

INDUSTRIAL POLICY AND U.S. INNOVATION

EXECUTIVE SUMMARY

Using industrial policy to compete with China in technology or for other purposes would likely harm U.S. innovation and leave the United States worse off, according to a new analysis by the National Foundation for American Policy. The conclusion follows a review of U.S. government policies and the economic literature on industrial policy.

INDUSTRIAL POLICY, JAPAN AND INNOVATION

Advocates of industrial policy argue trade protection and government-directed planning will increase innovation and the competitiveness of U.S. companies. Research shows this belief is mistaken.

Supporters of industrial policy favor trade protection and increasing exports (i.e., mercantilism), and have pointed to Japan as a model. Yet the data show an emphasis on imports and the removal of trade barriers is a better policy.

Economic growth is crucial to enhancing the standard of living in a country. Gross Domestic Product (GDP) growth, or economic growth, “is made up of growth in the workforce plus growth in labor productivity,” notes Robert S. Kaplan, president and CEO of the Federal Reserve Bank of Dallas.¹ The aging of a country’s population, fertility and immigration are key factors in a country’s labor force growth. Growth in labor productivity is a second important factor in economic growth.

Protectionism was a notable feature of Japan’s economy during the 1960s. Since Japanese economic growth increased during this time, many people believed that trade barriers contributed to that growth. “While many in Japan today might agree that reducing trade barriers could raise Japanese living standards, it is also commonly thought that the trade barriers in the 1960s contributed positively to Japanese development,” write economists Robert Lawrence and David Weinstein in a study of industrial policy and trade policy. “It is particularly noteworthy, therefore, that we find that less import protection could have been beneficial during the earlier phases of Japan’s development. In fact, this result suggests that one of the problems in trying to explain why East Asian growth was miraculous is that it could lead us to ignore ways in which East Asian growth might have been even faster and more durable. While our findings on the effects of imports may not explain why Japan grew rapidly, therefore, it may nonetheless have important policy implications for other countries. In particular, this evidence calls into question the view that Japanese sectoral productivity growth benefited from mercantilism.”²

This observation was not unique. They cite Michael Porter, author of *The Competitive Advantage of Nations*: “Japan must import more if vibrant productivity growth is to continue . . . Imports stimulate domestic productivity growth.”³

¹ Robert S. Kaplan, “Economic Conditions and the Key Structural Drivers Impacting the Economic Outlook,” Federal Reserve Bank of Dallas, October 10, 2019.

² Robert Lawrence and David Weinstein, “Trade and Growth: Import-Led or Export-Led? Evidence From Japan and Korea,” National Bureau of Economic Research, Working Paper 7264, July 1999, p. 4.

³ Ibid., p. 4.

In their research on Japan, Lawrence and Weinstein found “exporting does not cause productivity growth.”⁴ They also concluded, “Contrary to conventional wisdom we find that increasing protection in the early period actually was associated with lower rates of productivity growth and higher protection had virtually no impact after 1973 . . . In sum, this analysis suggests that while exporting did not promote TFP [total factor productivity], import protection actually retarded productivity growth and imports enhanced it.”⁵

WHY DO IMPORTS ENHANCE PRODUCTIVITY GROWTH?

There are two ways in which imports may increase the growth of productivity. First, competition from foreign companies may increase the quality of domestic companies. Imagine a team of high school basketball players who competed only with each other instead of playing against the best players in their state or country. Second, access to imports may lead to producing better quality goods or services. “For example, Japanese apparel producers may benefit from importing higher quality cotton from abroad,” write Lawrence and Weinstein. “This would be an example of superior intermediates in the same sector spurring productivity growth.”⁶

“The impact of non-competing imports on productivity growth is extremely small and statistically insignificant,” concluded Lawrence and Weinstein. “Competing imports, however, have a significant impact. The magnitudes of the coefficients indicate that for most sectors and time periods in our sample, higher past levels of competing imports are associated with more rapid productivity growth. It is important to remember that this result is not a product of the fact that sectors that import more have lower initial levels of productivity because we are already controlling for the initial relative productivity level. Rather, it appears that higher import levels have an independent effect.”⁷

“In electrical machinery, progressive liberalization caused competing imports to rise from 68% of imports in 1970 to 99% in 1985,” according to Lawrence and Weinstein. “We estimate that this increased competition from imports raised productivity in electrical machinery by about 35%. This suggests that competing imports were very important in understanding the success of that sector.”⁸

⁴ Ibid., p. 16.

