Farhadi, A. and Masys, A.J. (eds.) Great Power Competition Volume 2: Contagion Effect: Radicalization, Unrest, and Competition in the COVID-19 Era

Building Trust and Advancing U.S. Geoeconomic Strength Through Public–Private Partnership Stakeholder Capitalism

Adib Farhadi, PhD and Ian Galloway

Abstract The United States and China are currently engaged in a struggle for global influence and critical resources known as the Great Power Competition (GPC). Strategic access to key populations, geographies and supply chains, largely built on trust, will be the deciding factor in determining a competitive advantage. The global devastation of the COVID-19 pandemic has demonstrated that no one wins in a power struggle that overlooks human security for shareholder interests. This chapter explores a new way for the U.S. to engage within the modern GPC that increases competitiveness while better supporting the dignity of human constituents: specifically, to employ *stakeholder* capitalism rather than *shareholder* capitalism to win the hearts and minds of global citizens. This chapter will demonstrate that traditional national security policies, based primarily on the state, are less effective geopolitically and should no longer drive foreign policy or U.S. industrial policy. In order for the U.S. to compete in the current global arena, its policy must prioritize human and business security. Additionally, the chapter will explore the interdependent and complex relationship between the U.S. and China within the context of the modern GPC and the effects of this relationship on U.S. economy and industry. Finally, the chapter prescribes Public–Private Partnerships (PPPs), both at home and abroad, as an effective means to bolster U.S. and foreign institutions. Such a strategy will better serve all stakeholders in a post-COVID-19 global society while positioning U.S. security interests uniquely within the modern GPC.

Keywords COVID-19 · Great Power Competition · Cooperation · State Capitalism Stakeholder Capitalism · Shareholder Capitalism · Central Asia–Southeast Asia · United States · China · National Security · Geoeconomics · Geopolitical · Public–Private Partnerships · Trade · Diplomacy · Supply Chain

---

A. Farhadi
University of South Florida, Tampa, FL 33620, USA
e-mail: Farhadi@usf.edu

I. Galloway (✉)
DGC International, McLean, VA 22102, USA

A. Farhadi and A. Masys (eds.), *The Great Power Competition Volume 2*,
https://doi.org/10.1007/978-3-030-90390-9_5

Introduction

The prospect of winning or losing the great power competition (GPC) is often assessed through a realist lens of zero-sum finite power. However, this perspective is misleading and obscures the importance of considering the relative power of the United States versus that of its great power rival, China. As a result, the U.S. has traditionally made foreign policy decisions that no longer serve its best interests in a global era defined by a new type of competition following the COVID-19 pandemic. Historically, great powers have stemmed the potential loss of "empire" by competing with emerging peer rivals, thereby falling into a destructive cycle of state dominance known as the "Thucydides Trap." In this process, the act of competing is itself a cause of inevitable and continuous conflicts among states (The Belfer Center 2021). In these scenarios, empires vanquish their challengers, often repeatedly, but inevitably succumb to ruin after centuries of conflict and competition that eventually drains coffers, human resources, and goodwill among leaders.

To avoid the Thucydides Trap, leaders must re-conceptualize the modern GPC as occurring between business entities rather than state powers. A new strategic framework grounded in stakeholder capitalism, that emphasizes human security versus state security, will ensure the U.S. prevails in the modern GPC. This shift in strategy will necessarily call for a renewed prioritization of resources in economic areas of vital interest to global citizens. State security will remain a priority as well, and state competition will still exist; yet, over time, collaboration among states can provide an international safety net that allows businesses to compete without spiraling into a game of unintended consequences. Currently, state "power" is often assessed by its quantifiable parts, such as key economic or military statistics. The following discussion, based on a qualitative approach, will focus on the interplay of geoeconomics and geopolitical conditions of states, the raw impact of competition on human security, and the performance and actions of states, businesses, and human constituents. These factors culminate in a prescription for stakeholder capitalism that best harnesses emerging trends in global capitalism.

With this context in mind, the following analysis will examine several sets of criteria for assessing state "power". The first set of criteria addresses the systems in which states function geoeconomically and geopolitically: (1) state capitalism; (2) shareholder capitalism; and (3) stakeholder capitalism. The second set of criteria concerns the relative weight or prioritizations given within each system: (1) prioritization of the *state*; (2) prioritization of *business*; or (3) prioritization of *human security*—within the larger context of national security policy. In addition to these two sets of criteria, further considerations will include increasing global interdependence (defined loosely as the cause-and-effect cycle between competing and collaborating state businesses and humans), pandemic-driven war-like political conditions, and the impact of such conditions on current and future industrial policy. Using the above criteria, the analysis in this chapter will demonstrate that U.S. performance within the current militaristic paradigm of the GPC is deteriorating; and further, that rather than continuing to compete in a losing game, the U.S. must strive to create an entirely new one based primarily on *cooperation* among states, businesses, and humans. Once we redefine the game and how it is played, we can make smarter decisions that bolster U.S. performance.

This chapter explores five key questions:

- In which geoeconomic system(s) does the U.S. currently compete globally (state capitalism, shareholder capitalism, or stakeholder capitalism), and what is the current assessment of the U.S.'s prioritization of national security policy?
- How does global interdependence lessen the degree to which state security and conventional military strength provide for human security in the traditional sense; further, how does the condition of interdependence among global societies change the prioritization among state, business, and human security?
- How does shareholder capitalism affect state security, and how have inconsistencies in industrial policy led to the deindustrialization of essential strategic market sectors, accelerating the disparity between American business and national security interests (state and business)?
- How is the global demand for human security, and a permanent state of intervention/war footing in specific sectors, organically re-aligning budgets to prioritize human security and its impact on the GPC?
- How can stakeholder capitalism and Public–Private Partnerships (PPPs) align state, business, and human security to win the hearts and minds of our citizens and those of our competitors abroad, strategically positioning the U.S. within the GPC and creating a winning scenario for all players?

The ultimate goal of this chapter is to shift the geoeconomic and geopolitical analysis of the modern GPC from one focused on state security to one centered on human security, underpinned by stakeholder capitalism.

Shifting to Stakeholder Capitalism Over State or Shareholder Capitalism

Within any given nation, more than one version of capitalism may be operating at once, contributing to a conflicting national vision (state, shareholder, or stakeholder). Each has a specific function within the framework of global security, with particular challenges and benefits. Competition among globally integrated state-capitalist economies creates a negative feedback loop for critical business and human security, while competition among stakeholder capitalist economies creates a positive feedback loop.

State capitalism creates an environment in which state and business security are aligned. The result is short-term domestic human security gains within the context of a crisis event, whereby the states and businesses concentrate their power in the national interest. However, the resultant human security gains within the state's geography could reduce human security in other parts of the world and create a backlash from global competitors. In other words, state capitalism can cause a bifurcation of domestic and international human security, creating unsustainable stakeholder pressure on state businesses that seek to join global markets.

