State Capitalism and the Evolution of "China, Inc.": Key Policy Issues for the United States

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I. Introduction

This is a particularly timely moment to examine China's state capitalism. Issues posed by this aspect of China's economic model are at the heart of current US trade and technology disputes with China, as well as growing pushback against Chinese investment from other trading partners. Within China, there is a heated debate over the environment for domestic private firms, who continue to face systemic disadvantages competing against less efficient but politically powerful state-owned enterprises (SOEs). Such concerns are taking on a new urgency as China deals with slowing growth and the steep challenges of debt deleveraging and economic rebalancing.

This paper first outlines China's evolving model of state capitalism, placing it in the context of China's economic reforms and the priorities of the current leadership. A key emerging trend is that with Xi Jinping's emphasis on strengthening Communist Party control over the corporate sector, China's state capitalism is morphing further into a mode that can be termed "party capitalism." The paper then discusses the role of state capitalism in China's economic rebalancing and efforts to promote innovation. It concludes with a discussion of the implications for the United States and global trading system, and related recommendations for the United States and for Congress.

This is not a comprehensive treatment of the topic, which is enormously complex, or an academic work. The intent is to highlight the key policy issues posed by China's unique model of state capitalism, while capturing nuances of a topic often prone to exaggerated claims (positive and negative).

II. A brief overview of state capitalism in China

What do we mean by state capitalism in China? For the purposes of this paper, it refers to the role of SOEs, as well as government policies that take an active role in shaping industries and "picking winners" among specific firms and technologies.

[1] All views expressed here are those of the author, not of his employer.

State capitalism in China is not static. Since the start of the reform period in the late 1970s, China's hybrid economic model has continually evolved, with major shifts in the role of the state. SOEs have gone from accounting for four-fifths of China's output at the start of the reform period to roughly one-fifth today. Private enterprise represents the most dynamic part of China's economy, contributing most output and employment and accounting for China's most innovative companies.

But the state still plays a pervasive role in the economy, especially the "commanding heights" of strategically important sectors. SOE's control roughly 40% of industrial assets in China. This share partly reflects the dominance of SOEs in capital-intensive industries such as oil and gas, heavy industry and telecoms, which are still largely off-limits to private and foreign firms. State-owned banks dominate the banking system, and while they are increasingly commercially minded, they represent an important lever for the state to direct capital to favored sectors or initiatives.

The role of SOEs has evolved substantially through successive waves of SOE reform. During the late 1990s, Premier Zhu Rongji oversaw a massive restructuring of the SOE sector, with many failing firms closed or merged, and the government imposing tighter financial discipline ("hard budget constraints") on surviving firms. Under Xi Jinping, Beijing is focused on further consolidating the 96 mostly industrial SOEs owned by the central government into global champions, keeping them under firm political control while taking modest steps to improve their commercial orientation. There is more flexibility towards the many thousand of SOEs owned by local governments, which are less strategic in nature; Beijing is encouraging local governments to close money-losing local SOEs (so-called "zombie companies"), which local officials protect as a source of employment and tax revenue.

Aside from state-owned enterprises, the government and Communist Party play an active role in guiding sector-based industrial policies, both at the central and local levels. Tools for such intervention include regulatory actions (e.g. approvals for investment projects), price controls, direct subsidies and indirect subsidies (e.g. discounted access to bank loans, land, and energy). The extent and effectiveness of these industrial policies vary -- many have been failures, with China's success coming despite government intervention. China's industrial policies can have an enormous impact on global markets; measures to promote industries such as steel, aluminum, and solar photovoltaics (PVs), including through subsidized credit policies, have helped China massively expand global market share, but also created overcapacity that has depressed global prices and created problems for China's economy, as well.

Such outcomes are a reminder that China's industrial policies, in planning and especially in implementation, are the product of heavy internal politicking among key stakeholders -- different central government ministries, industry associations, SOEs, private firms, and local officials. When policy moves down to the local level for implementation, local officials will try to shape it according to their own incentives, leading to effects that are often far different from the leadership's intentions. Local officials seek to advantage their local firms and demonstrate that they are carrying out the leadership's objectives, resulting in a common phenomenon of duplicative and wasteful investment in sectors that Beijing has signaled are priorities.

In its industrial policy orientation, China is partly carrying on the planning legacy of the socialist era, but much more so the course set by governments in Japan, South Korea, and Taiwan during their "catch-up" periods of rapid industrialization. A common feature of this model is the government's active role channeling resources to favored companies or sectors, effectively "picking winners" among competing firms and industries to spur rapid industrialization and create large companies capable of competing internationally. China has a larger role for the state sector than was the case in either of its three main predecessors; on the other hand, by some measures it is today a considerably more open economy than Japan was in its high-growth phase.

A unique feature of China's state capitalism is the complicated role of the Communist Party. As a political organization with more than 80 million members, the party sits above China's government but has a reach that extends far beyond it, into private firms and other institutions in Chinese society. The party can exercise control over economic policy and influence the behavior of firms -- for example, encouraging a bank to provide financial support to a key initiative -- through political rather than formal administrative channels. The party's role in China's economy is strengthening under Xi Jinping, while that of the government is weakening, a trend that can be termed "party capitalism."

In sum, China is not a centrally planned economy or even "state-led" economy. But state capitalism remains a key feature of the economy: SOEs play a strategically important role in many sectors, and officials at various levels are often deeply involved in shaping industry development and guiding economic outcomes through direct administrative intervention, political influence and other means.