⁵ Ibid., p. 17-18.

⁶ Ibid., p. 18.

⁷ Ibid., p. 19.

⁸ Ibid., p. 20.

JAPAN, SOUTH KOREA AND THE UNITED STATES

Lawrence and Weinstein also looked at South Korea and the United States: “The results reveal that, as in the Japanese data, higher levels of imports are associated with greater productivity growth. Although the results are not statistically significant, the signs are consistent with the Japanese results. Turning to exports we actually find the reverse of ‘export-led’ growth. Sectors that started by exporting more actually recorded lower rates of productivity growth. When we add in several trade policy measures, tariffs and NTB’s [nontariff barriers] our results do not change much. We find a positive, but not statistically significant impact from imports and a negative but not significant impact from exports. Interestingly, we find a negative relationship between protection and productivity growth in Korea. Higher tariffs have a statistically significant negative impact on TFP [total factor productivity]. Thus, as in the case of Japan it appears that tariff protection in Korea retarded TFP.”⁹

“Lawrence (1999) estimates the impact of international competition on total factor productivity in over 100 US manufacturing industries in the 1980s. After controlling for spending on research and development and the degree of industry concentration, he finds that a higher share of imports in domestic consumption is associated with a statistically significant positive effect on subsequent total factor productivity growth. These effects are apparent for both imports from developed and developing countries. Lawrence similarly finds no evidence of a positive association between the share of exports in domestic production and subsequent productivity growth. Thus, the evidence for the United States appears consistent with that found for Japan and Korea. *Imports stimulate domestic productivity growth while exports apparently do not.*”¹⁰

The findings argue against industrial policy and protectionism: “Our findings on Japan suggest that the salutary impact of imports stems more from their contribution to competition than to intermediate inputs. Instead, this paper suggests that Japan’s performance was perhaps even more of a miracle than we thought, since it occurred despite the maintenance of protectionist barriers.

“Furthermore, our results suggest a reason for why imports are important. Greater imports of competing products spur innovation. Our results suggest that competitive pressures and potentially learning from foreign rivals are important conduits for growth. These channels are even more important as industries converge with the market leader. This suggests that further liberalization by Japan and other East Asian countries may result in future dynamic gains.

⁹ Ibid., p. 22.

¹⁰ Ibid., p. 22. Emphasis added.

“While our analysis has principally focused on Japan, we have also provided corroborating evidence suggesting that our conclusions apply more broadly. Imports into the U.S. seem to be an important factor in promoting productivity growth. The evidence for Korea suggests similar impacts from imports and tariffs and no evidence that exports promoted productivity. Our results thus call the views of both the World Bank and the revisionists into question and provide support for those who advocate more liberal trade policies.”¹¹

THE WORLD BANK

In 1993, the World Bank published the book *The East Asia Miracle, Economic Growth and Public Policy*.¹² The book was meant to distill the World Bank’s consensus on the role of government policy in increasing economic growth in Japan, South Korea and other Asian countries.

As with many economic discussions, Lawrence and Weinstein emphasized the differences between their economic research and the World Bank viewpoint. Upon closer examination, there is actually much agreement.