Conversely, *shareholder* capitalism creates an environment in which state and business security do not necessarily align. This system operates with the sole aim of ensuring profits to individual and institutional shareholders. The result is grossly insufficient human security. Public institutions hold little leverage over the businesses, specifically in the medical and defense sectors, which humans rely on to keep them safe.

Finally, the third variety of capitalism, *stakeholder* capitalism, elevates human and business interests as part of the national security paradigm. As Schwab points out, "Stakeholder capitalism is a form of capitalism in which companies seek long-term value creation by taking into account the needs of all their stakeholders, and society at large" (Schwab 2020). This system creates an environment whereby states, global institutions, and civil society work collaboratively to support worldwide commerce and innovations that result in long-term human security. Trust is an essential commodity of stakeholder capitalism.

The apparent difference between a shareholder economy and a stakeholder economy is the ongoing return of profits to all stakeholders rather than only specific shareholders. The implications of such a shift are profound. Historically, stakeholders in businesses are predominantly local, including owners or shareholders, employees, Main Street merchants, customers, suppliers, financiers, and municipalities. However, today, business stakeholders are global and often wholly dependent on international markets far beyond Main Street. Businesses operating in a stakeholder economy deploy capital in support of stakeholders worldwide, improving environmental, social, and governance (ESG) metrics. These businesses are best positioned to attract private investment and receive government and non-governmental organization contracts. As stakeholders become more global, the companies that best support and gain trust become more powerful.

A progressive modern GPC perspective gauges performance of competing businesses (formally states) by their ability to secure *all* stakeholders. U.S. and European businesses ought to manage their diffuse set of stakeholders better than their Chinese competitors, if for no other reason than that it makes good business sense. Governments must re-align budget priorities that support critical infrastructure and expand public–private partnerships to lock in long-term investments and innovations. Through such tactics, both business productivity and human security can be increased. The federal government, including the U.S. Department of Defense, can play a crucial role in supporting this competition for stakeholder trust and can draw upon lessons developed by the U.S. Central Command (CENTOM) to win the hearts and minds of local allies as part of their counter-insurgency (COIN) strategies. COIN relies not simply on defeating opponents but also on achieving local stakeholders' support of "winning hearts and minds." Competition among great powers, underpinned by a system of stakeholder capitalism, will best serve long-term U.S. national security interests.

State, Business, and Human Security

In the context of the modern strategic GPC, the concept of "national security" can be viewed as encompassing three distinct functions within the broader framework of the GPC: state security, business security, and human security. State security primarily consists of the conventional military forces that have historically served to protect/defend governments, dynasties, and elites. In this system, the protection of national businesses is a secondary goal, to the extent that they matter to the nation. Business security traditionally functions as infrastructure support, including laws and regulations (domestic and international), access to capital, and public partnerships required to compete fairly in a global marketplace. Human security involves enhancing the quality of human life and all that that entails. This latter form of security garners little concern for warring nation-states competing for resources and desired geographies.

An important but sometimes overlooked dimension of human security is the services, infrastructure, and supplies needed to protect state constituents from disease, crime, identity theft, hunger, poverty, and death, among other critical concerns. As noted in the proceedings from a U.S. defense contractor-sponsored "Asymmetric Threat" Symposium, "Given that annual U.S. spending on nuclear weapons exceeds the amount spent on public health, there is a clear imperative for changing budget priorities, so the U.S. can start right now having a savvier twenty-first-century definition of national security. Recognizing that human insecurities are the root cause of turmoil, instability, and threats, the power mindset should evolve to one of human security" (cited in CACI Int. "Asymmetric Threat Symposium" 2020). On June 4, 2012, formal debate on human security organized by the General Assembly of the United Nations held the rights of "people to freedom from fear and freedom from want, with an equal opportunity to enjoy all their rights and fully develop their human potential" (United Nations A/RES/66/290, article 3a 2012).

Natural disasters, violent conflicts, persistent poverty, epidemics, and economic downturns impose hardships on humans in every corner of the planet. In this context, human security is best understood through the drivers of insecurity: poor health and safety, injustice from the weak rule of law, a lack of economic opportunity, and breakdowns in society and community. For many Western policymakers, the American military keeps citizens free, safe, and prosperous, with such insecurities often relegated to the realm of international development instead of national security. Despite natural disasters, growing economic inequality, and the largest incarcerated population on the planet, it took the COVID-19 pandemic to shift elites' focus away from "others" in the developing world towards domestic insecurities of this nature. Unlike other drivers of insecurity, pandemics, epidemics, and natural disasters cannot be shielded by wealth, status, or zip code. Fires burn wine country, riots disrupt High Street, cybercriminals attack consumers rich and poor, and disrupted supply chains hit earnings reports and 401(k)s.

Overlooking the non-discriminatory nature of a virus, countries like the United States can leverage flexible work arrangements, and whose citizens' digital skills are most widespread will fare better than competitors (Schwab 2020). That said, disparities in health outcomes, technology, and workforce opportunities result in widening inequality, and accelerate societal fragmentation (Schwab and Zahidi 2021). If these issues are not immediately addressed, human security will falter, and unrest will spread, leading to an even more divided government and a weaker country. With public health, (including vaccines and critical supplies required to protect humans and keep businesses open) fast becoming a new playing field for geopolitical rivalry, national security priorities must now be re-evaluated. In the post-COVID-19 era, human and business security should drive our national priorities, budgets, and the modern GPC. Given this new dynamic, governments will need to use innovative emergency powers that reorient national resources to protect humans and businesses, first and foremost.

The COVID-19 pandemic, exacerbated by increasing interdependency in global markets, has accelerated the de-coupling of traditional notions of defense policy from human and business security. Historically, great powers used military power to protect themselves and their allies' interests, granting states with large militaries greater leverage in geopolitical conflicts. However, conventional tools are now insufficient on their own for providing overall security, and therefore their power relative to other tools is reduced. Following this logic, the current analysis points to an imminent degradation of American national power.

Suppose the United States is to compete with great powers post-COVID-19. State security will remain essential on a tactical level, but its emphasis must shift from large conventional military strategies to disaggregated hybrid, grey-zone, or soft-power capabilities. Only then, can the U.S. counter misinformation operations, economic coercion, and the use of ambiguous forces, quarantines, and denial of access in both physical space and cyberspace. For better or worse, unlike conventional wars of the past, grey-zone conflicts are now being waged by businesses worldwide. The increase in this type of conflict will lead to a synergistic alignment of "state" and "business" security, culminating in greater public–private collaboration in the future. Politicians will need to shed their concerns with growing the government (as with the military–industrial complex) and grant human and business security the same bipartisan support; as traditional "state security."

