



Integrating Infrastructure in U.S. Domestic & Foreign Policy: Lessons from China

Sadek Wahba
Development Research Institute, NYU
St. Antony's College, Oxford University

ABSTRACT

Infrastructure policy is generally regarded, and managed, as an element of domestic policy. But an examination of U.S. foreign policy in the post-WWII period, and of China's foreign policy in the period starting in the 1980s, demonstrates that infrastructure policy has played a significant foreign policy role, greatly expanding the influence of each nation, and enhancing its international standing during such periods of expansionism. However, in recent decades – since 1970 – the U.S. and China have found themselves on divergent infrastructure policy paths. While China has aggressively invested in and built infrastructure both at home and overseas, the U.S. has essentially withdrawn from systematic investment in infrastructure, leading to the decay of physical infrastructure at home and a coincident loss of economic influence on the international scene. This paper examines the reasons that U.S. and Chinese infrastructure policy have diverged. It discusses the economic benefits of infrastructure investment and more specifically explores the economic factors governing infrastructure export, arguing that China's infrastructure expansionism is driven as much by economic considerations as by global ambitions. It explores the factors that have combined to limit U.S. infrastructure investment over the past 50 years. Finally, it argues that lessons drawn from China's integration of domestic infrastructure policy with foreign policy provide a model for a new U.S. infrastructure policy approach. It suggests a new framework by which to re-establish robust investment in U.S. infrastructure and to place infrastructure policy at the center of U.S. global engagement. By greatly expanding the scope of U.S. infrastructure investment to include private funding from the U.S. and abroad, and by returning to its post-WWII stance of aggressively exporting its infrastructure capability, the U.S. can, the paper argues, establish an effective counterweight to China on the global stage and secure a stable investment stream independent of limiting political factors to rebuild U.S. infrastructure for the 21st Century. Finally, it suggests that the infrastructure arena might be a basis for an engagement with China that could benefit both economies.

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“If we don’t get moving, they are going to eat our lunch,”
President Biden to senators in a White House meeting on China and infrastructure investing,
February 12th, 2021

Introduction¹

Among the multitude of challenges confronting the Biden administration, two of the most significant – the U.S. infrastructure crisis and an effective China policy – would seem to be separate and distinct. The first challenge concerns our ability to upgrade our crumbling infrastructure and once again accelerate American productivity growth for the coming decades. The second addresses Secretary of State Blinken’s “biggest geo-political test of the 21st century” (De Luce et al., 2021). But as President Biden said when meeting with senators to discuss U.S. *domestic* policy, “China will eat our lunch.” The question is: what has China to do with the state of our own infrastructure? If they are linked, how so? And what should be our approach? This paper argues that these two existential challenges are deeply intertwined and that an approach that links both can provide a lasting solution to revive our *domestic* infrastructure and at the same time help integrate global infrastructure as an instrument of a long-term sustainable *foreign* policy, especially towards China.

Over the past four decades, China has emerged as the leading investor in infrastructure. Since 1980 it has maintained the highest rate of infrastructure investment as a percentage of GDP of any nation. Outside of its borders, China’s “infrastructure industrial complex,” consisting of construction companies, corporations and manufacturers engaged in infrastructure sectors, has been involved in over \$1 trillion in infrastructure projects, higher than any other nation. Since 2013, China has extended over \$600 billion in infrastructure-related loans, in comparison to \$490 billion extended by the World Bank, Asia Development Bank (ADB), African Development Bank (AFDB) and the Inter-American Development Bank (IADB) combined (Report Linker 2019). China’s ability to deploy such capital and know-how is the result of an unrelenting focus on

¹ This paper defines infrastructure to cover assets in specific sectors such as energy (including power generation, renewables, midstream) utilities (such as electric transmission and distribution, wastewater), transport and logistics (such as roads, bridges, ports, logistical supply chains), digital (such as fiber optic cables, data centers) and social infrastructure (such as regulated health care and educational facilities).

domestic infrastructure since the economic opening of the 1980s, which over the ensuing decades allowed China to export its infrastructure industry globally.

While many have argued that China's expansionist global infrastructure investment strategy is a key element of their aim for "geopolitical dominance," the reality may be more grounded in economics. As China invested in its own infrastructure, it developed an extensive network of industrial companies in such fields as construction and manufacturing, as well as technologies to serve their new domestic infrastructure needs. One must remember that by the early 1980s, China had emerged from the Cultural Revolution with highly diminished professional cadres. The infrastructure boom was thus accompanied by the creation of new technical universities, engineering departments and research centers to support that vast expansion program. As the positive multiplier effect of infrastructure investment on economic growth started to diminish, it was natural that after a 30-year infrastructure spending boom (1980-2010), the Chinese infrastructure-industrial complex would seek new markets, just as the U.S. military-industrial complex (to cite President Eisenhower's term) did in the years following the Second World War. China began to win major international contracts for their construction companies, and to export their domestically manufactured power generation turbines, new rail systems and container port cranes, to name a few. It is no coincidence that the Belt and Road Initiative (BRI) and the Asian Infrastructure Investment Bank (AIIB) were created shortly after the global financial crisis of 2008, which brought a relative slowdown in its infrastructure boom. That the China Communist Party (CCP) leveraged that economic reality to integrate infrastructure investment in its global foreign policy is not in question; but it should also be remembered that China's economic imperative is long-term sustainable growth for over 1.4 billion people, over half of whom, up until a few decades ago, lived below the poverty line.

In contrast, U.S. infrastructure in the same period moved in the opposite direction. There has been a significant secular decline in U.S. infrastructure investment in the last forty years. Since 1980, when China started to invest massively in infrastructure, U.S. infrastructure investment never exceeded 1% of GDP. Our ability to export infrastructure expertise through construction companies, engineering and manufacturing firms was slowly eroded because of the fundamental weaknesses in the domestic infrastructure market, which consequently put U.S. infrastructure-related industries at a considerable disadvantage.

In this paper, I argue that a more objective examination of China's global infrastructure policy, combined with our urgent need to rebuild our own

infrastructure, should lead to a new U.S. infrastructure era akin to what China has achieved in the last forty years. This should be intricately linked to an internationalist infrastructure strategy that would enhance U.S. standing globally and in turn generate foreign direct investment in our domestic infrastructure. It is also possible that this new approach could open the door to co-opetition with China on infrastructure investments both domestically and internationally.

A Tale of Two Economies: Infrastructure Investment in China and the U.S.

