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## Bad Idea: Expecting the Private Sector to Drive Innovation in National Security

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It's bipartisan Washington gospel that America's private sector ("industry") will deliver the innovation the country needs from next-generation national security technologies to future manufacturing competitiveness. Such expectation, however, is increasingly a bad idea without a far more strategic, centralized, and White House-driven approach to the challenges ahead. We are at the front-end of an era of rapid, disruptive technological change in which global competition is heating up, and first-mover advantage could prove decisive in markets and geopolitics for decades to come. National government-backed industrial policies, not markets alone, will play a decisive role in determining outcomes. The United States needs proactive strategies and not the kind of defensive, on-the-fly responses we've seen on artificial intelligence and 5G telecommunications.

At some point in the 1970s, Republicans and eventually Democrats began to develop an allergy to anything that resembled government direction of industry, even if it was predicated on national security grounds. The central role that government played in industrial planning and policy in the Second World War and continued to play through the early Cold War was dismissed as an aberration. With supply-side economics ascendant since the Nixon presidency, the argument for a laissez-faire approach toward industry prospered. The less government direction, the better, and the economy will organically innovate, the thinking went (and goes).

Fast-forward to the present, and it's a different world. U.S. competitors around the world are anything but laissez-faire with their national industrial policies. China has launched an ambitious industrial plan on key technologies and innovations through its "Made in China 2025" initiative. President Xi Jinping has been clear on the need to seize what "presents the Chinese people with an opportunity you rarely see in a thousand years." Russia has maintained a heavy hand in protecting and promoting those industries key to its national security, even as it becomes a global innovation laggard. U.S. allies and partners from France to Germany,

Japan to Israel, and South Korea to Singapore have also put into place strategies and policies to grow domestic industries around emerging technologies and to foster innovation in areas of national priority. They've looked intensely at everything from focused R&D to scaling up technologies and upskilling workforces for the changes underway.

None of this is your grandfather's or grandmother's industrial policy. It's aimed at the cutting edge of tech, and it's hardly a socialist approach. Instead, it's an effort by national governments to concentrate existing resources and infuse capital smartly to address the most important elements of future science and technology and manufacturing competitiveness. To be sure, this is something the United States has also done over this time frame but in a largely balkanized way that depends on informal networks, one-off initiatives, and few economies of scale. The type of White House leadership on these issues seen during the Cold War has been missing. There has been plenty of talk of "moonshots" but little implementation of them.

As a result, America is achieving far less than its potential across a range of technologies in which its early lead is rapidly diminishing: artificial intelligence to additive manufacturing, electric vehicles to unmanned systems, etc. And at an economy-wide level, the United States is failing to take advantage of what the Fourth Industrial Revolution can offer for reshoring manufacturing and creating new, good-paying jobs as some of these technologies transform the overall economy and risk large-scale labor dislocation. An argument can also be made that the innovation economy is becoming dangerously concentrated, with big companies getting bigger and less room for the innovation that startup companies bring. Strategic investments by the government could change that.

America's collective amnesia on the past success of government industrial policy intervention is puzzling. Nearly every major U.S. technological breakthrough of national security importance in the twentieth-century was the result of concerted national security policymaking from the Manhattan Project to ARPANET. Silicon Valley is Silicon Valley because of U.S. government investments made there over a span of decades. Defense and aerospace investments made by the U.S. government from the 1950s on led to the rise of the semiconductor industry and subsequently a clustering of engineering talent that laid the foundations for the rise of the tech industry. Yet in past decades, Silicon Valley companies and the Pentagon became so estranged from one another that the Department of Defense had to stand up a new and specialized office to

renew its interactions with Silicon Valley (the Defense Innovation Unit) while also creating a Defense Innovation Board to try to infuse its own organization with the thinking and ethos of the tech industry. And meanwhile, tensions between government and major Silicon Valley innovators have risen, from the role of social media platforms as largely unrestricted gateways for foreign election interference, to the refusal of software engineers to work on Department of Defense-funded projects.

Is there hope that the U.S. government might yet remember how and why it once led the world in fostering innovation, updated for the technologically-driven opportunities and challenges of our time? [In the 2017 National Security Strategy](#) the Trump administration identified what it called the National Industrial Innovation Base and stated,

“To maintain our competitive advantage, the United States will prioritize emerging technologies critical to economic growth and security, such as data science, encryption, autonomous technologies, gene editing, new materials, nanotechnology, advanced computing technologies, and artificial intelligence.”

But the follow-up to that worthy objective has been lacking. There is no federal government-wide strategy, let alone centralized implementation plan with resources. Despite broad lip service to that goal and important strides on export controls and intellectual property protection, no broad strategic actions have been taken. For example, the interagency task force report on [“Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States”](#) is long on diagnoses of the challenges the country faces and short on prescriptions to address them. Protecting U.S. industry on these issues isn’t enough; industry must be grown. For a U.S. administration with demonstrated resolve to intervene in the market on national security grounds when it comes to steel and aluminum, it should be natural for President Trump to realize his strategic ends in fostering and protecting America’s next generation of crown jewels. Yet, the focus on future competitiveness is sorely lacking. The much vaunted Office of American Innovation—created to address just these challenges—is missing in action.

While it’s true that significantly more innovation is coming out of the private sector than ever before, it’s also true that the government can play a decisive role in what remains the world’s first or second largest market

for just about everything. The U.S. government remains the single largest spender on R&D in the world, even as its share of total U.S. R&D spend has declined as U.S. private sector spending has risen (from a high of 53.9 percent in 1953 to 24.1 percent in 2016, [according to the St. Louis Federal Reserve](#)).

Put simply, it's a bad idea for the United States to ignore the power of national industrial strategy and policy at this moment in history and expect the private sector alone to drive necessary innovation and future security and prosperity. The Trump administration should issue a National Innovation Strategy to clearly focus U.S. government resources and attention on priority areas, especially focusing on those technologies of national security and broader economic importance.

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