Re-aligning State Security in the Post-COVID-19 Era of the GPC

Policymakers often miss the mark in their basic assumptions regarding what constitutes endurance in the contemporary international power struggle of the GPC. They view the battleground against the backdrop of a dominant economy and dollar that historically has leveraged its power with international institutions such as the UN, NATO, and WTO, and in bilateral negotiations. Further, many view a strong military as the "market maker" that ensures trade and commerce. However, equity markets, bond markets, housing markets, and consumer spending are all driven by confidence. Confidence is based not on military prowess but also on trust and sustainable business and human security. After the financial crisis of 2008 and the West's recent unprepared response to COVID-19, it is debatable whether the world maintains confidence in the international systems implemented by the U.S. How much direct impact does U.S. conventional military force have on global economic recovery or human health? Without sufficient confidence in the international system or the global economy and people that underpin it, great power erodes quickly.

Given this shifting security context, the most significant influence on the fabric of society today is not military force but rather the power of the global economy and its potential rewards in terms of exchanges of goods, ideas, energy, bits, bytes, and data. Although businesses, like states, are undoubtedly concerned with the "defense" of their products and core business segments, we see little reference to the impacts of conventional war in current SEC filings and presentations. On the other hand, COVID-19 is front and center on many U.S.-based quarterly earnings statements such as General Motors and Alcoa (GM 2020; Alcoa 2020). If conventional war no longer has a significant impact on business returns, then, by and large, businesses' interests are no longer aligned with state security. This growing disparity has primarily resulted from profuse trends in shareholder capitalism and has been exacerbated by global co-dependence.

Conversely, foreign adversaries are increasingly influenced by the mere threat of diplomatic, business and economic pressures. The frequency and scale of such threats have grown steadily in recent years. Indeed, our global interdependence is now so ingrained into business performance that governments often remain mired in an unhealthy cycle of interventions and pullbacks, leading to vulnerabilities and a growing lack of confidence in both governance and free markets. The United States should not reduce its defense budget; instead, the U.S. should re-orient that budget towards long-term investments in innovation and technologies geared toward business and human security. Such investment would be better tailored to the current moment, as conventional forces that predominantly support state security alone fail to increase domestic and foreign confidence.

The Emergence of Global Interdependence of State Security

Throughout most of the last five centuries, European powers have used their technological and military might to field "great" armies and navies to protect their empires and resources. This approach inevitably led to a cycle of imperial competition, with zero-sum contests over resources such as land, people, and gold and great powers giving little thought to the national health of their competitors. This dynamic began to shift as the United States rose to preeminence following the two World Wars that devastated Europe in the early twentieth century. Instead of extracting resources, postwar U.S. policymakers made the strategic decision to rebuild the "Old World" with massive, coordinated government investments in infrastructure and alliances.

Instead of expanding empire by fiat, policymakers created inclusive global institutions and frameworks to govern and regulate the future of competition among great powers. The establishment of the United Nations, various agreements on tariffs and trade, and the formation of NATO, IMF, and WB, among others, were all intended to stabilize the new world order and secure the U.S.'s preeminence within it.

This period represented a significant shift in the great power competition. In the postwar period, under a type of Pax Americana, competition among great powers became less militarily kinetic and more economical—meaning, driven by the aim of exerting influence over others via soft or non-military-based hard power. Capitalism and the growth of global trade resulted in the integration of markets to such an extent that businesses exerted influence over them. They became reliant on other great powers—the more significant the competing power, the bigger its market and potential for business growth. Gaining power thus necessitated sharing it. The extent to which this power sharing occurred has been veiled, hidden by stock market gains and consumerism. Shareholder returns, cheap consumer goods, and a general culture of excess have obfuscated just how much U.S. national power is now distributed among and interdependent on global competitors.

Enduring economic security throughout the middle of the twentieth century meant that American citizens enjoyed the best healthcare, roads, airports, telecommunications infrastructure, jobs, and schools in the world, as well as stable food sources, well-funded local governments, and with some exceptions, a just rule of law. U.S. politics were generally left untouched by more remedial concerns. However, since the second half of the twentieth century, crises that are more fundamental have emerged within an interdependent global eco-system. Oil embargos, trade wars, demographic changes, and financial crises in once—"faraway" lands are now impacting humans and businesses right at home in the U.S.

Decades of power, a strong economy, and relatively weak competition have resulted in the U.S. political machine investing in only a handful of essential industry segments, mainly financial markets and defense, to bolster narrow political platforms. Yet, shareholder capitalism has put even those sectors at risk by shifting critical national attention from government and public interests to profit interests, allowing only a small number of global elites to thrive while diminishing the overall growth in human security. To avoid the inevitable outcome of shareholder politics, many developing countries have turned away from free-market capitalism towards post-modern state capitalism, including a combination of traditional state economic planning and elements of free-market competition. The World Economic Forum (WEF) data shows that globalization measured by trade openness is in decline for the first time since the interwar era of 1918–1939 (Sault 2021).

Opportunities for Growth at Home and Abroad

In a post-COVID-19 world, as the U.S.'s industrial, military, and financial strength are deteriorating relative to competitors, shareholder capitalism further weakens the United States comparable to those with state capitalist economies. While shareholder capitalism transfers power from the state to the corporation, state capitalism does the opposite. For instance, corporations that are interdependent with, and often owned by sovereign states, transfer large amounts of U.S. wealth to foreign competitors. State capitalism has the advantage of quickly and efficiently consolidating state power in the face of a crisis; in addition, state capitalist governments incur less risk of interdependence in strategic industrial sectors because the state itself essentially owns them. Conversely, under shareholder capitalism, corporations have little incentive to support states or people's needs if unaligned with short-term profits. COVID-19 demonstrated the advantage that state capitalism gave to China in dealing with a global crisis. The hybridized Chinese state-capitalist system allows the state to respond both quickly and efficiently in mobilizing all aspects of the economy while also being able to reap the benefits of a free market by selling its goods around the world with increased diplomatic goodwill. Throughout the pandemic, Chinese businesses, both public and private, benefited from this situation across multiple sectors. In the mining sector, Jiangxi Copper, Zijin Mining, and Chalcho Ltd all met or exceeded their 2020 Q1 or Q2 production targets despite the negative impact of COVID-19 as compared to those of Western competitors (Chalco 2020; Jiangxi 2020; Zijin 2020). Earnings statements from Newmont Goldcorp, Barrick Gold, Southern Copper, Alcoa, and Freeport McMoran, all noted considerable headwinds when the pandemic caused operational downtime at mining sites in "care and maintenance," contract cancellation costs, and employee separation costs (Newmont Goldcorp 2020; Barrick Gold 2020; Southern Copper 2020; Alcoa 2020; Freeport McMoran 2020).