Infrastructure Investment and Economic Growth

Economic theory has established the link between public spending and economic growth, starting with Arrow (1970) and more recently in the context of the new growth theory by Barro (1990) and others. The basic premise is that public spending on infrastructure has a positive effect on economic growth, but the extent of that impact will depend on a series of factors, including the relative size of public spending and, by implication, the state of economic development. Put simply, higher spending has a positive effect; too much spending starts having a diminishing effect. When too much spending occurs, capital is deployed in less productive assets and crowds out other sources of capital, so that economic growth is impacted. The result is that measuring the effect of infrastructure investment on economic growth becomes more of an empirical question, with the answer dependent on the country's stage of economic development, the mechanism by which infrastructure is funded (taxes, private or foreign investment) and delivered, and the institutional decision-making process, to name just a few of the parameters. A recent report by the IMF re-affirms the importance of public investment on economic growth and the case for scaling up investment especially during a recovery period (IMF 2020). In the U.S., the relationship between infrastructure and economic growth has been extensively studied. The early pioneering work conducted by Aschauer (1989) demonstrated a clear positive link between public spending and economic growth. Aschauer's work in turn generated a new area of empirical research, mostly statistical to capture the exact causal link between economic growth and infrastructure spending (see Munnell 1992) and more recently to examine the role infrastructure investment plays in reducing income inequality and absolute poverty (see, for example, Calderon and Serven 2014 and Tilmisina et al. 2020)². Several studies have been generated at the country- and cross-country levels to analyze the impact of infrastructure on economic growth. Recent studies such as Bivens (2017) confirm

² Interestingly, most of the studies analyzing the relationship between income inequality/poverty reduction and infrastructure investment have focused on emerging economies (for an excellent panel data analysis across states, see Hooper 2017). The new Biden infrastructure plan has correctly identified the link between the two, but regrettably little prior research from academia and policy centers have been conducted on that topic. This should be a subject for extensive research in the coming years.

that infrastructure investment can boost U.S. economic growth. He suggests that every \$100 billion in infrastructure spending can boost GDP by up to \$150 billion. This increase in GDP could increase employment by an additional 1 million workers.

The main challenge in the U.S. is the way infrastructure investment is delivered and the short-term focus by multiple administrations and U.S. Congress on “shovel-ready” projects – that is, projects for which permits have already been secured and funding soft-circled, so that construction can begin quickly once funding is fully secured. During a recession, an administration is typically eager to spend on infrastructure as fast as possible, to generate an immediate stimulus effect, otherwise long-term infrastructure investments would come too late in the recovery cycle, coinciding in turn with higher growth rates and therefore higher inflationary pressure. This concern has been a main reason that ambitious infrastructure investment programs touted by successive administrations never fully materialized and did not have any long-term impact. As Bivens (2017) argues convincingly, even with the American Recovery and Reinvestment Act (ARRA) of 2008, infrastructure spending represented only 15% of the plan, since the focus was on “timely, targeted and temporary” shovel-ready projects.³

There has been particular attention to the impact of infrastructure investment on China’s economic growth. Most often, studies show a positive correlation between infrastructure and GDP growth as well as a positive effect on poverty reduction and income inequality (Tilmisina 2020). While there is no question that the early investment in infrastructure in China was vital for China’s economic development (essentially there was no infrastructure to speak of when China opened up in the 1980s), 40 years later, the assessment of *continued large* spending on infrastructure is mixed. Campbell (2016) reviews China’s infrastructure investments in the context of its pivot strategy towards Asia, and notes that while impressive, many of the investments have come at considerable expense and could ultimately “destabilize the country’s financial system... stunting China’s growth.” Shi et al. (2017) find that, “More infrastructure is not always better, too much investment in infrastructure can even be detrimental to growth.... More public infrastructure may yield diminishing returns if pushed too far. The returns may even become negative if infrastructure investment crowds out private sector activity. This ‘crowding out effect’ may take a variety of forms. First, preferential lending for government-supported infrastructure projects can lead to inefficiency in resource use when projects are not subject to market discipline. Second, development of infrastructure can drive up the cost of inputs and cause

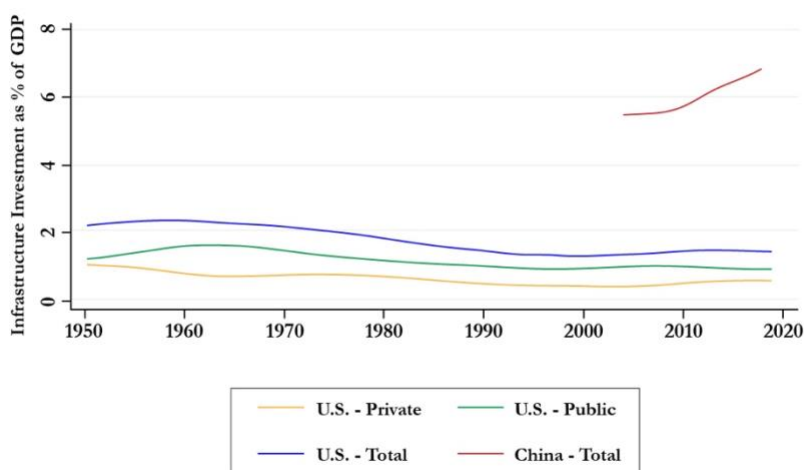
³ In contrast, the Biden infrastructure plan has recommended investing in infrastructure over an eight-year period precisely to avoid focusing only on short-term immediate imperatives.

dislocations.... Third, for road infrastructure, beautiful roads with no traffic or accompanying private sector development do not yield productive outcomes. Moreover, for road infrastructure, building one road may be productive, but building more may largely divert existing traffic... [and] fourth, lagging regions may lack the absorptive capacity to take advantage of large amounts of infrastructure investment.” Some recent field studies have shown that infrastructure projects may not have generated the type of benefits identified earlier (see, for example, Banerjee et al. 2020). However, domestic infrastructure investment as a percentage of GDP continues unabated, with large programs underway in the airport sector, renewable energy and digital infrastructure to name a few.

China and U.S. Infrastructure Investment 1980-2020

By a variety of measures, starting around 1980, China sharply increased its infrastructure spending as a percentage of GDP. In the U.S., infrastructure spending has fallen sharply and steadily since 1970. The following chart shows the percentage of infrastructure investment to GDP for both the U.S. and China.⁴ The graph shows a steady decline in the U.S. and a massive increase in China. While the U.S. started with an extraordinary capital stock resulting from the massive infrastructure spending programs of the 1950s and 1960s, China caught up and has never looked back.