III. Recent trends in China's state capitalism

a. "The state advances, the private sector retreats"

Since 2013, and especially since 2015, SOEs have experienced a resurgence relative to the private sector, reversing the long-term trend since the start of the reform period[2]. Growth in output and investment by SOEs has outstripped that of private firms in recent years. Bank credit has been flowing mainly to SOEs, which received 83% of new bank loans in 2016 (the private sector received just 11%), compared to a share of only 35% in 2013[3]. Reflecting their greater ease of access to capital, many SOEs have taken stakes in listed private firms, especially in the last year; while many of these transactions represent bailouts for ailing private firms, some Chinese commentators fear "re-nationalization." Importantly, all the above trends are taking place even though SOEs remain less efficient than private firms.

The renewed momentum of the state sector reflects a mix of intentional policies and unintended consequences, including:

- **An SOE-friendly approach to industrial consolidation.** Xi's "supply-side structural reforms," launched in late 2015, are an effort to modernize the production side of China's economy and reduce symptoms of wasted or inefficient investment: industrial overcapacity, high leverage, excess inventory (including in real estate), and pollution. In practice, Beijing prefers large, centrally owned SOEs to be responsible for securing and supplying basic commodities and strategically important inputs, including energy, metals, chemicals, grains, and shipping. Thus, Beijing has engineered a number of mega-mergers between the central SOEs in these fields. Further, as Beijing has sought to reduce excess capacity in sectors such as coal, steel and

[2] For the most comprehensive treatment of this issue, see Nicholas Lardy, *The State Strikes Back: The End of Economic Reform in China?* (Washington, D.C.: Peterson Institute for International Economics, 2019)
[3] Nicholas Lardy, "The State Strikes Back: The End of Economic Reform in China?," accessed February 4, 2019, https://piie.com/system/files/documents/lardy20190128ppt.pdf

aluminum, it has encouraged the largest players (typically SOEs) to acquire smaller firms (often private). These mergers often have the aim of creating industrial giants that are even larger in scale and at least theoretically more competitive; however, further bulking up sprawling SOEs could well lower their productivity and increase their market power at the expense of the private firms that operate downstream from them.

- **China's financial de-risking campaign,** launched in late 2016, has taken an even larger toll on private firms but with much less intention. The campaign has focused on shutting down channels of "shadow finance" in China, meaning "wealth management products" and other unregulated or opaque investment vehicles sold by banks and other financial institutions. The problem is that these same channels, while a potential source of systemic financial risk, are also a key channel of financing for private firms and especially SMEs. Banks have long preferred to lend to SOEs rather than private firms, especially in their formal loan books, since SOEs enjoy an implicit government guarantee; even if an SOE does default, the professional and political consequences for the loan officer are less serious than in the case of private firm. China's regulators are now using political pressure and a bevy of new financial instruments to try to encourage banks to lend more to private firms, but banks are especially afraid to do so in a climate of slowing growth and trade tensions with the United States (private firms account for most of China's exports).

The troubles faced by the private sector, especially in obtaining finance, have led to an increasingly loud chorus of alarm from entrepreneurs and economists that "the state is advancing while the private sector retreats," a reversal of a credo from earlier in the reform period. After many months of relative inaction, China's leadership realized in October that this state of affairs was weighing on business confidence amid a sharp slowdown in growth. Xi has recently made a number of high-profile statements in support of the private sector, and government agencies have unveiled a host of new measures and proposals to boost access to credit and lower costs (including through tax cuts). Beijing has also pledged to put private firms on a more level playing field with SOEs in areas such as regulatory treatment and legal protections. But there are no signs yet that Beijing is contemplating the legal and political reforms this would likely entail, including greater political independence for regulators and the court system.

b. Party Capitalism and the next evolution of "China, Inc."

The most significant political development in China under Xi Jinping has been the strengthening of party control across all major institutions in China. This was the dominant theme of the 19th Party Congress in October 2017, which kicked off Xi's second five-year term as China's leader. Xi's address to the Congress contained a key line that was also added to the CCP constitution: "Government, military, society and schools, north, south, east and west — the party is the leader of all."

Party control has major implications for China's state capitalism, and is playing out in two main ways:

First, tighter party control over the corporate sector. All SOEs have long been required to have party committees, but their role was often more about political education of party members than key business decisions. Since a wave of party building that began in late 2015[4], and an amendment to the CCP's constitution in November 2017, SOEs must now ensure that the party committee is consulted on major issues[5]. The party committee is not a "shadow" decision-making body, in that senior managers are already party members. Instead, the significance is to formalize the importance of the party's direction, such as adhering to rules against corruption. SOE executives face serious consequences if they fail to carry out key party objectives. Their career trajectories will suffer, since the party's organization department decides key personnel moves within SOEs. And for serious infractions they face discipline from the party's anti-corruption body.

A wave of party building is also taking place in private firms, especially in the aftermath of the 19th Party Congress, though their function is not as formalized as in SOEs, and the CCP's constitution does not specify a management or governance function[6]. Many private firms are advertising their party activities primarily to show ideological correctness. Tech companies have been particularly keen to send this message, especially as Beijing has cracked down on what it considers to be politically or morally incorrect content in video games, video streaming, and other forms of online content.

Party building is also impacting some foreign firms in China. Chinese joint venture partners (especially in the case of SOEs) are increasingly requiring amendments to corporate charters to elevate the role of the party committee in the JVs decision-making[7].