The COVID-19 pandemic presents an opportunity for the United States to shift its geoeconomic policy away from emphasizing state security under shareholder capitalism to one of human and business security under stakeholder capitalism fueled by interstate *cooperation*. U.S.-based pharmaceutical companies Pfizer and Johnson & Johnson are two entities that are well positioned to spearhead an increase in U.S. power and influence through stakeholder capitalism. Despite declining revenues due to COVID-19, both companies solidified their market position with Chinese consumers and saw earnings outperform as a result (J&J 2020; Pfizer 2020). In the long term, the trust these companies build with Chinese consumers and other stakeholder partners to supply medicines will enable them to exert tremendous advantage over international affairs. COVID-19 may, in this way, ultimately serve as a trigger for policymakers to align bipartisan support with human and business security, as the new normal in a war on COVID that precipitates the shift away from conventional military budgets and capabilities. Additionally, as the U.S. becomes increasingly globally interdependent, the country can act in its own best interest when competitors have a reliable infrastructure and can add value to our businesses.

While extraordinary government intervention mitigates some business risks in the short term, the globally integrated nature of business operations and supply chains means inter-governmental coordination and collaboration are even more critical to sustaining a post-pandemic “wartime” footing in the twenty-first century. Wartime economic production no longer relies solely on national enterprise but rather on international enterprises and foreign nation-states—perhaps even rivals. In some cases, foreign corporations and their associated foreign supply chains can even be the critical infrastructure for state security.

Further, the international hunt for new global consumers and markets will present dominant American businesses with the added leverage to demand that foreign governments invest in education, protect workers and human rights, abide by international rules and regulations, and build resilient infrastructure. While these demands improve human security, they likewise position the U.S. uniquely within the Great Power Competition by solidifying its position as a significant stakeholder in global affairs.

Interdependence of Critical Infrastructure

The World Economic Forum broadly defines competitive economies in terms of productivity, but it also emphasizes the “basic requirements” that include institutions, infrastructure, macroeconomic environment, health, and primary education (Schwab 2020, p. 54). We often take for granted what American businesses’ competitive advantages are: excellent transport and communications networks, effective healthcare services, stable power networks, supplies of relatively clean water and safe food, and credible banking services, to name a few. Yet, budgetary analysis demonstrates that these critical sectors may not be currently receiving their proportionate due.

In 2020, the USDA budget was cut despite agriculture generating one-fifth of all national economic activity. The Agricultural Research Service is responsible for developing vaccines and enhanced diagnostic capabilities to protect against emerging foreign animal and zoonotic diseases that threaten the Nation’s food supply, agricultural economy, and public health. According to The Office of Management and Budget, “The 2021 Budget requests $21.8 billion in discretionary resources for USDA, a $1.9 billion or 8% decrease from the 2020 enacted level. The Budget proposes $240 billion in mandatory net savings over ten years from USDA programs to reduce long-term deficits” (U.S.G. 2020, p. 25). In another reduction, the Department of Commerce 2021 budget request was $7.9 billion, a $7.3 billion or 48.0% decrease from the 2020 enacted level. This is a drastic reduction considering that the department is tasked with investing in industries of the future, such as artificial intelligence (A.I.) and next-generation communications technologies, as well as helping to keep American people and property safe by maintaining early warning systems for extreme weather and disruptive solar events (U.S.G. 2020, p. 29).

Even more strikingly, given the presence of a global pandemic, Health and Human Services (H.H.S.) saw its budget cut to $94.5 billion, a 10% decrease from the 2020 enacted level. This reduction was made even though H.H.S. is responsible for biodefense, responding to public health threats, and medical countermeasures against chemical, biological, radiological, nuclear, and infectious disease threats, including pandemic influenza. The agency also controls the Food and Drug Administration (F.D.A.), responsible for modernizing drug research, advancing digital health technology, and assuring the safety and efficacy of human and veterinary drugs, medical devices, and the nation's food supply (U.S.G. 2020, p. 49).

Meanwhile, the Department of Treasury budget increased to $13.3 billion, or $291 million and 2.2% above the 2020 level. Part of the increase includes a $35 million allocation for Treasury to continue the swift implementation of the Foreign Investment Risk Review Modernization Act of 2018. FIRRMA updates CFIUS to address national security concerns arising from foreign non-controlling investments in American business (U.S.G. 2020, p. 85). Despite the increase, the threat of adversarial capital into strategic American businesses has, in fact, been widely underreported due to its benefit to shareholders and elites. The U.S.'s interdependence with businesses worldwide means this implementation should be expanded even more to assist partner countries with controlling and managing potential adversarial capital into strategic businesses of their own. Take, for example, the case of Shanghai Fosun Pharmaceutical Co Ltd., a leading Chinese pharmaceutical company. In 2020, Fosun formed a strategic development and commercialization partnership with BioNtech of Germany to distribute the COVID-19 vaccine in China, a region outside the licensing deal with Pfizer (Pharmaceutical Technology 2020). Part of the agreement included Fosun making a $50 m equity investment in BioNTech (Fosun 2020). Fosun and BioNtech are also looking at jointly manufacturing the vaccine beyond their initial agreement using Chemo Wanbang Biopharma, a joint venture between Jiangsu Wanbang Biochemical Pharmaceutical Group, a subsidiary of Fosun Pharma, and Chemo Pharmaceutical Group of Spain (Ng 2020). While in this case, perhaps, the collaboration among U.S., German, Spanish and Chinese companies will benefit all stakeholders involved, indeed its implications for the G.P.C. need to be analyzed at the highest levels.

Along with the Department of the Treasury, cybersecurity infrastructure is one of the few areas that saw an increase in federal funding. It is no surprise, therefore, that the U.S. Chamber of Commerce's July 2020 assessment of cyber risk reads like a Defense Department policy brief, with talk of cybersecurity "readiness," service attack "denial," data "destruction," business "disruption," and long-term efforts to "strengthen network security" (U.S. Chamber of Commerce 2020). This type of battle-ready language appeals to bipartisan support. Consequently, and precisely because it is well funded, cybersecurity infrastructure is one of the country's strengths in attracting business investment relative to others. Additionally, the Department of Homeland Security 2021 budget request was $52.1 billion, a $1.6 billion or 3.2% increase from the 2020 enacted level, while the Department of Education 2021 budget requested $66.6 billion for Education, a $5.6 billion or 7.8% decrease compared to the 2020 enacted level (U.S.G 2020, p. 55).

In summary, a competitive and productive business environment requires that all critical infrastructure segments be equally well supported; no one component can operate without the other, as they are all interdependent. The country's strength will only be as strong as its weakest industry in a crisis. Traditional security sectors would be well served by sharing their budgets with other agencies, equally crucial to businesses and humans' security.

Business Security and Access to Capital

The condition of financial security is critical for private industry to feel comfortable aligning itself with the public sector and taking risks investing in long-term strategic goals over short-term profits. Despite their role in ensuring that businesses have access to affordable capital, the Small Business Administration 2021 budget request of $739 million is a $243 million or 25% decrease from the 2020 enacted level (U.S.G. 2020, p. 105). Financial security means access to multiple sources of capital. State capitalism ensures this condition is largely mitigated with domestic government-provided capital. Conversely, those same advantages can make it more challenging to attract foreign investment. Accommodative monetary and fiscal policies in the United States provide similar domestic support in the short term, but gridlock and dysfunctional policies hamper business confidence long-term. If emergency government support for business is removed as U.S. budgets tighten and deficits rise, private industry will become more reliant on venture capital and private equity. China is now on par with the United States in terms of venture capital commitments. However, domestic sources now account for most newly committed V.C. and P.E. funding in China (Harden 2017). Their ability to maintain such levels and insulate V.C. and P.E. recipients from a downturn in global capital flows due to the pandemic, protectionism, or regulation will continue to be advantageous within the G.P.C.