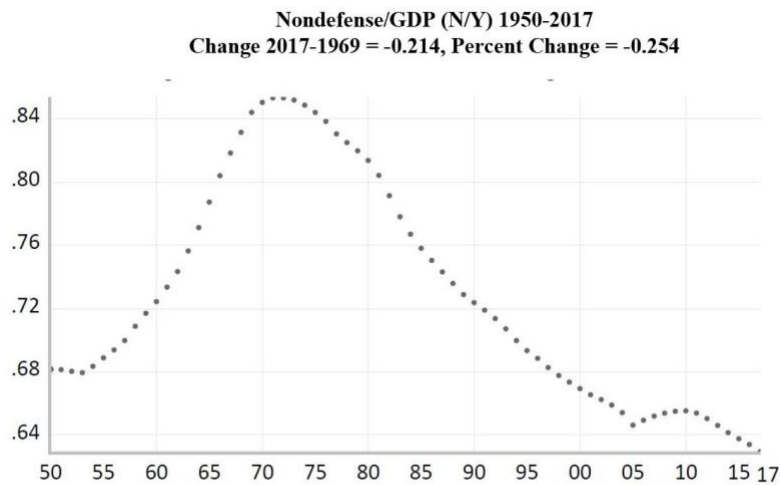
Infrastructure Investment as Percentage of GDP: U.S. and China, 1950-2020



(China Statistical Office and Bureau of Economic Analysis)

⁴ While exact data prior to 2000 that has the same definition of U.S. infrastructure investment is not readily available, various data points confirm the high percentage of GDP going to infrastructure in the 1980s and 2000s. For example, infrastructure investments are estimated to have been over 4% in 1980 compared to less than 1% in the U.S. and, by some measures, infrastructure investments in China were over 16% of GDP in 2010 (China Statistical Office).

Why the U.S. decline? Fair (2019) suggests that, “Infrastructure as a percent of GDP began a steady decline around 1970, and the government budget deficit became positive and large at roughly the same time. The infrastructure pattern in other countries does not mirror that in the United States, so the United States appears to be a special case. The overall results suggest that the United States became less future-oriented beginning around 1970.”



(Bureau of Economic Analysis, cited in Fair, 2019)

As the chart above shows, (see Figure 4 in Fair 2019) this decline has accelerated dramatically in recent years and in fact never exceeded 1% of GDP, and in the last decade has been less than 0.5%⁵. According to Kane and Tomer (2020), the U.S. entered an “era of repair and replacement,” not of new construction.

In contrast, during that period, China went from consuming 151 KWh per capita in 1971 to 2900 KWh per capita in 2010 and installed the largest system of power generation equipment ever built. China invested massively in its air transport system, which grew from essentially zero (2.5 million passengers) in 1980 to 659 million passengers in 2010. In comparison, the U.S., which already had 300 million passengers in 1980, grew to 926 million by 2010. We see the same explosive growth in rail passenger traffic, as a result of China’s continued reliance on its rail network as a means of public transport. In 2000, China’s passenger rail system carried 453 million people compared to 25 million in the U.S. Twenty years later, the U.S. number grew to 31 million, but China grew to 1.34 billion rail passengers (World Bank Open Data). A similar trend can be seen with regard to broadband access, which in China grew from zero in 2000 to 31% in 2018, just slightly lower than the U.S., which stood at 34% in the same year. An initiative is

⁵ The table shows total non-defense infrastructure spending (federal and state) as a % of GDP.

currently underway to expand China's roster of major airports from the current 235 to 450 by 2035 (Falcus et al. 2019), many of which will be privately run under PPP concessions⁶, unlike the U.S. which has few privately owned airports and makes scant use of PPP schemes.

Current Challenges for China

There are limits to the economic impact of China's infrastructure investment on economic growth. By the first decade of the twenty-first century, China achieved a level of infrastructure per capita in many respects commensurate with OECD economies. But some Chinese provinces had in fact overbuilt their infrastructure. There was a tendency, for example, to award large real estate projects predicated on the development of additional infrastructure even if the area did not immediately require it. Real estate developers would therefore offer to build additional roads, bridges and wastewater facilities along with real estate development projects without regard to whether there was an immediate need for the additional infrastructure. This approach of "build and they will come" may have been based on the early rapid growth in demand for infrastructure, but was no longer supported by the same growth rates, especially when analyzed across different provinces.⁷ The financial crisis of 2008 led to increased investment in infrastructure, but by many accounts those investments may have been unproductive precisely because China had already achieved a higher level of infrastructure penetration (Barreda and Wertime 2013).

What propelled China to embark on a massive global infrastructure investment strategy? There are several reasons, the most discussed being a conscious attempt to establish China as a regional and global superpower. Infrastructure investment as an instrument of foreign policy is not a new concept, as we discuss in the next section, and has been the subject of much research and policy analysis. However, I believe that the primary factors for China's international expansion were simply an economic rationale; diminishing returns in their domestic markets, as I mention above, and greater profits in overseas markets. It may very well be the case that the economic motivation was coupled with strategic consideration. But

⁶ PPP refers to Public-Private Partnership, which has become a common method of financing infrastructure projects with private sector funds. Typically, the public sector (for example a state or city) maintains ownership of the asset and enters into a long-term concession agreement (for example, 25 years) with a private company to manage the asset in exchange for an upfront payment and/or an obligation on the part of the private company to invest a certain amount in the improvement of the asset. During that period, the private company essentially "owns" the asset under the terms of the concession, including collecting revenues, making profits and selling the concession to third parties.

⁷ Perhaps this "build and they will come" approach that was successful in China influenced the BRI approach to some of their earlier mega projects in developing countries.

it would be a mistake to attribute the global expansion of the last decade solely to an attempt at global control.

The first element of that export-led strategy was simply to win new markets and diversify away from reliance on the domestic market. The best way to illustrate this trend is through the example of COSCO, China's largest shipping company. A state-owned entity created in 1961, it grew and morphed into a large state-controlled shipping conglomerate by the 1990s. In 2009, in the aftermath of the global financial crisis, it had carried over 43 million TEUs.⁸ Of those, 3.47 million (8% of their total volumes) came from their overseas container port investment, which at the time consisted of only three container port terminals: the ports of Piraeus and Antwerp and a container port in the northern part of the Suez Canal (COSCO, 2009). As the dominant player in China, COSCO's share of the domestic container market was over a third of total volumes, and therefore could not possibly grow beyond that percentage. Two years later, overseas volumes had increased by 56% compared to 7% for the domestic market, and, by 2019, COSCO's overseas TEUs represented 25% of their total volumes, with their share of the China domestic market unchanged at 33% of the domestic market. COSCO by then had invested in more than a dozen container ports globally, including in the U.S. (Seattle container port), Latin America, Europe and Asia. In its annual report, it stated it was targeting investments overseas with low double-digit returns, compared to the single-digit returns from their existing investment in China (COSCO 2020). In the span of a decade, COSCO transformed itself from the major domestic player in container ports to one of the largest global players, and it listed on the Shanghai stock exchange.

This example is repeated across multiple companies involved in infrastructure investments that have been seeking new outlets at attractive returns. Has such an expansion served China's strategic goals? No doubt. Have these companies benefitted from Chinese government support through institutions like the China Development Bank? No doubt. But in analyzing China's global expansion in infrastructure investments, it is critical to remember that a primary motivation was simply to maximize returns and secure long-term markets, just as any U.S. company does. The difference is that the U.S., having failed to invest in domestic infrastructure, did not have the capacity to export the way China did. Put differently, I believe that the majority of the investments undertaken by Chinese companies in international infrastructure were principally motivated by economic returns.