Second, the formalized role of party decision-making bodies, rather than government ministries and the State Council (cabinet), as the primary locus of economic policymaking. While the party has typically set economic policy at the highest level, under Xi Jinping the party has come to dominate policy formulation and even implementation, at the expense of the broader government bureaucracy. A key example here is the transformation of several of the party's "central leading groups" overseeing economic policy into more formal "central commissions" in March 2018. This streamlining has allowed Xi to more effectively shape policy but comes with the downside of policies that haven't necessarily been well-vetted by the bureaucracy. Beijing has also been using the anti-corruption campaign as a tool to force officials to comply with key policy directives. This has improved enforcement, including over initiatives such as environmental protection and financial deleveraging, but has also led to "over-shooting" as officials take draconian measures for fear of punishment.

With tighter political control, some room for modest economic liberalization

By having all players in China's system hew to the CCP's line, the leadership aims to channel all resources to accomplish strategic priorities -- whether those are economic (such as controlling financial risks, reducing excess capacity, and toughening environment protections) or political/geopolitical (such as combatting corruption, ensuring ideological correctness, and promoting the Belt and Road Initiative and other efforts to expanding China's influence abroad). Indeed, China's firms and other traditionally less political players in the system (such as universities) are increasingly quickly to promote their efforts to

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[4] See "CCP central committee and State Council's Guidelines on Deepening Reforms in SOEs" (in Chinese), August 24, 2015 : http://www.xinhuanet.com/politics/2015-09/13/c_1116547305.htm

[5] Jake Laband, "Fact Sheet: Communist Party Groups in Foreign Companies in China," *China Business Review*, May 31, 2018, https://www.chinabusinessreview.com/fact-sheet-communist-party-groups-in-foreign-companies-in-china/

[6] Laband

[7] Laband

back priority initiatives such as Belt and Road and Xi's poverty alleviation campaign and to stress their ideological correctness.

However, it would be misleading to characterize this trend as a return to central planning. From a practical perspective, Party control creates the political conditions for Beijing to -- at least in theory -- create more room for the private sector and to reduce administrative control over SOEs.

Xi Jinping's greatest aspiration for the economy, other than ensuring basic stability, is turning China into an innovation superpower. This is important to Beijing not only for purely economic reasons, but also for national security (reducing reliance on the US for critical technologies) and military competitiveness. It is not lost on Beijing that China's private firms are more critical to this task than SOEs. Private players such as Huawei, Alibaba, Baidu and Tencent -- rather than state-owned behemoths like China Telecom -- represent China's "national champions" in next generation areas such as artificial intelligence and its applications. Ensuring effective political control over private firms provides Beijing with the comfort to work in increasingly close partnership with them. Indeed, the internet giants are becoming deeply embedded in aspects of China's economic and even governance infrastructure, from the payment system to inputs into China's social credit system.

This is not to say that private entrepreneurs are necessarily seeking out this tighter embrace, which can become suffocating, but they face a difficult balance act given the importance of keeping up strong ties with regulators and other government officials. It is also important to note that Beijing's embrace of strategically important private firms has not translated to broader efforts to level the playing field for private firms against the state sector, such as by removing the direct and indirect subsidies and political protections that SOEs enjoy.

When it comes to SOEs, Beijing is combining tighter party control over these firms with reduced administrative interference in their operations. This is an effort to improve the financial discipline and commercial orientation of SOEs while ensuring their fealty to Beijing's key priorities. Significantly, the wave of party building within SOEs began in late 2015, just as Beijing began moving ahead with modest reforms to SOEs' corporate governance. These include providing more leeway to SOEs to make personnel and compensation decisions without approval from SASAC, the state agency that supervises SOEs, as well as "mixed ownership reforms" that invite private firms to take stakes in SOEs and (at least in theory) bring greater market savvy to their decisions.

In sum, party capitalism represents something of a gamble. In theory, it allows Beijing to work in closer partnership with dynamic private firms, and improve the commercial orientation of SOEs, all while maintaining political control and ensuring that these firms support the leadership's strategic priorities.

Will it work? Much depends on whether Beijing takes a light or heavy touch to the degree of political control it imposes over firms. But there are reasons to think that even under this new approach, state capitalism will continue to suffer from some of its existing drawbacks -- namely, inefficiency and low productivity because of political distortions (see next section).

Even if current SOE reforms provide SOE executives with more professional management and greater independence, these executives know that they will be evaluated on political objectives such as support for the Belt and Road Initiative, which may trump measures based on financial performance. Moreover, unless China reduces the implicit government guarantee that SOEs enjoy, these firms will continue to receive preferential access from China's credit system regardless of their financial performance, leading to continued misallocation of credit and capital.

The blurring of lines between state-controlled and private firms creates its own risks for the private sector. First, tighter political control over private firms could introduce *new distortions* in the behavior of these firms, much as we see with SOEs. Second, if political control is particularly aggressive, it could harm the confidence of private firms, who are already unsettled about the security of their property rights in China.

Finally, it risks exacerbating a growing trend in which private firms from China are increasingly viewed internationally as agents or potential agents of the Chinese state. This is one factor in the growing pushback against Chinese investment, particularly in Western countries. Increasingly, the perception is that the distinction between private companies and SOEs is meaningless.

Is this charge fair? In most contexts, private firms remain quite different from SOEs. They are profit-maximizing companies facing ruthless competition at home. But for cases involving national security -- such as reviewing a foreign investment in a sensitive technology -- it is hard for trading partners to completely dismiss the possibility that private firms are acting in part to accomplish China's strategic objectives. Such a judgement will often be wrong, but the bias towards suspicion is an unfortunate and inevitable byproduct of China's recent emphasis on party control over the private sector.