Human security is closely correlated to business security in that both humans and businesses use the same critical infrastructure, rely on sound financial institutions, and ultimately need cash to survive. More than any other advanced citizenry, Americans rely relatively more on employment and business success for security rather than on the state and social welfare system. Whether one agrees with the underlying political policy or not, if humans rely more on businesses than governments to provide for their welfare, they will demand their tax dollars be spent on humans first, businesses second, and the state third.

China and the U.S.—Rivals and Partners

Given the interdependence of foreign actors to fight future challenges like pandemics, climate change, and terrorism, conventional war, and even the preparation for it degrades the foundations of globally integrated supply chains that underpin our collective human and business security. In this juxtaposition, where human and business security no longer aligns with traditional military-centric nation-state security, great power fundamentally changes. This condition of great powers being simultaneously friend and foe is most apparent in the U.S.'s relationship with China.

The Biden, Trump, and Obama Administrations have all recognized to some degree that China represents the most significant foreign policy challenge, or threat, of our time. Conversely, with its offering of substantial cost efficiencies, important markets for American farmers, and growing consumer spending, China might just as readily have been branded the greatest opportunity of our time. Arguably, China's intensity of opportunities and threats will likely increase and converge symbiotically over the next few decades. Until now, shareholder capitalism has tilted the tradeoff of opportunities and threats in favor of business growth, a policy that is now at odds with core U.S. Government security interests.

American families rely on Chinese factories. Chinese families rely on American medicine. In such a state of interdependence, how does one measure a great power? The cynic might say that global corporations have won, deploying their capital to hook great powers and their publics on their products, services, and cash. Because of China's outsized economic role in global supply chains, with which the U.S. and others are thoroughly integrated, reducing the U.S.–China economic interdependence would entail what has quickly become known as "decoupling." According to Goldstein, "the opportunity costs of decoupling will include forgoing supply chains that make economic sense and forgoing some areas of international collaboration in research and development that contribute to scientific progress" (Goldstein 2020, p. 53). The severe disruptions and dislocations experienced during the COVID-19 pandemic starkly illustrate the possible implications of U.S.–China rivalry.

As currently configured, great power competition between the U.S. and China is a game with no discernable end and no utility with which to measure progress towards a final decisive moment or "win." Some might argue that winning is not even the goal, but instead continually improving one's position relative to others so that in the event of a game (war), our team is better positioned to win. As stated above, state-owned enterprises (SOEs) proved a great asset to the Chinese state in combating COVID-19 due to their alignment with the government and their ability to disregard the needs of any other stakeholders, including shareholders. The U.S. reliance on the Chinese consumer market for American companies driven by shareholder return is significant. While this situation poses challenges in the short term, if adequately incentivized and aligned with human security in the future (via public–private partnerships), business power will be a significant factor in the game played between great powers.

For example, Tesla's foray into the Chinese market exemplifies the growing power of corporations and the co-dependence challenges faced by both American businesses and Beijing. The concessions initially received by Tesla in China were unprecedented. First, Tesla got support from local and National Governments to keep 100% control of its local operations and protect its intellectual property. This led to the National Development and Reform Commission announcing that the 50% foreign ownership cap for automotive businesses would disappear by 2022, with operations devoted entirely to EVs exempted almost immediately. Next, Tesla secured multiple financing deals from state-controlled banks worth more than $1 billion. After China's lockdown, Tesla was back up and running with plenty of N95 masks on hand weeks before competitors (Campbell et al. 2021). It is hard to know what China's initial motives are for such concessions, but Musk's success indirectly support SpaceX and, by extension, the Department of Defense. That said, less than one-year later, Chinese authorities and regulators appear to be showing signs of unease with such concessions and are making it increasingly difficult for Tesla to operate. While such actions serve as a potential warning sign to future corporations investing in China, more importantly, Beijing's hot/cold moves demonstrate the difficulty state-capitalist economies face in building trust with global stakeholders. The Chinese consumer's explosive growth has increasingly turned the country into a net importer of goods from food to energy. To keep the growing domestic consumer class happy, the Chinese state will be required to open itself to risks they are not accustomed to. In their July 1, 2020 earnings statement, General Motors notes that they delivered 492,489 vehicles in the U.S. in the second quarter of 2020, a decrease in total vehicle sales of about 34% compared to a year prior. During the same period, GM delivered over 713,600 vehicles in China, demonstrating strong growth (GM 2020). It is up to Tesla and GM to ensure that they use their market power to benefit all stakeholders, not just its shareholders.

The Prescription

As G-20 nations and governments worldwide coordinate and implement emergency measures to shore up the global economy, mobilize key industries, and share breakthrough medical innovations with friends and foes, the U.S. may soon find itself at the nexus between the great power competition and a *great power cooperation*. How can nations agree to share medical advancements yet limit the integration of 5G telecommunications equipment in today's world? Are human, business, and nation-state security aligned for the United States vis a vis China in 2021? Why are great power governments gearing up for war when great power businesses are gearing up for more collaboration, joint ventures, and equity investments? What is the strategy the U.S. needs to navigate a winning game on the current GPC playing field?

At first glance, the strategy of state capitalism seems poised to out-perform shareholder capitalism in a wartime competitive environment among peers, at least in the short term. State capitalism, and the resulting strong alignment between states and business interests, will be more effective in managing the short-term effects of a war-like COVID-19 environment and global interdependence challenges than

Western alternatives. The U.S.'s short-term disadvantage will slowly change to a long-term advantage as human security replaces state security as the dominant factor in national security. The power of connected global stakeholders will grow, driven by the consumption of products and services. Indeed, it is precisely the emergence of Chinese consumers and stakeholders that will limit the power of Chinese state capitalism and reward businesses that align with human security.

In the short and medium-term, the U.S. should narrow its efforts in the GPC to sectors that align state, business, and human security. This focus would require the country to revise industrial policy and embrace sustained government interventions into the private sector. Specifically, the country must invest in critical infrastructure, both domestic and foreign, via public–private partnerships and deploy technological innovations to win the trust of a global consumer class.