⁸ TEU stands for twenty-foot equivalent unit – a measure used to calculate the volume of containers being carried.

Other economic considerations have driven China's expansion overseas. China is a net consumer of energy and primary commodities: Oil, gas, coal, rare earths and others. To ensure access to these commodities, China needs its suppliers' infrastructure as well as its own to be adequate.⁹ One should remember that China is an arable-land-poor economy, with less than one-fifth of the arable land in the U.S. (USDA 2020). In addition, with the massive drop in poverty and with increased urbanization, the dietary profile of Chinese citizens changed materially. China needs to feed over 1.4 billion people every day. As a result of these factors, investing in large agricultural projects in Africa and other arable-land-rich economies, such as Brazil, makes both economic and strategic sense. This argument was advanced forcefully by Lester Brown in his seminal book "Who Will Feed China?" (Brown 1995) and remains even more valid today.

Finally, with all the talk of China's economy surpassing that of the U.S., the fact remains that China's per capita income is still substantially lower than that of the U.S. China's per capita income in 2019 stood at \$10,216, or 15% of that of the U.S. figure of \$65,297 (World Bank Open Data). China is rightly proud of its achievements in poverty reduction; between 2000 and 2020 the incidence of poverty in China declined from 48.8% to essentially zero. The massive infrastructure investments of the last forty years contributed to China's dramatic move out of poverty (World Bank Open Data, Statista). However, a sizable number of Chinese households continue to be vulnerable to poverty; indeed, rural poverty seems to be on the increase (Wu 2016). In fact, if one applies 1960 U.S. income levels to China today – a reasonable assumption – as well as the 1960 U.S. poverty line, 80% or more of Chinese fall below the poverty line (Gill 2021). Viewed through that lens, one should understand better China's need to secure critical infrastructure to maintain economic growth rates that prevent poverty levels from rising again.

Current Challenges for the U.S.

While China dramatically ramped up its infrastructure spending and sustained it, the U.S. showed all the signs of a downward trend. As mentioned above, the U.S. investment in infrastructure as a percentage of GDP has been on a secular decline. According to the *2021 Infrastructure Report Card* published by the American Society of Civil Engineers, the U.S. is now \$2.59 trillion short of the funding needed just to keep existing infrastructure in good repair. Current spending falls short over \$1.2 trillion on surface transportation alone. The report notes the economic consequences, which, without exaggeration, can accurately be described as

⁹ The global COVID-19 pandemic as well as accidents such as the one that occurred in the Suez Canal in March 2021 demonstrate the fragility of global supply chains.

devastating: a cost of \$10 trillion in GDP and more than 3 million jobs by 2039, and \$2.4 trillion in exports over the next 20 years (ASCE 2021).

This secular decline in U.S. infrastructure investment occurred in roughly the same time frame as the emergence of related policy preferences that also had a negative impact on the state of U.S. infrastructure, in particular the short-term focus on shovel-ready projects that we have discussed. The decline in spending affected not only the quality of existing infrastructure but also the planning process. In addition, and crucially, the U.S. was unable to develop funding mechanisms apart from federal government spending, which requires congressional bipartisan support, or from the municipal debt market, which gives full control to state and local agencies but is bound by balanced budget requirements as well as matching funds from the federal government. In contrast, countries like Canada, the U.K. and Australia, to name a few, embarked in the 1990s on extensive use of the PPP mechanism to encourage the private sector, both foreign and domestic, to invest in infrastructure.¹⁰ The table shows the percentage of total assets managed by pension funds allocated to infrastructure for the U.S., Canada, Australia and the U.K.

Infrastructure Allocation % AUM

Country	% of Assets Allocated to Infrastructure
U.S.	1.1%
Canada	8.4%
Australia	7%
U.K.	4.4%

(Prequin)

Australian and Canadian pension funds have allocated over 7% of their pension funds' money to infrastructure investments, compared to 1.1% for U.S. pension funds (see also Inderst 2014). This is a result of an aggressive national policy to bring the private sector into domestic government infrastructure. The U.S. has been unable to establish either long-term infrastructure goals or reliable mechanisms to dial infrastructure investments up or down according to strategic needs. These two failings, together, have materially hampered the development of a successful U.S. infrastructure strategy. What is needed is the ability to create

¹⁰ While not the focus of this paper, it is important to highlight that these countries have a federal framework for PPPs, which the U.S. does not. In Canada, while provinces can make “local modifications” to the regulatory PPP framework, it is essentially a federal system. The U.S. has no federal or central framework – if there are any PPPs, they are subject to a combination of state and local laws.

long-term sources of funding to ensure that infrastructure spending is spread over a period of time, deployed judiciously in productive assets and distributed strategically to support key goals such as reducing income inequality. I have argued (2020, 2019, 2011) for the adoption of funding mechanisms that would encourage domestic and foreign capital to invest in infrastructure. In particular, I have argued (2021) for the creation of an infrastructure bank that would enable steady long-term planning of infrastructure in the U.S. Such a bank, as we explain below, could be established under the full control of the U.S., but invite foreign capital to invest. Haughwout (2019) has suggested the creation of an automatic stabilizer fund that would allow the smoothing-out of infrastructure spending across business cycles. In all cases, what the Chinese experience has demonstrated is that the need for a secure source of capital, given the underlying investment, is, by its very nature, long-term, with a long lead time. Short-term stimulus plans, with congressional appropriations mostly running on one/two-year cycles, are not the solution. In addition, an active domestic market will provide the basis for U.S. enterprises, with the support from U.S. government agencies, to invest globally in infrastructure.

Infrastructure as an Instrument of Foreign Policy

I have discussed the domestic roots of China's global infrastructure expansion, as well as the gradual exit of the U.S. from global infrastructure associated with a decline in domestic infrastructure investment in the U.S. For the U.S., infrastructure policy had been an integral part of foreign aid starting with the end of World War II. The creation of the World Bank as part of the Bretton Woods agreement was in fact a massive infrastructure project, as evidenced by the legal name of the World Bank still in use, The International Bank for Reconstruction and Development (IBRD). The U.S. had the strategic advantage over any other country as a victor in World War II, and its effective control of the Bretton Woods institutions allowed the U.S. to leverage the new economic order to undertake massive infrastructure projects globally that aligned with U.S. foreign policy. On a much smaller scale, China was already involved in the 1960s in infrastructure development as part of its nascent foreign policy (see Wilcox 2019). For example, China stepped in to build the Tazara project, which was the largest rail system in sub-Saharan Africa when it was vetoed by the World Bank under pressure from the U.S. and the U.K. At the time, China had deployed \$400 million for the project.