IV. Motivations of state capitalism: Costs and benefits for China

China practices its model of state capitalism for reasons that are a mix of political, economic, and geostrategic:

- **Rapid industrialization and modernization:** As noted above, the heavy hand of the state in China's industrial policies reflects the influence of Japan, Korea, and Taiwan during their "catch-up" periods of rapid industrialization. As with those states, China has used measures such as low-cost credit, protected markets, and a host of direct and indirect subsidies to promote favored firms and sectors. Given their close relationship to government ministries, SOEs have historically been the main recipients of these favorable policies.

- **Political and economic stability:** The state sector is a critical tool by which the CCP seeks to promote economic and political stability, the leadership's overriding concern. The most dramatic example came in the wake of the global financial crisis, when China launched its RMB 4 trillion ($590 billion) stimulus package in November 2008. The stimulus relied on China's state control of the banking system to finance infrastructure projects, most of which were in turn undertaken by local government-owned SOEs. The spending package cushioned China's economic growth (and global demand) during the crisis as exports cratered. But its excesses also exacerbated the debt risks and problems with industrial capacity that China is now grappling with.

- **Securing vital resources and promoting China's influence abroad:** SOEs dominate strategically important sectors in China such as energy and heavy industry, where Beijing has sought to groom national champions that have the scale and financial resources to compete internationally. SOEs, with their strong financial backing from banks and the government, are a key tool for China to acquire strategically important assets overseas, as well as to expand China's economic influence through high-profile investments in the Belt and Road Initiative.

How well has state capitalism actually worked for China? The country's economic achievements since the start of the reform period in 1979 have been remarkable, but economists debate the degree to which the various policies grouped under "state capitalism" contributed to this success. Most economists would agree that China's growth has been driven primarily by factors over which state capitalism had relatively little bearing, including: high-quality human capital (a starting point of high basic literacy, and then continued investments in education), a high savings rate (allowing China to finance long-term investments), and policies of liberalization/decentralization that have promoted entrepreneurship and gains in productivity (including mobility of labor from the countryside to urban areas). If there is one area where state intervention has played a key role in the growth model, it is in the use of state banks and state firms to finance and execute infrastructure construction. Infrastructure has generated significant benefits for China but is also a key factor behind an increasingly serious debt load.

From the standpoint of China's leaders, for whom political objectives matter as much as economic objectives, SOEs and top-down industrial policy have been a necessary part of the toolkit that China has used to secure its rapid growth without suffering from widespread economic or social instability or a diminution of the party's hold on power. The leadership views SOEs as essential arms and symbols of China's global influence, with 3 Chinese SOEs in the top five of the Fortune 500, and China as a whole -- again, mostly SOEs -- accounting for the second most firms on the list (120) behind the United States (126). While there is a significant debate in elite policy circles over the role SOEs should play in the economy, few in the leadership would suggest dramatically paring it back.

Is China's State Capitalism Sustainable?

China's economic growth suffers from major imbalances, including: high and rising levels of leverage; a continued reliance on investment as a growth driver, with consumption rising as a share of the economy but still below China's peers; and a slow transformation from a manufacturing-led economy to one driven by an efficient service sector. The state's heavy involvement in the economy is a key factor in these various imbalances:

- **High leverage and inefficient investment:** China's non-financial debt (260% of GDP) is among the highest in the world and has grown rapidly since the 2008-9 stimulus. Reducing this debt burden without a disruptive slowdown requires China to reduce the credit intensity of its growth -- that is, to require less credit to produce a unit of economic output. That, in turn, involves improving the allocation of credit and capital across the economy, of which state-owned enterprises represent perhaps the most significant challenge. SOEs are less efficient than private firms[8], but due to political distortions they receive an outsize share of credit from the banking system. The most serious corporate leverage problems are concentrated in SOEs[9].

- **Over-investment and under consumption:** Money that goes to support SOEs through direct and indirect subsidies could be better channeled to uses that support greater household consumption -- in particular, a further expansion of China's still under-funded social safety net. One example of an indirect subsidy is the fact that SOEs retain a large portion of their profits rather than paying them out to their government shareholder, a dynamic that also contributes to SOEs' tendency towards over-investment. Beijing is forcing SOEs to pay out a greater share of dividends to the government budget, where they can fund much-needed social spending, but payout ratios are still below international norms.

- **Slowing productivity growth:** China's growth model, especially over the last ten years, has relied on mainly on increasing the capital stock (investment in infrastructure and manufacturing) and population growth, with a small and shrinking role for total factor productivity (TFP). Boosting the role of TFP will be vital, given that the other two main inputs to growth face serious headwinds: fixed investment is running into the constraints of high leverage, while China's working-age population has already started to decline in relative and absolute terms. Accelerating productivity gains will require channeling more resources away from SOEs to private firms, as well as breaking down the monopoly of SOEs in key sectors of the economy, especially in the highly protected services sector.

The longer China takes to resolve these imbalances, the more vulnerable it is to an external shock (such as another financial crisis) or internal shock (such as major downturn in the property market). While China's government likely has enough policy tools to avoid a hard-landing in the next several years, it is at significant risk over the medium term of entering a period of Japan-style stagnation, in which banks and corporates are encumbered by high levels of debt in the economy, and a lack of productivity gains saps potential growth.