Public Private Partnerships (PPPs)

Public–Private Partnerships (PPPs) will help to align state, human, and business security needs. The design of the traditional PPP is to encourage private innovation and financial investment in public infrastructure. This approach now needs to expand into health and defense supply chains and education. Domestically, PPPs offer private industry long-term options to invest and allocate capital in sectors that are critical to national security, tying together the long-term needs of humans and the profit motives of business. Additionally, in the developing world, PPP with foreign governments will support infrastructure to help meet the United Nations' Sustainable Development Goals. As a foreign policy tool, PPPs tie stakeholders in strategic geographies with those in the United States, feeding the positive feedback loop of human security and reducing the risks of foreign conflict.

Medical PPPs

The partnerships between pharmaceutical companies and the CDC define the war on COVID-19. The CDC works with the private sector because public–private partnerships advance the CDC's mission of protecting Americans (CDC 2021). Such partnerships illustrate the universal potential global benefit of PPPs, and they should extend into other sectors. One such sector is supply chains of vaccine ingredients. Due to globalization, pharmaceutical products and vaccines are manufactured worldwide. The most active pharmaceutical ingredients (APIs) come from China, including vaccinia-capping enzymes that prevent mRNA degradation in the latest COVID-19 vaccines.

Conversely, China relies on American drugs that have been developed and patented to cure its growing middle class (Kominers et al. 2020). In both countries, resilient and diversified supply chains provide benefits to stakeholders. Additionally, PPPs serve as tools to bolster budgets for the U.S. Food and Drug Administration (FDA) to compete with China's National Medical Products Administration (CNMPA) and help improve stakeholders' perception of medical regulators, domestically and abroad. Medical PPPs will have considerable implications in U.S. foreign policy and the country's ability to influence vaccine diplomacy's geopolitics.

Education PPPs

The U.S. should view educational institutions as critical infrastructure that warrant proportionate government attention. The Cybersecurity and Infrastructure Security Agency (CISA) website identify 16 critical segments of infrastructure: Chemicals, Commercial Facilities, Communications, Critical Manufacturing, Dams, Defense Industrial Base, Emergency Services, Energy, Financial Services, Food and Agriculture, Government Facilities, Healthcare, IT, Nuclear, Transportation, and Water (CISA 2021). Because PPPs between universities, countries, and businesses are forming to develop COVID-19 vaccines, the U.S. should add education as the seventeenth critical infrastructure segment.

According to the World Economic Forum (WEC), the United States experienced downward trends in the adequacy of skills of all graduates between 2015 and 2020. Conversely, China has improved its scores year after year (Schwab 2020). A skills gap study from consulting firm Deloitte and the National Association of Manufacturers projected in 2018 that more than half of the 4.6 million manufacturing jobs created throughout the next decade would go unfilled, creating challenges for Aerospace Defense Equipment Stocks (Dutta 2020). The WEC estimates that in OECD economies, five new jobs are created with every $1 million of public investment into education and R&D, and twice as many when the investment is channeled through higher education institutions. This amount is higher than the job creation triggered by investments in any other sector in advanced economies (Schwab 2020). If the U.S. is to remain globally competitive, it must prioritize education initiatives and funding.

Supply Chain PPPs

The Belt and Road Initiative (BRI) demonstrates the importance of supply chain resiliency to China, with its National Development and Reform Commission embracing PPPs as part of its strategy. Currently, China remains dependent mainly on State-Operated Entities (SOEs), and as a result, the country is rapidly courting private enterprises to attract capital to national priorities. Attracting private industry to participate in the BRI, especially from countries traditionally wary of Chinese influence, will be critical to China's success. However, foreign capital is a double-edged sword for Chinese SOEs, allowing for fair pricing competition, a transparent procurement process, and strong governance. While the percentage of Chinese PPPs using foreign capital has increased exponentially since the 1990s, the number remains below 50% (Sugden 2016). Western institutions hold a distinct advantage in attracting private investment into PPPs and have more experience in procuring and administering such programs. However, the sheer scale of Chinese BRI PPPs for foreign long-term investment opportunities is very appealing. The extent to which the Chinese government can attract foreign capital into such projects will likewise build trust with other BRI PPP recipient countries. For example, Australian private enterprise and capital deployed in a PPP with Chinese projects add significant legitimacy to the BRI. In other words, attracting foreign capital into such programs will remain key to Chinese foreign policy and diplomacy. At the same time, attracting such capital will require reforms within China, including the adherence to international best practices and the rule of law, thus fulfilling a long-standing goal of Western democratic states.

In the United States, Public–Private Partnerships need significant political and budgetary support, specifically in education, energy, mining, and communications technology. Government agencies need to protect businesses, especially those privately held, that take risks in deploying capital into critical supply-chain infrastructure overseas. In a budgetary constrained environment, policymakers need to choose investments strategically to ensure each supply chain is adequately supported. If support wanes due to a change in administration, business security is at risk, and the benefits are weakened. For example, long-term investments in rare earth and critical minerals such as lithium in strategic countries could be structured through PPPs. Outputs benefit all stakeholders, not just states or shareholders. PPP investments in markets via stakeholder capitalism will exponentially increase human security while winning the "hearts and minds" of local populations, a significant component in our current U.S. foreign strategy. An essential part of such ventures' success is the use of U.S. power to build regional alliances through trade and infrastructure initiatives. The New Silk Road Initiative currently in play is one such project that would benefit the entire Central Asia–South Asia (CASA) region and could create economic stability through trade partnerships, supply the U.S. with access to critical minerals, and assure the U.S. a redundant position and edge within the GPC.

Industrial Policy and the U.S. Defense Industry

Small businesses comprise 65–75% of prime contracts with the DoD, an eye-opening statistic given their heightened risk exposure due to the pandemic. Most notable risks include cash flow and liquidity challenges, as well as the high costs of implementing DoD's new Cybersecurity Maturity Model Certification (CMMC). Given heightened financial risk factors, the small business industrial base becomes highly vulnerable to adversarial capital, in this case, cash from China. According to the DoD Industrial Capabilities annual report to Congress, deindustrialization and the extreme consolidation of supply chains in aircraft, ground vehicles, machine tools, missiles, printed circuit boards, and the risk of dependence on sole-source vendors, weaken industrial resiliency. Additionally, the report calls out short-term shareholder earnings as potentially "damaging" (OSD 2021).

Meanwhile, foreign investors buying into strategic industries bolster share prices. The Chinese are investing in American technology companies, systematically targeting U.S. greenfield investments like technology, R&D networks, and advanced manufacturing. China's strategic investment in the U.S. increased some 800% between 2009 and 2015, reaching roughly $45.6 billion by 2016 (Stoller and Kunce 2021).

There are too many complex systems, procurements, and facilities to maintain or manage industrial defense policy and acquisitions effectively. Among these systems are lasers, railguns, hypervelocity projectiles, intelligence, surveillance, reconnaissance capabilities, military space capabilities, electronic warfare capabilities, military cyber capabilities, hypersonic weapons, military robotics, autonomous unmanned vehicles, quantum technology, artificial intelligence (AI), stealth bombers, fighters, submarines, tanks, rifles, fuel, and massive operations and maintenance and aging infrastructure costs. This list constitutes only a fraction of the weapon systems, gear, equipment, facilities, and general items that the Pentagon procures from businesses, small, medium, and large. The more complex the weapon system, the more complex its supply chain (Renewed Great Power Competition). The globalization of supply chains and the reliance on components, subcomponents, materials, and software from other countries is concerning. The pandemic has shown that the United States lacks sufficient investment in the most basic industrial supply chains like personal protective equipment, all while continuing to burden itself and its military with ever more complex supply chains that will surely also be under-resourced and at risk.