Today the U.S. and China have adopted fundamentally different approaches to international infrastructure development. U.S. policy is principally limited to participation via the multilateral agencies that form the broader Bretton Woods system (the World Bank Group and regional development banks), whereas China has leveraged its new economic weight within those institutions and is attempting to develop a parallel set of institutions to craft its own policy (Lia 2015). This has had serious consequences for the U.S. There is a vicious circle starting with a lack of domestic infrastructure investment which has diminished U.S. expertise, which diminishes U.S. standing still further, which leads to the U.S. being no longer able, as was once the case, to export U.S. expertise as part of its foreign policy. In addition, poor domestic infrastructure has further undermined American credibility on the international stage¹¹. China fills the vacuum with its own power and expertise. Western Europe has found pathways to engagement with China on infrastructure on a selective basis, but the U.S. has failed to develop a counter-

¹¹ For example, there are very few American company that operate/manage or build airports outside of the U.S.

policy – except to boycott and actively undermine China’s infrastructure outreach – with little success.

China’s Global Infrastructure Expansion

The start of China’s global infrastructure strategy can be traced back to the 1960s, with the building of the Tanzania rail system. But the real boom started with the announcement by Xi Jinping in 2013 of BRI and AIIB. The Belt and Road Initiative, originally known as One Belt One Road (OBOR), is described as “one of the most ambitious infrastructure projects ever conceived” (Chatzky 2020). It purports to replicate the value and impact of the original Han Dynasty Silk Road by linking China, East Asia and Europe via a complex of highways, railways, pipelines and streamlined border crossings stretching from China through Central Asia, Southeast Asia, South Asia, Pakistan and India to Europe. A Maritime Silk Road is also a major element of the project. The fact is that much of this has little to do with history, as Daly and Rojansky (2018) argue, and the term “Silk Road” was only coined in the late 19th century. But the use of the term is emblematic of China’s desire to establish economic linkages across the region through a fundamental investment in infrastructure that will connect the various markets to China.

The Asian Infrastructure Investment Bank is a multilateral investment bank with 103 members. The aim of the bank is to provide financing for sustainable infrastructure development. Between its launch in 2014, and year-end 2019, AIIB approved funding for 63 global infrastructure projects totaling \$12.04 billion, has committed \$8.37 billion, and has disbursed \$2.89 billion. (AIIB 2019 Annual Report). Interestingly, AIIB has adopted some of the most stringent environmental and, more broadly, ESG criteria. An early assessment of AIIB suggest that, with over \$25 billion in investments and over 100 projects, it is taking a cautious and conservative approach to investment, and that there is much less overlap with BRI projects than expected (Hayakawa 2021).

The U.S. response was to combat China’s global infrastructure expansion, but with no defined objective. When in 2015 the U.S. chose not to participate in the AIIB and failed to persuade its European allies to withdraw as well, former Treasury Secretary Lawrence Summers wrote in the Washington Post, “This past month may be remembered as the moment the United States lost its role as the underwriter of the global economic system.... I can think of no evidence since Bretton Woods comparable to the combination of China’s effort to establish a major new institution and the failure of the United States to persuade dozens of its traditional allies, starting with Britain, to stay out” (Summers 2015). Officially, the U.S. stated: “The United States and many major global economies all agree

there is a pressing need to enhance infrastructure investment around the world. We believe any new multilateral institution should incorporate the high standards of the World Bank and the regional development banks. Based on many discussions, we have *concerns* [my emphasis] about whether the AIIB will meet these high standards, particularly related to governance, and environmental and social safeguards... The international community has a stake in seeing the AIIB complement the existing architecture, and to work effectively alongside the World Bank and Asian Development Bank” (U.S. State Department quoted in Wikipedia, AIIB).

China has been identified by Republicans and Democrats alike as the number-one domestic and foreign challenge to the U.S., and China’s infrastructure policy has been lumped into that same analytic framework. This has limited any possible objective assessment of China’s infrastructure strategy and motivation, which in turn has led to myopic reactions, such as boycotting AIIB, yet providing no alternative solution. A good example of a highly negative assessment of China’s policy is Shullman (2019), and a more pragmatic approach is presented by Chin (2015), among others. Some have taken a more nuanced view, arguing that we are witnessing version 1.0 of China’s infrastructure policy, which is expected to evolve over time (Dollar, 2018). Yet another assessment has been a *tu quoque* argument (Barbones 2020) and a recent report produced by the Council on Foreign Relations (Lew et al. 2021) provides a comprehensive assessment of BRI with broad policy recommendations. Part of China’s argument goes back to the Cold War period, when China described its foreign policy as being neither the U.S. nor the Soviet Union, but rather working in solidarity with the developing-world countries (the Third World) and the nonaligned movement (Wilcox op cit.). For example, in a scathing Op-Ed in the Financial Times, Abdoulaye Wade, President of Senegal, countered the attack on China’s funded projects with a critique of foreign aid and multilateral funding and the inability of multilateral agencies to deliver projects in an effective way (Abdoulaye Wade 2008).

But the hostile reception to China’s policies has been put into question by a growing body of academic research that attempts to measure the effect of China’s infrastructure investment on GDP growth in emerging economies. Recent studies have indicated the positive impact of China’s infrastructure investments on economic growth and income inequality reduction in the countries where it has invested (see, for example, Bluhm et al. 2018 and Martonaro 2018). And interestingly, since the announcement of the BRI in 2013, the World Bank has conducted an entire initiative to assess BRI’s overall role. Nineteen background papers have been produced, covering a wide-ranging set of topics, including environmental risks, public procurement processes and measurement of the

economic impact of these projects on economic growth and income inequality (World Bank 2021). China has responded to the criticism and has adapted its approach to environmental and social governance issues, as well as developing more transparent procurement process. The other major criticism leveled at the BRI is the “debt trap” it creates by having poor countries borrow heavily from China and then find themselves hostage when they are unable to repay what is invariably described as poorly executed “white elephant” projects (see, for example, Shulman *op cit.*). But recent studies on BRI loans and the “debt trap” suggest that the risk of asset seizure by China is a rare occurrence, and that most of the time the debt is written off or renegotiated (see Kratz et al. 2019 and Brautigam and Rithmire 2021).