First, both reject the “revisionist” view that government intervention played a significant positive role in increasing economic growth in East Asian countries. “In general its proponents have not claimed to establish that interventions per se accelerated growth,” according to the World Bank. “Moreover, as we shall show, some important government interventions in East Asia, such as Korea’s promotion of chemicals and heavy industries, have had little apparent impact on industrial structure.”¹³

Second, the World Bank shares the view of Lawrence and Weinstein that the “revisionist” argument in favor of strong government intervention in the economy is not supported by the experience of the East Asia economy. “In the ‘market-friendly’ strategy it [the World Bank] articulates, the appropriate role of government is to ensure adequate investments in people, provide a competitive climate for private enterprise, keep the economy open to international trade and maintain a stable macroeconomy,” notes the World Bank. “Beyond these roles, the [1991] report argues, governments are likely to do more harm than good, unless interventions are market friendly. On the basis of an exhaustive review of the experience of developing economies during the last 30 years, it concludes that attempts to guide resource allocation with nonmarket mechanisms have generally failed to improve economic performance.”¹⁴

¹¹ Ibid., p. 24.

¹² *The East Asia Miracle, Economic Growth and Public Policy*, A World Bank Policy Research Report (New York: Oxford University Press, 1993).

¹³ Ibid., p. 9.

¹⁴ Ibid., p. 10.

Third, the World Bank favors trade liberalization, a position in agreement with Lawrence and Weinstein, and at odds with advocates of industrial policy. “The close link between successful macroeconomic policies and trade liberalization can be seen in the experience of Indonesia, Korea and Taiwan,” according to the World Bank, detailing the removal of protectionist measures that coincided with improved monetary policies.¹⁵

The main area of disagreement is the World Bank believed an orientation toward exports may have increased productivity growth in East Asian economies. However, the research by Lawrence and Weinstein found that not to be the case. The World Bank equivocated in its views on exports and productivity growth: “Of course, it is possible that the move to higher production function occurred before the growth in exports – that TFP [total factor productivity] growth *caused* export growth rather than the reverse.”¹⁶

In sum, Lawrence and Weinstein and the World Bank economists agree that trade liberalization benefited the East Asian economies, but disagree whether an emphasis on exports aided East Asian countries in fostering economic growth.

RECENT UNSUCCESSFUL ATTEMPTS AT INDUSTRIAL POLICY

The Trump administration’s attempts to implement an industrial policy have proven to be expensive uses of taxpayer dollars yielded few results. Three events illustrate that a central shortcoming of industrial policy is it cannot be divorced from politics and, lacking the discipline of the marketplace, can result in costly “boondoggles.”

Early in the Trump administration, the president heralded taxpayer subsidies directed at Foxconn, a manufacturer based in Taiwan, to build a factory in the key swing state of Wisconsin. “In 2017, President Donald Trump and the Wisconsin GOP struck a deal with Foxconn that promised to turn Southeastern Wisconsin into a tech manufacturing powerhouse,” writes Josh Dzieza in *The Verge*. “In exchange for billions in tax subsidies, Foxconn was supposed to build an enormous LCD factory in the tiny village of Mount Pleasant, creating 13,000 jobs. Three years later, the factory – and the jobs – don’t exist, and they probably never will.”¹⁷

“In many ways, the Foxconn debacle in Wisconsin is the physical manifestation of the alternate reality that has defined the Trump administration,” writes Dzieza. “Trump promised to bring back manufacturing, found a billionaire eager to play along, and now for three years the people of Wisconsin have been told to expect an LCD factory that plainly is not there. Into the gap between appearance and reality fell people’s jobs, homes and livelihoods. The

¹⁵ Ibid., p. 125.

¹⁶ Ibid., p. 317. Emphasis added.

¹⁷ Josh Dzieza, “The 8th Wonder of the World,” *The Verge*, October 19, 2020.