Managing and executing federal contracts is expensive for both the buyer and seller. On the seller side, facility clearances, cybersecurity, approved accounting and purchasing systems, significant compliance requirements, and often unpredictable and lengthy procurement cycles are barriers to market entry and often limit competition to a few entrenched firms. Furthermore, lowest-price type acquisitions with short performance periods give industries little assurance of a future need and lead to weak supply chains and poor services. On the other hand, well-funded and well-thought-out procurements that seek the development of innovative products and services that have no immediate commercial application but may significantly advance science or technology domains in the future are essential. Suppose non-traditional industries, including many tech startups, emerge as the tools of a future battlespace. In that case, simplifying the barriers to working with the federal government will help foster a more collaborative public–private partnership.

On the buyer side, contracting shops remain buried in paperwork and wholly removed from the supporting programs. Complex appropriations and an over-reliance on continuing budget resolutions lead to truncated and shoddy procurements; last-minute execution of option years leads to uncertainty in the market, and end-of-year "sweep" money splashed out in a "use it or lose it" fashion leads to waste. The U.S. acquisition engine must contend with too many complex problems and obligations that leave little to no oxygen for the country to respond to new requirements in times of crisis. Additionally, those existing programs require vast and complex globally integrated supply chains that collectively drain the surge capacity of the industrial base. Without drastic reductions in the sheer quantity of systems procured, the surge capacity of the U.S. industrial base will falter in a crisis (Cancian and Saxton 2021). In the unlikely event of a large-scale peer-to-peer conflict, tanks, armored personnel carriers, helicopters, jets, and drones will not be quickly replaced, even in a total-war-production environment. If, on the other hand, the government buys commercial products and services that happen to protect national stakeholders, then the U.S. acquisition cycle can be streamlined.

Continuing to focus on the "aerospace and defense" sector as a stand-alone pillar of industrial policy is counterproductive in the long term. As national leaders claim, if the U.S. is currently at war with COVID-19, then human and business security is the new battleground; quite possibly, traditional industrial aerospace and defense sector companies will not fight wars of the future. Industries with commercial applications in cyber, biotech, and artificial intelligence could be used both in state-to-state conflict and in defense of stakeholders. This shift presents a long-term opportunity for industrial policy planners. In the past, countries established defense industries to ensure that they would not need to convert existing factories to maintain supply chains in times of war. Today, most weapon systems in the U.S. have little to no commercial application and serve largely as a jobs program in many states. In the future, the country could base federal procurements on commercially available products that serve all stakeholders in society, not just the state. This would give U.S. businesses reasonable confidence that products and services procured today will not be canceled in the next fiscal year. It would also drive competition and allow government acquisition groups to terminate poor-performing contractors since they would not be sole suppliers.

Findings

The pandemic has laid bare weaknesses in U.S. policies and those of competing global powers in terms of how battles are now being fought. Given this new information, the U.S. must take timely action to address its vulnerabilities. In the short term, the U.S. must find bipartisan support for a national security policy that elevates business and human security. Out of pure necessity for state action, the war on COVID-19 could give legislators political cover to intervene in the whole of government in unprecedented ways. The question is, how will this intervention support or hinder business security? Given the global influence of corporations today, will countries compete with other great powers without working hand-in-glove with the private sector? New, smarter forms of regulations will be required to harness the power of governments in shareholder-dominated markets.

Most importantly, reliable and defensible critical infrastructure will be essential in attracting and deploying new public–private capabilities in response to crises. It is highly recommended to develop a new U.S. public–private defense plan to meet today's needs within the framework of the modern GPC. Private industry would deter emerging competitors with the strength of their balance sheet, the skills of their workforce, and the benefits they provide to stakeholders. In turn, governments would hold new fiduciary responsibilities to adequately invest in and protect commercial networks critical to functioning business, effectively deterring harm to private industry that may arise from newly emerging threats.

The great power competition would no longer be among warring states or large armies but among small, medium, and large businesses. Great power policies would need to provide businesses with the ability to compete and win by aligning national security to the basic needs of commercial enterprises and their employees. In these conditions, the great powers would promote individual freedom and the rule of law, the enforcement of property rights, neutral arbitration of disputes, and government accountability while investing sufficiently in infrastructure.

Modest U.S. investments in education, healthcare, information, and communications technology and digitization would lead to significant gains in global competitiveness while also growing U.S. jobs. To make these investments, great powers would need to identify new ways to develop effective tax structures that reflect the realities of the "Fourth Industrial Revolution." The U.S. should lead efforts to construct an international agreement on the taxation of digital activity. Further, companies and research institutions in like-minded countries should explore ways to bring together their technological strengths and ideas to benefit stakeholders and start priming the positive feedback cycle of human security that interconnected stakeholders reap from each other.

Stakeholder capitalism that aligns state and human security presents U.S. businesses with an opportunity to outcompete their great power rivals by fostering effective PPPs domestically and globally. People, not capital, drive economic growth, and social cooperation is fundamental to state power. More than any other commodity, trust is the most valuable asset in a stakeholder economy. Western economies remain the most trusted in the world; however, despite outperforming China, the U.S. still has work to do to get back on top of the rankings (Drew 2020). A renewed focus on human security would support such an ascent. Business innovation could fulfill human needs, and investments in innovation could be returned to stakeholders in kind. However, when state-capitalist economies do not protect human interests, the corporations that rely on foreign stakeholders will be forced to take action to put their interests above the state. No amount of government concessions and protectionist policies will be powerful enough to reverse such stakeholder pressure. Despite the short-term crisis, the COVID-19 pandemic demonstrates that U.S. businesses are better positioned to compete for stakeholder trust than our great power rival, China.