As stated above, the U.S. never defined a set of objectives to counter China’s expansionist infrastructure policy. It has failed to revive its own domestic infrastructure, which could form the basis for a more assertive international policy, and failed to strengthen its own agencies responsible for international development. The U.S. relies principally on the newly-named International Development Finance Corporation (DFC, formerly OPIC) to provide support to foreign infrastructure projects along with other agencies such as the U.S. Export-Import Bank. But successive administrations essentially failed to listen to requests by the DFC staff to give them greater flexibility to conduct their work and failed to adequately fund it. Various administrations have maintained the same governance structure in these agencies as when they were originally created. As China was weaving its infrastructure policy into its foreign policy, no attempt was made to redefine these agencies’ roles, which resulted in a siloed approach. This situation worsened under the Trump administration, which actively worked to undermine U.S. international agencies as well as multilateral agencies such as the World Bank, where the U.S. has traditionally played a dominant role.¹²

The American response to China’s policy can best be summarized as a failed Khrushchevian approach. Today, the U.S. has neither the means to counter China on infrastructure policy internationally, nor a vibrant domestic infrastructure policy in place to support such a policy. Even the institutions under its direct control, such as DFC, have not been given the proper tools to counter any Chinese expansionist policy. There is, however, an alternative approach that is more constructive and should be of great benefit to the U.S.

¹² The recent G-7 meeting in Wales recommended the creation of the Build Back Better World (B3W) essentially to counter China’s infrastructure policy (see White House 2021). Whatever policy the G-7 adopt will require funding, as well as the mechanisms to invest those funds (which the U.S. does not have as it currently stands) and ultimately co-opetition rather than outright competition with China.

Towards a New Approach to U.S. Domestic-Foreign Policy

A new approach is needed both in the domestic and foreign spheres. As Jake Sullivan recently stated, "We've reached a point where foreign policy is domestic policy, and domestic policy is foreign policy" (Detrow 2020). President Biden (2021) has announced the American Jobs Plan, which includes the most ambitious infrastructure plan since the 1950s. It calls for billions in infrastructure investment. But as the analysis above suggests, there is a very strong case to be made that this number should be significantly larger. The ASCE calls for an increase in infrastructure spending from all sources, public and private, of 1 percentage point of GDP, from 2.5% to 3.5%, by 2025 (ASCE 2021).

President Biden has correctly identified the problem: if we don't invest in our own infrastructure, China will eat our lunch because American productivity will stall. A renewal of American productivity requires a comprehensive long-term sustainable renewal of our own infrastructure. Yet the U.S. national debt is currently 136% of GDP, the highest ratio in its history (Amadeo 2021). This figure does not include the new \$1.9 trillion COVID stimulus program nor the proposed infrastructure plan. The Republican Party has clearly stated that the proposed plan, and more specifically its funding through an increase in corporate taxes, makes it a non-starter (Morgan 2021).

These domestic challenges, as well as the challenge of China's global infrastructure approach to our foreign policy, suggest the urgent need for a new policy framework. The U.S. should develop a comprehensive domestic infrastructure policy along the lines of the Biden plan, but must also incorporate infrastructure as part of its foreign policy. It needs to draw the lessons from China's infrastructure policy experience, both positive and negative. Any long-term strategy requires a domestic infrastructure policy that is reliant not on short-term funding mechanisms but rather on long-term solutions that are not subject to appropriation risk. It also requires multiple actors to fund our infrastructure, as opposed to the government or local and state agencies, to avoid inefficient allocation of resources. It also requires a combination of private domestic capital *and* foreign capital, keen to invest in the U.S. domestic market, that brings with it the infrastructure experience accumulated in the last decades from international investments. It should also avoid spending on infrastructure purely for Keynesian fiscal stimulus when there are other, more efficient means to achieve such fiscal

stimulus. Investing in a road to nowhere has long-term economic and social consequences, as we have noted in the case of China.

On the foreign policy side, China has been highly adept at integrating infrastructure into its foreign policy. The U.S. should aim to do this as well, capitalizing on existing institutions to be more active and relevant in the space. But it should develop a coordinated approach, both domestic and foreign, including coordination with other like-minded international partners, just as China has done over the last decade. The U.S. should also acknowledge the role China plays and insist that if it is true that its motivations are in large part grounded in economic imperative, China should accept the integration of BRI into the international rules-based system more systematically and comprehensively. Finally, co-opetition with China, rather than outright objection (which has not succeeded), should be the operative approach. A new policy would include the following key items discussed below.

Funding Domestic Infrastructure

The size of U.S. investment in infrastructure exceeds several trillion dollars by any measure. The plan presented by the administration relies principally on a major increase in corporate tax rates as well as other tax measures (Biden 2021). While tax revenues should be used for investing in productive infrastructure, the fundamental challenge is that taxes alone cannot be the only solution. The tendency to develop infrastructure spending plans as part of stimulus plans that are dependent on appropriations, as well as the prevailing political climate, has led to pro-cyclical infrastructure investments (Haughwout 2020). In addition, most infrastructure investment decisions are not made by the federal government. Rather, as Haughwout explains, since 1996, 72% of nondefense public investments (which are key to long-term economic growth) have in fact been “determined in large degree by the 50 states and more than 80,000 local governments across the country.” It is therefore critical to develop a long-term infrastructure plan funded by the government and the private sector through long-term funding mechanisms. A plan that relies only on government spending cannot succeed unless its aim is to invest for the short term only. If the Biden plan follows that pattern, it will be no different than what has been proposed and implemented by previous administrations. The Biden administration has, however, a once-in-a-lifetime opportunity to launch a new era in American productivity and establish infrastructure as a key component of American foreign policy.

The following proposals should ensure that we meet our objectives:

- 1) **Create a U.S. Infrastructure Bank** with a paid-in capital of \$100 billion, which could be leveraged 10:1, raising in total \$1 trillion of permanent capital without any increase in taxes. That capital will be used to fund infrastructure projects through debt and equity investments in a sustainable way, on a long-term basis, across business cycles, and independent of any appropriation mechanisms. The bank should be formed within the lines of a Government State Entity (GSE) but should include private capital. Its fundamental role will be the equivalent of the DFC but for the domestic infrastructure market, and totally independent of the appropriation cycle. The bank will invest in equity as well as lend to projects, providing financial guarantees as well as other financial instruments that meet the long-term demand for infrastructure projects both brownfield and greenfield.
- 2) **Capacity-Building Initiative at the state and local levels.** As part of the infrastructure bank, or through other mechanisms such as the U.S. Conference of Mayors, develop the technical know-how and support for the state and local agencies that will be responsible for designing and implementing several multi-million, if not billion-dollar, projects across the U.S. The U.S. Treasury Department has developed a successful Office of Technical Assistance and a specific program to help foreign governments develop their infrastructure programs. We need the same for our state and local agencies.
- 3) **Encourage the development of Public-Private Partnerships (PPP)** that would allow the private sector, including domestic *and* foreign capital, to invest in identified projects. There has been an extensive debate about PPPs that revolve around whether government or the private sector is more efficient at running certain infrastructure assets, but the verdict is squarely in favor of PPPs for most, although not all, types of infrastructure projects. It is ironic that U.S. investors can invest in Chinese toll roads, Chinese airports and Chinese power generation, but few foreign investors, let alone Chinese, can invest in, for example, U.S. airports, since the majority are still owned by governments agencies.
- 4) **Encourage the development of Public-Public Partnerships (PPuP).** U.S. pension funds had over \$18 trillion in assets under management (AUM) at the end of 2019, according to the Organization for Economic Cooperation and Development, and would benefit greatly from direct