State capitalism is likely significantly lowering China's potential growth. Nicholas Lardy estimates that "the deteriorating productivity of SOEs and the squeezing out of private investment is reducing China's growth by an estimated 1.6 to 2.0 percentage points annually.[10]" Similarly, the IMF estimates that China would boost its medium-term GDP growth by about 1 percentage point per year, relative to a baseline scenario, if it implements a reform agenda that features SOE reform and progress closing "zombie firms.[11]"

The political logic of state capitalism makes it unclear whether growing economic pressures would be enough to drive major reform. In the late 1990s, China pushed through a series of politically contentious reforms to SOEs that closed many of the most inefficient firms. But the leadership has also been inclined

[8] Private firms had a return on assets that was an average of 7 points higher than SOEs in 2014-2017. See International Monetary Fund, "People's Republic of China: Staff Report for the 2018 Article IV Consultation", 50.
[9] In 2017, industrial SOEs carried a debt-to-equity ratio of 152%, compared to 107% for industrial private firms. See IMF, 50.
[10] Lardy, 17.
[11] IMF, 30.

to further rely on SOEs to prop up growth, as it did during the global financial crisis. The last 2-3 years of slowing growth and leverage issues have seen both dynamics at work. Beijing has become more serious about closing inefficient SOEs at the local level but has also relied more heavily on SOEs to boost growth as private sector investment has slowed.

In sum, state capitalism provides significant economic, political and geopolitical benefits to China's leadership, but is also responsible for increasingly serious imbalances in China's growth model. Without a serious growth crisis, which is difficult to predict, the balance of factors suggest that Beijing is unlikely to make wholesale changes to the state's role in the economy anytime soon.

V. What is State Capitalism's Role in Promoting Innovation?

With China's leadership intensely focused on making China an innovation superpower, the state is deploying multiple lines of effort to achieve this task. Some efforts, such as funding basic research and expanding China's cadre of highly trained scientists and engineers, are similar to those in the United States and not "state capitalist" in nature. But China frequently also employs a host of top-down industrial policies to decide which specific firms, technologies and standards should receive support, and then coordinates efforts to give these firms/technologies an advantage in the domestic or global marketplace.

The most well-known of these industrial plans is the Made in China 2025 initiative, a key focus of the US's Section 301 investigation but also of concern to a wide set of China's trading partners, particularly Germany and Japan. The initiative, officially launched in May 2015, sets out a host of policies for central and local governments to help domestic firms grab global market share in 10 key industry sectors. Another example is the China National Integrated Circuit Industry Investment Fund, set up in 2014, which aims to reduce China's dependency on foreign companies (particularly the United States) in semiconductors. But there is a long history and long list of other active policies that aim to directly promote "indigenous innovation" in various fields of technology.

How effective are such policies? This paper won't attempt a rigorous answer, but stylized facts and observations support a general supposition: industrial policies are often far less effective than advertised and can be a highly inefficient approach to promoting breakthrough innovation. Among the key arguments:

- Cross-country experience -- including from Japan and South Korea -- suggests that government bureaucrats can do a reasonable job of "picking winners" during a catch-up period, but that this becomes increasingly difficult as technologies move to the cutting edge; not only do technological issues themselves become more complex, but there is no existing market to test which firms/technologies are most competitive. With China increasingly focused on dominating frontier technologies such as quantum computing and advanced semiconductors, there is ample room for the government to place expensive bets on the wrong horse. The Made in China 2025 initiative and National IC Fund are part of a broader agenda of import substitution policies, reflecting Xi's growing concern with "self-reliance" in technology. But without the discipline of competition with foreign products, import substituting policies may be more likely to suffer from rent-seeking and capture by domestic firms.

- Several academic studies show that political distortions undermine the effectiveness of innovation subsidy programs in China. Wei, Xie and Zhang found that subsidy allocation is highly biased towards SOEs, despite private firms being more innovative[12]. Another recent survey concluded that "the firms that receive innovation subsidies do not have higher productivity, more profits, or larger market shares. Overall, the results point to inefficiency of allocation of innovation subsidies and show that the subsidies encourage only incremental innovations and not radical ones[13]."

- Finally, and most impressionistically, it is not uncommon to hear Chinese officials and economists voice skepticism about whether China's past industrial policies have been effective in competitive sectors -- especially when compared to the bottom-up innovation from private firms.

None of this is to say that China is not becoming more innovative, only that the sources of industry-leading innovation may be more likely to arise from the broader inputs in China's innovation ecosystem -- including talented scientists and engineers, an entrepreneurial ethos and thriving venture capital scene -- than top-down industrial policies.

However, China's innovation and industrial policies don't need to be successful to represent a cause for concern for the United States and other trading partners. One of the key concerns of US and European industry is that China's industrial policies, including extensive subsidies on non-market terms, lead to over-investment and excess capacity, with Chinese producers flooding global markets with exports. Solar photovoltaics (PVs) are a prime example. Extensive subsidies helped Chinese firms grab market share from US and European firms, who found it difficult to compete on pricing as the sector suffered from significant overcapacity in 2009-2013. Support from state-owned banks helped many Chinese producers stay afloat and emerge with a dominant role in the market. In 2018, China announced extensive cuts in subsidies to solar PV firms to cope with yet another bout of overcapacity.

Major trading partners fear that the Made in China 2025 and other industrial policies will create a similar dynamic in a broader array of high-tech industries, ranging from semiconductors to industrial robots. Local governments in China are using "government guidance funds" to invest in projects favored by Beijing to hit political and economic targets. For example, European think tank MERICS added up planned investments in production by local governments in the automation sector and found that the total far exceeded projections for the size of China's market in coming years[14].