References

Alcoa Inc (2020) Second quarter earnings annual report, pp 1–4. https://investors.alcoa.com/news-releases/news-release-details/2020/Alcoa-Corporation-Releases-Preliminary-Second-Quarter-2020-Results/default.aspx

Aluminum Corporation of China Limited (2020) Interim report. http://www.chalco.com.cn/en/tzzgxen/yjbgen/

Barrick Gold Corp (2020) Second quarter report, pp 2–128. https://www.barrick.com/English/investors/quarterly-reports/default.aspx

CACI International (2020) Asymmetric threat global snapshot: own worst enemy—the human factor in national security. https://www.asymmetricthreat.net/thought_leadership.shtml

Campbell M, Zhang C, Fan H, Stringer D, O'Brien E (2021) Elon Musk loves China, and China loves him back—for now. Bloomberg Businessweek. https://www.bloomberg.com/news/features/2021-01-13/china-loves-elon-musk-and-tesla-tsla-how-long-will-that-last?sref=skg8buCS

Cancian M, Saxton A (2021) US war surge production too slow, CSIS finds. Breaking Defense. https://breakingdefense.com/2021/01/us-war-surge-production-too-slow-csis-finds/

Cybersecurity and Infrastructure Security Agency (2021) Identifying critical infrastructure during COVID-19. https://www.cisa.gov/identifying-critical-infrastructure-during-covid-19

Drew K (2020) U.S. suffers greatest global decline in trust. U.S. News and World Report. https://www.usnews.com/news/best-countries/articles/2020-01-15/us-trustworthiness-rating-dives-in-2020-best-countries-report

Dutta A (2020) Near-term outlook dim for aerospace-defense equipment stocks. https://www.nasdaq.com/articles/near-term-outlook-dim-for-aerospace-defense-equipment-stocks-2020-05-20

Freeport McMoran (2020) FXC conference call second quarter 2020 results, 23 July 2020, pp 1–39. https://investors.fcx.com/investors/default.aspx

General Motors (2020) Proxy statement and notice: annual meeting of shareholders, 16 June 2020, pp 1–136. https://investor.gm.com/shareholder

Goldstein A (2020) US–China rivalry in the twenty-first century: Déjà vu and Cold War II. China Int Strategy Rev 2:48–62. https://doi.org/10.1007/s42533-020-00036-w.pdf

Harden T (2017) China now rivals U.S. in VC investments. Venture Beat. https://venturebeat.com/2017/10/14/china-now-rivals-u-s-in-vc-investments/

Jiangxi Copper Company Limited (2020) Interim report, pp 2–136. http://en.jxcc.com/channel/e1098c7ad7ef4f2d9e902c5fda53b59e.html

Johnson and Johnson (2020) JNJ earnings presentation Q2, 16 July 2020, pp 3–23. https://johnsonandjohnson.gcs-web.com/financial-information/quarterly-results.

Kominers S, Tabarrok A (2020) Vaccines use bizarre stuff. We need a supply chain now. Bloomberg—MSN Money. https://www.msn.com/en-us/money/other/vaccines-use-bizarre-stuff-we-need-a-supply-chain-now/ar-BB186ATQ (and Alex Tabarrok 18 Aug 2020)

Newmont Inc (2020) Newmont announces solid second quarter results, pp 1–30. https://www.newmont.com/investors/reports-and-filings/default.aspx

Ng E (2020) Fosun pharma rushes logistics plan for possible BioNTech's Covid-19 vaccine deployment from January. South China Morning Post. https://www.scmp.com/business/companies/article/3115902/fosun-pharma-rushes-logistics-plan-possible-biontechs-covid-19

OSD A&S Industrial Policy (2021) 'Industrial Capabilities' report to congress. https://www.businessdefense.gov/

Partnering with the CDC (2021) Centers for Disease Control and Prevention. https://www.cdc.gov/partners/partnering.html

Pfizer Inc (2020) Second quarter 2020 earnings teleconference, 28 July 2020, pp 3–19. https://investors.pfizer.com/financials/quarterly-reports/default.aspx

Pharmaceutical Technology (2020) BioNTech signs covid-19 vaccine deals with Pfizer and Fosun. Pharmaceutical Technology. https://www.pharmaceutical-technology.com/news/biontech-pfizer-fosun-covid-19-vaccine/

Sault S (2021) Davos agenda: what you need to know about geopolitics. World Economic Forum. https://www.weforum.org/agenda/2021/01/davos-agenda-2021-beyond-geopolitics-international-institutions-multilateral-world-social-justice-public-private-partnership/
Schwab K (2020) Now is the time for a 'Great Reset'. World Economic Forum. https://www.weforum.org/agenda/2020/06/now-is-the-time-for-a-great-reset/
Schwab K, Zahidi S (2021) The global risks report—insight report 2021. World Economic Forum, pp 1–97. http://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf
Shanghai Fosun Pharmaceutical (Group) Co., Ltd. (2020) Third quarterly report, 29 Oct 2020, pp 1–22. https://www.fosunpharma.com/en/investor/investor-index.html
Southern Copper Corporation (2020) Results second quarter and six months, 28 July 2020. http://www.southernperu.com/ENG/invrel/Pages/PGAnnualSec.aspx
Stoller M, Kunce L (2021) How wall street is devastating our national security. The American Conservative. https://www.theamericanconservative.com/articles/americas-monopoly-crisis-hits-the-military/
Sugden C (2016) Keeping the 'Private' in PPPs in the PRC. Asian Development Blog. https://blogs.adb.org/blog/keeping-private-ppps-prc
The Belfer Center (2021) The Thucydides's Trap project. Harvard, Kennedy School for Science and International Affairs. https://www.belfercenter.org/thucydides-trap/overview-thucydides-trap
United Nations Trust Fund for Human Security (2012) United Nations general assembly resolution, A/RES/66/290, 25 Oct 2012, pp1–2. https://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/66/290
United States Government (2020) A budget for America's future. Budget of the United States Government Fiscal year 2021. Office of Management and Budget. PDF, U.S. Government Publishing Office, Washington DC
US Chamber of Commerce (2020) Cyber insurance special addition—assessment of business cyber risk, July 2020. https://www.uschamber.com/cyber-abc/
Zijin Mining Group Company Ltd (2020) First quarterly report 2020, 28 April 2020, pp 1–31. http://www.zijinmining.com/upload/pdfjs/web/viewer.html?file=/upload/file/2020/09/14/c3559e5463c4427983d5c251629852b3.pdf

Dr. Adib Farhadi is Assistant Professor and Faculty Director of the Executive Education Program at the University of South Florida. His research focuses on the intersection of geoeconomics, geopolitics, and religion, particularly on the "Silk Road" Central and South Asia (CASA) Region. Dr. Farhadi also serves as the Editor-in-Chief of The Great Power Competition book series and previously served in senior positions for Afghanistan and extensively advised the U.S. government and various other international organizations..

Ian Galloway is a Principle and Management Executive in the Aerospace, Defense, and Energy sector with a keen interest in—and significant experience with—public affairs, international business, strategic consulting, and risk management.

At DGC International (DGCI), he specializes in developing innovative solutions that meet client needs in VUCA environments. Ian focuses on expanding current services; capturing new business in existing core mission areas; risk management; strategic communication; and corpo-rate development. Recently, he helped to document and refine key supply chain, logistics and program management processes and systems in support of government, military and international commercial markets. As a key member of DGCI's closely knit Executive Team, Mr. Galloway has contributed significantly to the achievements of DGCI.

He travels frequently to maintain his ties to international culture and politics—and his skills to promote the efforts of the Memorial Day Flowers Foundation and Zamani Foundation at home and abroad.