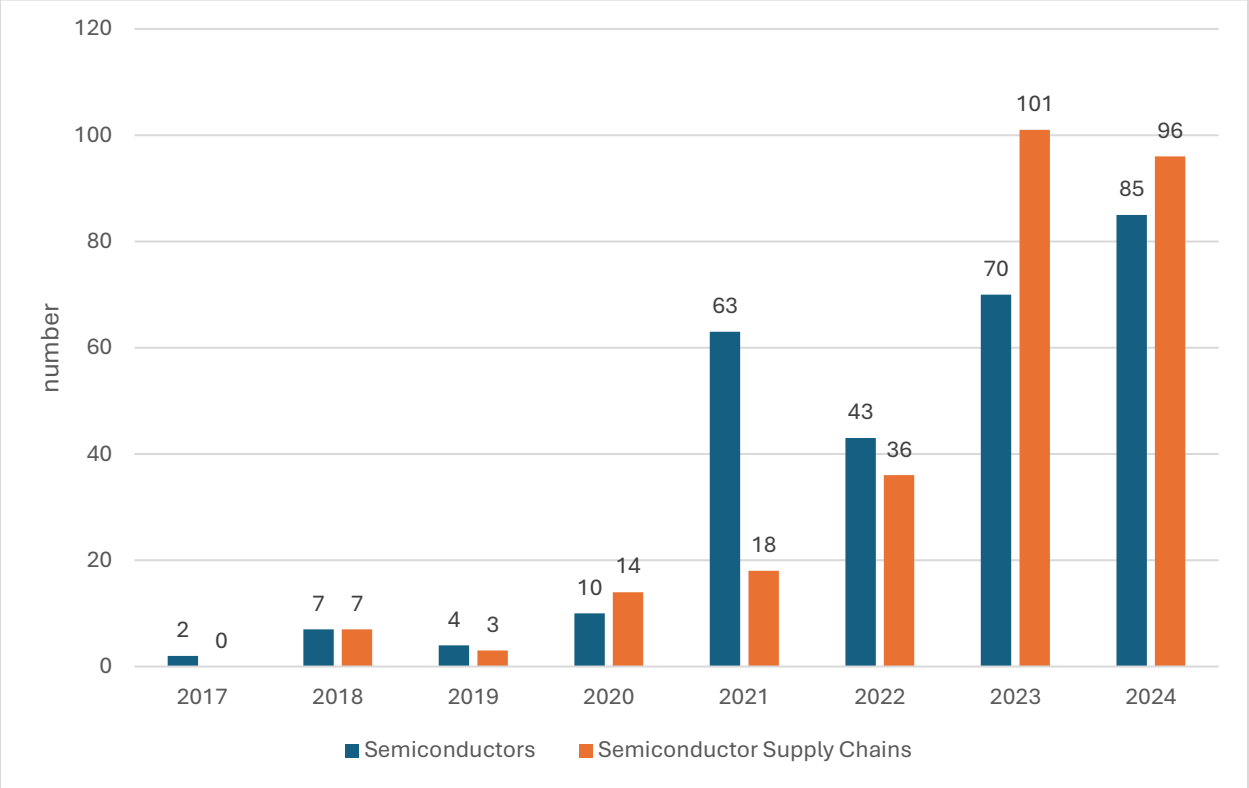
Figure 1: Industrial Policies in the Semiconductor Sector



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