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[12] Shang-Jin Wei, Zhuan Xie and Xiaobo Zhang, "China's Transition to a More Innovative Economy: Progress and Challenges," in China's New Sources of Economic Growth: Vol. 2 (edited by Ligang Song, Ross Garnaut, Cai Fang, Lauren Johnston), July 2017.
[13] Hong Cheng, Hanbing Fan, Takeo Hoshi, Dezhuang Hu, "Do Innovation Subsidies Make Chinese Firms More Innovative? Evidence from the China Employer Employee Survey," NBER Working Paper No. 25432, January 2019.
[14] Jost Wübbeke, Mirjam Meissner, Max J. Zenglein, Jaqueline Ives, and Björn Conrad, "Made in China 2025: The making of a high-tech superpower and consequences for industrial countries" (Mercator Institute for China Studies, December 2016), 25, https://www.merics.org/sites/default/files/2017-09/MPOC_No.2_MadeinChina2025.pdf

While such concerns about overcapacity are a key theme of the US Section 301 investigation, messaging by the US government could be more effective in highlighting this point -- especially in China. The author has been in numerous meetings in which Chinese officials and economists claimed that the US is overly concerned about the likelihood that the Made in China 2025 initiative succeeds, not realizing that the US and other trading partners are also concerned about expensive failures that depress global markets.

Another concern with state capitalism and innovation is that Beijing will use its influence over domestic firms, its market size and its diplomatic heft to promote global standards that benefit China -- even when these solutions are not necessarily best-in-class. The process of standard-setting in 5G has become intensely geopolitical, with Chinese firms, at Beijing's urging, playing a highly active role in ensuring that China controls key standards and is not left dependent on licensing foreign technologies, as was the case with 3G and 4G[15]. The political pressure on domestic firms to "back the home team" spilled out into public view in 2018, when Lenovo chairman Liu Chuanzhi issued a public statement pushing back on criticism online that Lenovo had been "unpatriotic" by allegedly not voting for a 5G standard promoted by Huawei[16].

In sum, China's top-down industrial policies may not be highly effective in promoting innovation -- at least relative to the hype in China as well as overseas. However, the US and other trading partners will face risks even from unsuccessful policies, including the potential for over-capacity to depress global profits, and for Beijing to use its influence to promote standards that advantage domestic firms at the expense of open global competition.

VI. International pushback against China's State Capitalism

Pushback against "China Inc." is leading to growing trade frictions

China's state capitalism is not inherently unfair -- it is a choice of economic model that China is entitled to make. The unfairness comes from its interaction with a trading system that is designed for an economic model in which state support is less extensive and more transparent. In this environment, companies competing on commercial terms and without state support stand to face an unlevel playing field.

The conflict between these two systems was politically and economically tolerable when China was a smaller economy. But tensions are growing now with China's economic importance and the surge in China's overseas investment over the last decade. 2018 marked a tipping point in this pushback among developed countries.

In the United States, the Section 301 investigation directly targets China's industrial policies and the unique challenge posed by state capitalism. USTR's focus on forced technology transfer, for example, reflects the concern that when US companies enter joint venture agreements in China, they are negotiating as individual companies against a Chinese government that is intentionally seeking to

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[15] See "Eurasia Group White Paper: The Geopolitics of 5G," November 15, 2018

[16] See Fan Liya, "China's Tech Luminaries Back Lenovo Amid Public Backlash," May 18, 2018 https://www.sixthtone.com/news/1002303/chinas-tech-luminaries-back-lenovo-amid-public-backlash

acquire valuable US intellectual property, and willing to hold back market access to compel this action. In such a circumstance, US firms will make decisions that are profit-maximizing for the firm in the short term but pose long-term damage to US economic competitiveness and even national security.

Likewise, recent US legislation to tighten CFIUS (FIRRMA) and export controls (ECRA) are motivated in part by a similar logic: China's state system is using all avenues to acquire US IP, requiring a significantly stepped up level of protection. Whether a firm is state-owned or private is increasingly meaningless to US regulators in this context, a shift triggered in part by several episodes in which China has used venture capital funds and other non-state players to attempt acquisitions in sensitive areas, even when the funding ultimately comes from the state.

In the last year, several other major trading partners have announced actions or proposals to tighten investment restrictions against China. A common theme is similar concern that China is acquiring key firms and technologies to further broader industrial policy goals. Notable developments include:

- Under a new legal framework, Germany blocked a Chinese acquisitions on national security grounds for the first time, and proposed to lower the threshold for such investment reviews from 25 to 15 percent;
- The UK proposed to establish a new framework to review transactions on national security grounds, a move reportedly targeted mainly at China;
- France is also proposing to establish new hurdles to foreign investment in strategically important sectors;
- The European Parliament is considering legislation, driven by France and Germany, that would harmonize how individual EU states approach investment reviews to close loopholes between member countries.

Ripple effects - proliferating industrial policies?

These moves may well be appropriate responses to the unique challenges posed by China, but it still important to note that there are potential risks or unintended consequences whenever such barriers are imposed. In the case of the United States, tariffs, investment restrictions, and export controls -- unless implemented carefully -- have the potential to hurt the competitiveness of some US firms, potentially undermining a longer-term objective of preserving a lead in strategically important areas of technology. New barriers erected by other countries to safeguard "strategic investments," even when initially targeted at China, could be used to block investments by the US or other trading partners.