exposure to infrastructure. Infrastructure projects are highly predictable – power transmission and distribution grids, toll roads, bridges and airports have stable, well-studied cash flows that are maintained over the decades-long life of the investment. Direct investments will help address pension fund shortfalls. The Equable Institute reported last August that the national funding shortfall for state retirement systems was \$1.35 trillion at the end of 2019 and projected it would rise to \$1.6 trillion by the end of 2020. Near-zero interest rates on fixed-income securities compound the problem. U.S. pension funds are under-allocating to infrastructure compared to their Canadian or Australian peers, as indicated in the previous table. Why are U.S. pension funds so far behind in deploying infrastructure investments? The paradox is that most U.S. pension funds would love to invest in infrastructure, but there are too few projects, since most assets are controlled by government agencies, and new infrastructure projects are also undertaken by local and state agencies. If Public-Private Partnerships are challenging for political reasons, then “Public-Public Partnerships” between state and local authorities and U.S. pension funds provide a politically viable alternative. These partnerships will allow funds to invest directly in these projects under long-term concession agreements which will benefit all parties.

The second component of this proposed approach is the development of a coherent foreign policy strategy that enhances U.S. global standing and supports both domestic and international infrastructure investment. The actions required to support this strategy would include:

- 1) **Invite foreign pension funds to invest in our infrastructure.** Foreign pension funds should be encouraged to invest in our infrastructure. A fast-track approach can be developed to identify projects via the infrastructure bank that satisfy certain criteria, so that they could be pre-approved by the Committee on Foreign Investment in the United States (CFIUS). Those criteria can include:
 - a. ***Greenfield projects*** – projects that have not yet been built, such as highways, and clean power generation facilities, such as solar or wind.
 - b. ***A focus on non-strategic assets*** such as highways, power transmission and distribution systems, wastewater systems and waste recycling, to name a few.
 - c. ***A concession period of no more than 30 years***, after which the assets will then revert back to the state or local authority.

- d. *A strong regulatory system* to ensure compliance and monitoring of the PPP projects.
- e. *Ability for the U.S. to intervene in the case of force majeure.*

- 2) **Invite foreign capital to invest in the Infrastructure Bank.** The U.S. should invite key foreign allies to participate in the creation of our infrastructure bank. The target amount of \$100 billion in equity capital can be easily achieved by inviting Canadian, Japanese, Australian European and Middle Eastern sovereign and pension funds, as well U.S. state pension funds. The U.S. government will always be the largest shareholder, with an absolute controlling stake.
- 3) **Remove taxes that discourage foreign capital from investing in U.S. infrastructure.** We must encourage foreign pension and sovereign funds to invest in the U.S. by eliminating as many roadblocks as possible. Today, any foreign investor in core infrastructure assets such as toll roads is subject to the Foreign Investment in Real Property Tax (FIRPTA), introduced in 1980 by Congress to tax foreigners acquiring U.S. real estate assets. The law was never meant to capture infrastructure assets. While there have been several subsequent attempts to exempt infrastructure projects from FIRPTA, they have never been conclusive. Fully exempting this tax on infrastructure investments will encourage many overseas pension funds to invest in the U.S. Since 2012, pension funds (U.S. and non-U.S.) have invested \$1.7 trillion globally in infrastructure, with 83% coming from non-U.S. pension funds. There is substantially more pension money globally waiting to invest in U.S. infrastructure, and removing the tax would seriously encourage those investors to participate in our infrastructure renewal. Any loss in FIRPTA tax revenues will be compensated by other tax revenues, as well as economic growth from the foreign direct investment coming to the U.S. Continuing to rely strictly on direct government investment will ensure that America will only fall behind on the critical need to modernize the nation's infrastructure.
- 4) **Should we invite China to invest in our infrastructure?** While the current environment is not conducive to encourage China to invest directly in U.S. domestic infrastructure, China has in fact been investing in U.S. infrastructure for some time. Estimates vary, but they suggest that over \$20 billion to date has been invested directly and indirectly (via third party private equity funds), which is *de minimis* relative to its potential (see U.S. Chamber 2013). The Biden administration and Congress may

consider inviting Chinese firms to invest in our infrastructure, but only within the context of a comprehensive agreement with China.

Funding our International Presence

On the foreign policy side, the U.S. will need to undertake a series of critical measures to rebuild its position globally.

- 1) **Rebuild our international development finance institutions.** We will need to move urgently to consolidate existing institutions that have played a key role in the past in supporting U.S. industries that export know-how and capital abroad. These include DFC and the Export-Import Bank of the United States (U.S. EXIM) among others. The needed support should unfold along the following lines:
 - a. ***Strong governance:*** DFC is chaired by the Secretary of State, and relatively small decisions at DFC must be approved by Congress, the Office of Management and the Budget (OMB), and multiple cabinet departments (e.g., Treasury, Commerce). Under such governance, DFC can never adapt to a new global strategy. Like the infrastructure bank, it will need to be run like a true Development Financial Institution (DFI) or, in the U.S. context, a GSE which is under the supervision of cabinet departments (State and Treasury) but is run independently. Strong governance also implies an independent board of directors with clear delegation of authority to the management; minimal political appointments beyond the CEO, and an ability to hire and pay people competitive wages relative to similarly structured institutions.
 - b. ***Clear mandate:*** The current mandate of these institutions is confusing to say the least. It will be necessary to simplify the mandate and focus on key areas that are critical to U.S. long-term strategy. We must allow them full flexibility to lend and to invest in equity the same way as any other DFI. As an example, currently DFC can make equity investments of no more than \$150 million per year.
 - c. ***Balance sheet sufficient to compete with China:*** The DFC is too small in terms of its balance sheet to have any significant

influence. It can only lend up to \$60 billion, which limits considerably the institution's ability to play a lead role. The administration will need to fund DFC with permanent equity capital of at least \$140 billion, compared to \$100 billion for AIIB, which covers only Asia. This increase is necessary if DFC is to have a truly global mandate. It will allow DFC to invest over \$1 trillion over the coming decade in investments outside of the U.S. that will generate appropriate risk-adjusted returns for U.S. taxpayers, while also serving our global strategy.