Industrial Policy and U.S. Innovation

buildings Foxconn has erected are largely empty. The sphere has no clear purpose. The innovation centers are [still vacant](#). The heart of the project, the million-square-foot 'Fab,' is just a shell. In what an employee says was a final cost-cutting measure, only the portion that was to host the Trump visit was ever finished."¹⁸

By 2021, the story had not improved. "In exchange for billions of dollars in possible public subsidies, [Foxconn originally committed to investing \\$10 billion](#) in a high-tech manufacturing operation south of Milwaukee that would create as many 13,000 jobs," writes Bloomberg's Austin Carr. "But more than three years after the striking its agreement, Foxconn's latest EV pitch is a reminder that the company still has no concrete plan for what it's going to build there."¹⁹

Two episodes in which White House adviser Peter Navarro used the Defense Production Act "in expensive and counterproductive ways" provide further illustration of how politics and taxpayer money produce unsatisfactory outcomes in economic policy.²⁰

"On May 19, he [Peter Navarro] announced that the administration was giving a Virginia-based pharmaceutical company a \$350 million contract to stimulate domestic drug production," writes Eric Boehm of *Reason*. "This is a great day for America,' Navarro said. 'This has all the elements of the Trump strategy.' Indeed, the contract granted to Phlow Corporation does share much in common with the administration's half-baked trade war and other follies. Almost immediately, red flags were raised."

Boehm noted that Phlow Corp. "has no track record in drug manufacturing," according to *Politico*, "and it's not clear when its assembly lines will begin churning out products." Even this was "the largest contract ever awarded by the federal government to a single pharmaceutical manufacturer," *BioPharma Dive* reported the company "had only been founded a few months before the White House" gave it the contract.²¹

"A few weeks later, Navarro was at it again," writes Boehm. "In July, the White House announced a \$750 million loan to Eastman Kodak – a camera company that had declared bankruptcy in 2012 – with the goal of further developing American drug manufacturing. The deal was 'a great win for the American people,' Navarro proclaimed. Like the grant to Phlow Corp., the Eastman Kodak deal was intended to prevent America from being too dependent on drugmakers in China and elsewhere, Navarro said. But there was little cause for concern on that score . . . Last

¹⁸ Ibid.

¹⁹ Ausin Carr, "The Future of American High-Tech Manufacturing: Gummy Bears," Bloomberg, March 22, 2021.

²⁰ Eric Boehm, "Peter Navarro's No-Good Economic Nationalism," *Reason*, December 2020.
<https://reason.com/2020/11/08/peter-navarros-no-good-economic-nationalism/>.

²¹ Ibid.

Industrial Policy and U.S. Innovation

year, less than 1% of the finished drugs imported into the United States came from China – compared to 23% that came from Ireland.”²²

“*The Wall Street Journal* reported in August that Navarro ‘spearheaded the idea, then used his sway within the administration to help Kodak navigate the bureaucracy to be first in line for the potential contract,’” noted Boehm. “The contract was doled out without congressional approval, because it was part of the emergency powers Trump seized and Navarro consolidated under the DPA. But when it came out that the Securities and Exchange Commission was investigating Kodak executives for leaking the agreement to boost stock prices, Navarro immediately distanced himself.”²³

CONCLUSION

A review of U.S. government policies and the economic literature on industrial policy should caution policymakers on its likely impact. Using industrial policy to compete with China in technology or for other purposes is likely to harm U.S. innovation and leave the United States worse off.

²² Ibid.

²³ Ibid.

ABOUT THE NATIONAL FOUNDATION FOR AMERICAN POLICY

Established in 2003, the National Foundation for American Policy (NFAP) is a 501(c)(3) non-profit, non-partisan public policy research organization based in Arlington, Virginia, focusing on trade, immigration and related issues. Advisory Board members include Columbia University economist Jagdish Bhagwati, Cornell Law School professor Stephen W. Yale-Loehr, Ohio University economist Richard Vedder and former INS Commissioner James Ziglar. Over the past 24 months, NFAP's research has been written about in the *Wall Street Journal*, the *New York Times*, the *Washington Post*, and other major media outlets. The organization's reports can be found at www.nfap.com. Twitter: [@NFAPResearch](https://twitter.com/NFAPResearch)