Indeed, as countries react to the state capitalism in China, they are taking steps that look increasingly like full-scale industrial policies. The Federation of German Industries (BDI) recently released a detailed set of recommendations urging a more proactive response to countering Chinese policies, including promoting mergers to create European champions with the scale to compete against China. BDI charged that China "is establishing its own political, economic and social model," which Germany and the EU cannot ignore. EU regulators were not persuaded by this logic in the specific high-profile case of a proposed merger between Alstom and Siemens, which BDI argued was necessary to compete against Chinese SOEs in rail. However, the notion that governments must take a stronger hand in creating or strengthening national champions appears to be gaining momentum in Germany and France.

If this trend becomes pronounced, it could have significant implications for the global economy and free trade and investment. National champions will come under increasing protection from host governments, and more ambitious and interventionist industrial policies may proliferate. Such moves could exacerbate existing strains in the current multilateral trading system (discussed below).

Even the US is moving closer to practicing industrial policy as a response to China, if not in name. Policies to "decouple" from China in critical areas of technology almost by necessity end up requiring greater amounts of state intervention than the United States is used to. With new export controls, the US government is now deciding whether cutting-edge areas of innovation, such as AI, can be exported overseas. When the US government blocked the attempted acquisition of Qualcomm by Broadcom, citing national security grounds, one justification seemed to be the need to preserve Qualcomm as effectively the US "national champion" in 5G, given concerns about China's growing dominance and the national security threat this poses.

Risks to the WTO

A common theme in the above responses is that national governments believe that China is taking advantage of the standard rules-based trading system, which was never intended for a system of state capitalism like China's. This same concern is leading to growing doubts about whether the WTO is "fit for purpose" in dealing with China's unique circumstances. Harvard law professor Mark Wu takes the pessimistic view that WTO members will likely not rise to the challenge of reforming the WTO in response to the dilemmas posed by "China, Inc.[17]". He concludes that "the most likely outcome is one in which China's rise will exacerbate the diminishing centrality of WTO law for global trade governance."

Wu draws this conclusion partly due to the political difficulty of convincing China to approve reforms that it will almost certainly view as harmful to its interests. Wu also notes the danger that as other WTO members become more frustrated with China's policies, they will simply go outside the WTO in addressing these concerns. Indeed, the Trump administration has its foot in two camps regarding China and the WTO. USTR is working with the EU and Japan to promote reforms in the WTO that would close some of the key loopholes that China falls through, such as subsidies provided by SOEs. At the same time, the Trump administration is taking unilateral trade actions -- including under Section 301 as well as Section 232 -- that reflect a dim faith in the WTO as an institution equipped to deal with China, and which threaten to hurt the WTO's legitimacy.

VII. Conclusion and Policy Recommendations

The discussion above is meant to place China's state capitalism in the context of China's political system, economic model, and role in the global economy. China's state capitalism has evolved considerably over the reform period and will continue to do so. Economic pressures on China, as well as growing international pushback against aspects of state capitalism, could both be important factors in this evolution. However, given the strong political logic for state capitalism from the standpoint of China's

[17] Mark Wu, "The 'China, Inc.' Challenge to Global Trade Governance," *Harvard International Law Journal*, 57, no. 2 (Spring 2016), http://www.harvardilj.org/wp-content/uploads/HLI210_crop.pdf

leaders -- such as the use of SOEs to stabilize growth and employment and spread China's influence overseas -- one shouldn't assume that even strong pressures will lead to a wholesale shift in policy.

The discussion also pointed to some of the key challenges that China's state capitalism poses to the United States and other key trading partners, especially as China continues to rise as an economic power and innovation leader. These challenges are both direct -- in the form of policies such as forced technology transfer -- as well as indirect, such as the risk of a less effective and legitimate WTO.

The key challenges for the United States are:

- An unlevel playing field, as individual US companies compete against Chinese companies that benefit from extensive direct and indirect state support, including a protected market at home. These have longer-term consequences for US competitiveness against China and in some cases national security.

- The risk that over-investment in China because of top-down industrial policies will create over-capacity, hurting the financial viability of US companies involved in key areas of technology, such as semiconductors.

- The potential for China to use its influence over Chinese firms, and its diplomatic and economic heft, to shape global industry and technology standards in ways that benefit China at the expense of open global competition.

The key challenges for the global economy and trading system are:

- The likelihood of growing trade and investment barriers directed against China, some of which could have spillover effects that impact global growth and US growth.

- The potential for a proliferation of industrial policy and "national champion" policies in response to China's state capitalism.

- The danger that the WTO fails to address the unique challenges of China's state capitalism and declines in its effectiveness and legitimacy.

And finally, state capitalism poses risks for the sustainability of China's economy:

- The potential for continued political distortions to slow China's progress in rebalancing and deleveraging, increasing the risk of an eventual hard-landing and/or stagnation.

- The potential for political pressure to weaken the performance and confidence of private firms, as well as limit their ability to invest overseas due to perceptions that even private firms are acting as arms of the Chinese state.

Recommendations for the United States

The United States has several policy tools to address aspects of China's state capitalism -- ranging from the unilateral tariffs and investment/export restrictions that the Trump administration has imposed to a more multilateral and engagement-focused approach favored by past administrations.

Before reaching for specific policies, however, the United States should consider its longer-term strategy for dealing with China's state capitalism -- questions that the US of course cannot separate from its broader strategy towards China. What are the specific problems with state capitalism that the US is trying to solve? The US strategy towards China should have three main elements:

(1) Work with allies on a multilateral framework that closes the loopholes from state capitalism. The Trump administration deserves credit for several aspects of its trade strategy with China. It has recognized the need to take a new, more assertive approach with China on issues of long-standing concern. It has rightly focused on innovation and industrial policy as the most important issues to resolve with China. And the Trump administration has pinpointed some of the specific challenges posed by state capitalism, such as the political conditions that compel US companies to transfer valuable IP as a condition of market access in China.