- 2) **Create an infrastructure coordination role at the National Security Council.** The U.S. plays a key role in multilateral agencies such as the World Bank, the IFC, the Inter-American Development Bank (IADB), the Asian Development Bank (ADB) and many others where it has effective veto power. The U.S. has in the past played a critical role in international agencies that have a direct link to global infrastructure. The World Health Organization (WHO), which has been prominently mentioned during the pandemic, plays a key role in global medical supply chains and overall health infrastructure. The International Labour Organization (ILO) plays a key role in defining labor rights in infrastructure projects. The United Nations Development Program (UNDP) is taking the lead on developing the U.N. Sustainable Development Goals, which have a direct impact on how infrastructure projects will be developed over the coming years. The International Maritime Organization (IMO) is responsible for the safety and security of global shipping. The U.S. has taken a passive role, if it has not outright abdicated its leadership, in many of these organizations. The Biden administration is undertaking multiple initiatives that cut across several areas, such as the new climate initiative, which are intricately related to infrastructure investment. This proposal calls for establishing within the NSC an infrastructure coordination desk, the role of which will be to coordinate U.S. policy across the various U.S. departments that are in turn responsible for all of these organizations, and to develop a comprehensive approach that meets our objectives.¹³ By ensuring that criteria are properly developed and implemented, we can encourage institutions such as AIIB

¹³ Whether a coordination role within NSC or some other form is more appropriate goes beyond the scope of this paper, but much has been written about how to improve the instruments and institutions of American foreign policy and covering infrastructure could be done in many ways (see Campbell and Price 2009).

or the BRI initiative to meet those universally accepted international standards.

- 3) Integrate infrastructure-specific criteria into the U.S. International Climate Finance Plan.** The recent Executive Order on “Tackling the Climate Crisis at Home and Abroad” (E.O. 14008), signed January 27, 2021, includes an international plan for climate financing (White House 2021). Climate change is intricately related to infrastructure investments, from power generation to the development of large transport projects. The Biden administration should complement its approach either by explicitly developing criteria for infrastructure projects or looking to develop a stand-alone complementary finance plan for infrastructure along the lines discussed in this paper.
- 4) Launch a U.S. global sustainable urban technology and innovation fund.** Over 50% of the population will soon be living in urban centers. The U.S. has taken the lead on understanding the role cities will play in our economic development in the coming century. This in turn requires the study of urban infrastructure and the delivery of infrastructure services in highly dense urban zones which simply did not exist a few decades ago. The U.S. government should fund R&D in those fields. By so doing, the U.S. will ensure it can maintain its edge in finding urban solutions, not only for U.S. cities but also for major global mega-cities such as Jakarta, Manila, Mumbai, Mexico City and Cairo, to name a few. Rather than just focusing on traditional infrastructure, we should focus as well on the infrastructure of the 21st century by continuing to lead on technology innovation and the development of the Internet of Things (IoT). The future path of infrastructure development goes through technology. The U.S. should devote funds from the proposed infrastructure plan to the development of infrastructure technologies, including energy-efficiency systems, new batteries and new, efficient mass transit systems that will serve as the infrastructure of the 21st century. This research and development effort could be the way for the U.S. to regain its leading edge globally.
- 5) Co-opetition, not confrontation with China on global infrastructure.** The U.S. will need to recognize that it has little alternative but to cooperate with China in some areas and compete in others. As we have argued, the main driver, albeit not the only one, for China’s international infrastructure policy is economic necessity. The U.S. should undertake the following:

- a. ***Work with China's BRI to make it a positive contributor to global economic growth***, but push BRI to integrate more fully into the international economic system. As I argue above, China has been listening to the criticism leveled at BRI. The U.S. and others will need to monitor that China complies with international norms of investment. The U.S. should actively seek to invest in some BRI-sponsored projects rather than compete against them. The newly funded DFC will have the means and ability to participate in those projects, but also to compete directly whenever necessary.
- b. ***Join AIIB***. Much has been written about the strategic mistake the U.S. made when it chose to boycott this organization. The U.S. should join AIIB in conjunction with Japan (the only CPTPP country out of ten members that is not a member of the AIIB) and work within the institution to ensure the organization is well integrated within the rules-based global system.
- c. ***Actively oppose projects that do not meet international standards***. To the extent that Chinese firms undertake projects in economies that are highly indebted, with weak institutional governance, and that do not meet international standards of project financing as developed by the IFC, UNPRI, SDG targets and other criteria, the U.S. will have the ability, through a more coordinated approach, to work with China to improve terms, identify alternative financing sources and, if necessary, block such projects.

Conclusion

The U.S. needs urgently to develop a new domestic-foreign policy strategy that benefits U.S. households while strengthening our global strategic presence. Infrastructure investment should be a prominent component of that strategy. But as a result of decades of underinvestment, our infrastructure needs are far in excess of the funding available from taxation, deficit financing or, for that matter, any single private funding source. We need to draw on every available form of investment.

Since its economic opening in the 1990s, China has implemented a systematic infrastructure policy that helped stimulate economic growth and reduce poverty and inequality over the last forty years. China then leveraged its new infrastructure complex to export its know-how and gain new market share, at the same time weaving infrastructure into its foreign policy. The U.S. did the exact opposite. It stopped investing in the U.S. and slowly abandoned its global role in economic development, including the development of infrastructure projects around the world.

The U.S. must learn from China's experience. The Biden administration has proposed a bold and innovative infrastructure plan. This paper proposes to build on this plan to encourage further investment in infrastructure through long-term funding sources rather than rely on government budgets and taxation as the sole source of funding. Private capital in the form of private enterprises or U.S. pension funds can play a leading role in guaranteeing a long-term source of capital. This must, however, be accompanied by the development of infrastructure projects that are open to private capital and not just funded by state and local agencies. PPPs offer a well-established way of combining public and private capital. Foreign capital must also be invited to invest in U.S. infrastructure.

The U.S. should leverage its domestic infrastructure plan to launch a similar plan on the foreign side. This should entail fundamentally altering the way DFC conducts its business, as well as ensuring better coordination between the various agencies that are responsible for international trade and investment, whether directly or through U.S. participation in the international financial and U.N. institutions. A strong and vibrant domestic infrastructure market will prevent China from "eating our lunch," as President Biden suggested. The U.S. should consider joining the AIIB and work within the organization rather than outside of it to ensure China integrates into the international rules-based system which has governed global economic growth since WWII. At the same time, the U.S.

should seek co-opetition with China on infrastructure policies at the international level. With a BRI fully integrated in the international system as a condition *sine qua non*, the U.S. could then seriously consider Chinese investments in U.S. domestic infrastructure in a meaningful way.

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About the Author



Sadek Wahba is a Senior Fellow at the Development Research Institute, New York University and Senior Member of St. Antony's College, Oxford University. He earned his Ph.D. in economics from Harvard University and has published on issues related to infrastructure policy. He is also the Chairman and Managing Partner of I Squared Capital, a global investment firm that focuses on infrastructure investment. The views expressed in this paper do not necessarily reflect the views of any of the organizations mentioned above.