However, the administration has focused too heavily on using tariffs to compel change in behavior from China, and not enough on working in concert with allies. A key drawback to tariffs as a strategy is sustainability: while tariffs might force China to make concessions in the short-term -- even this is open to question -- Beijing could well resort to past practice as soon as the pressure is off. The other shortcoming is that, as we have seen, different responses to China's state capitalism threaten to create new barriers in markets outside of the US, legitimize activist industrial policies, and undermine the confidence and effectiveness of the WTO. None of these are in US interests.

The only sustainable approach to addressing the problems with state capitalism is to work with like-minded countries to update the rules of the trading system and make it less vulnerable to an unfair advantage from state capitalism. While the administration has made some important efforts in this area, such as the trilateral working group on WTO reforms formed with Japan and EU, such efforts would be more effective if the US settled ongoing -- and far less consequential -- trade disputes with those partners, reaffirmed US commitment to the WTO as an institution that upholds market capitalism, and led robust reform of that institution to take on state capitalism and other 21st century structural challenges to global trade. In kind, the US should look to re-engage CPTPP and other multilateral trade agreements that provide platforms to address some of the most problematic Chinese trade policies; CPTPP, for example, contains groundbreaking provisions in areas related to SOEs, and is the only agreement to establish benchmark rules for the digital economy.

(2) Develop a cohesive strategy to maintain economic competitiveness against China -- and, as necessary, "decouple" in some areas. This approach to meaningfully work must tie in US domestic innovation goals and be based on both sound science and concrete economics. As noted earlier, an irony of the US policy response to China's state capitalism is that the US is now taking a more interventionist role in trade and investment policy -- deciding which US industries should be exempted from tariffs on China, and which technologies US firms should be allowed to export. Indeed, one aspect of US tariff policy is to encourage US companies to remove supply chains from China. These policies may be legitimate responses to the threat posed by state capitalism, but the US is effectively practicing industrial policy without naming it, absent a debate or coherent strategy such a shift in policy should involve.

For example, US tariffs are hurting the international competitiveness of US firms in several sectors, including technology. Unless done carefully, this approach risks undermining one of the key objectives of this policy, ensuring the viability of US firms in strategically important sectors. The same could be said of export control lists now under development, as well as US visa restrictions on Chinese citizens in STEM fields; these policies may be justified for national security reasons, but the US risks depriving itself of sources of innovation that ultimately strengthen the US economy.

US domestic policies to promote innovation and strengthen the global competitiveness and appeal of US products and technologies don't appear to feature in the overall US strategy with respect to China, at least outside of military-funded programs. This will need to change if the US is going to be able to compete with China, especially in the innovation-intensive, high-value and fast-moving strategic sectors. China's top-down industrial policies may be highly inefficient, but its dynamic private sector has already pulled even with the US, or even ahead, in some areas of AI and other technologies. There is much more that the US can do at the national level to promote coherence in domestic innovation programs and ensure their consistency with broader trade and national security policies toward China.

(3) Continue a results-focused approach with China, but don't dismiss the value of engagement. It is not practical to think that the US can move from China off its fundamental political and economic model. That model could change, but it is unlikely to be on account of US pressure. At the same time, this does not mean that the US should give up engaging with China directly on policies that the US finds problematic for the US economy and legitimacy of the multilateral trading system. The United States doesn't need to be naïve in believing that such engagement alone will be effective, but engagement does inform Chinese views. Recent US messaging on trade and technology issues has made it too easy for hawkish voices in China to paint US objectives as efforts to contain China, rather than as legitimate grievances about policies that harm the US economy and support for open trade and investment. That perception is hurting the ability of the two sides to reach agreement on key technology issues.

The US may be able to leverage a burgeoning debate in China over the structural problems facing the domestic private sector. Some Chinese officials have proposed establishing a clear principle of "competitive neutrality" in China to put SOEs, private firms, and even foreign firms on an equal footing. Such a proposal won't resolve the fundamental barriers that US firms face in China, but it is at least a debate worth encouraging.

Recommendations for Congress:

(1) **Ensure adequate funding, and insist on ample resourcing, for US agencies that track China's industrial policies.** China's industrial policies are extremely difficult to track. The central government and local governments release a flood of documents in a given month, and the ultimate impact of these policies often can only be gleaned through consultations with industry experts. New initiatives that appear significant may be largely hype, while esoteric industry regulations -- such as over cybersecurity -- can have a huge impact on US industry. Congress

should ensure that US agencies have the resources to effectively track these issues, identify the challenges posed to the US economy, and develop strategies to address them.

(2) Consider establishing an independent expert advisory board that evaluates innovation challenges from China, based on national security, economics and technology. US agencies are parsing through the complex issues posed by China's innovation and industrial policies, but these are deeply complex and require an understanding of technology, national security, and industry economics. There would be high value in bringing together a body of independent experts from industry, academia and the national security community to evaluate tough questions on a periodic basis. Which areas of China's advances should be worrying to the US, and which are more benign? How should US academia and industry work together to ensure competitiveness with China in frontier technologies? Would placing a certain technology under export controls hurt US innovation more than protect it? If the US decides to replace certain Chinese inputs into supply chains, does the US have the technical know-how and resources to provide substitutes?