



Prepared for The Office of
U.S. Senator Maggie Hassan

Counteracting China's Digital Silk Road



Niki Hendi
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Disclaimer

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Honor Pledge

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

A handwritten signature in blue ink, appearing to read "Nitha Hendi".

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Executive Summary

China is expanding into international digital and telecommunications infrastructure through the Digital Silk Road (DSR), a branch of China's Belt and Road Initiative (BRI) focused on digital and telecommunications infrastructure. The BRI has been connected with issues of security concerns, the spread of anti-democratic values (including lack of Internet freedom), and predatory lending practices leading to debt for BRI member countries. The U.S. currently lacks an adequate response to the BRI, leaving China unchecked in their expansion and the U.S. falling behind in telecommunications development. In light of the various consequences that arise from the expansion of the BRI, this analysis considers five alternatives to address the growth of the BRI and how to increase American efforts in international telecommunications infrastructure development:

1. Increase Messaging about Problems with China's BRI
2. Assist Countries in Renegotiating Chinese Debt
 - 2.1. Direct U.S. Intervention
 - 2.2. Indirect U.S. Intervention through Participation in the Paris Club
3. Enter Bilateral Agreements to Limit Spread of BRI
 - 3.1. Limit BRI Expansion
 - 3.2. Global Telecommunications Expansion with Allies
4. Provide Subsidies for Current American Companies to Expand into 5G Globally
5. Provide Direct Grants or Loans to Most-Targeted Areas

Each alternative is evaluated with respect to the following criteria: (1) budget efficiency, (2) effectiveness, (3) logistical feasibility, (4) bipartisan support, and (5) equity. The analyses conducted in this report suggest that Alternative 2.1: Direct U.S. Intervention in Debt Renegotiations for BRI Countries and Alternative 3.2: Bilateral Agreements with Allies to Expand Telecommunications Development are the most promising options. Alternative 1: Increase Messaging about Problems with the BRI is also recommended to be carried out in conjunction with these alternatives, though should be given less priority. With regards to implementation, it is recommended that Senator Hassan's office first focus on building bipartisan support within Congress, then with international allies such as Japan and Australia, and finally with developing countries who actively seek an option other than China's BRI for telecommunications financing support.

Problem Statement

Through its Belt and Road Initiative (BRI) for global infrastructure development, China is expanding into the international digital infrastructure space with its Digital Silk Road (DSR) program. China's efforts have currently extended into over 100 countries through their telecommunications leader Huawei, while the U.S. has yet to conduct a similar expansion into developing countries to compete with China (Campbell, 2017). *The U.S. does not have adequate legislation to counteract China's expansion with their own efforts. This also puts international American interests and values at risk, as well as the U.S.'s former dominance in the digital space.*

Client Overview

As a member of the Senate Homeland Security and Governmental Affairs Committee, Senator Hassan helps oversee the Department of Homeland Security, “including cybersecurity and drug interdiction efforts” (“Committee”). This problem is tangentially related to her work in the cybersecurity space given the concerns over security risks with China’s telecommunications systems. For a strong national defense, Senator Hassan has also stated her commitment “to confront any nation that may seek to break international norms or undermine American interests, including Russia, Iran, North Korea, and **China**” (“A Strong”). Creating strong legislation to ensure American interests against an active Chinese presence in the digital sphere is in line with the Senator’s priorities.

While there has been unease over China’s digital expansion and steps taken to avoid using Chinese service providers in some Western countries, there has so far not been any U.S. legislation introduced to limit its expansion, and therefore influence, in developing countries. It is important to address it now to pass preventative measures rather than reactive ones, especially as demand for China’s digital infrastructure investments is on the verge of an increase from more people relying on the Internet due to Covid. The digital aspect of China’s investments is also increasing in relative importance “as COVID-19 has made it difficult to build large-scale infrastructure under BRI” (Iwasaki, 2020).

As China expands its global influence, everyone will eventually be affected in some way. The BRI already covers 65% of the world population and its reach is only growing. It is necessary for legislators like Senator Hassan to secure the data of American citizens from being stolen by other governments and corporations.

Background

China's Belt and Road Initiative (BRI), also called One Belt One Road (OBOR), was first announced in 2013 as a strategy for developing global infrastructure and “to improve connectivity and cooperation on a transcontinental scale” (“Belt,” 2018). Based on old trade routes, mainly the Silk Road, that connected China to the West, the BRI is meant to address an infrastructure gap in areas including the Asia Pacific area, Africa, and Central and Eastern Europe. The BRI has been estimated as one of the largest infrastructure and investment projects in history, as it covers over 100 countries (as seen in Figure 1), 65% of the global population, and 40% of the global GDP in 2017 (Campbell, 2017). Some estimates say this region has a \$26 trillion infrastructure deficit, emphasizing their need for investments offered by BRI (Campbell, 2017).



Additionally, not all BRI members host BRI projects. While some countries formally endorse the BRI and pledge to work with China on the program, they do not necessarily invite those investments into their own country. Italy, for example, signed a Memorandum of Understanding with China to work together within the BRI but did not officially join to host projects in Italy. Overall, the countries that have not joined the BRI “are generally more democratic, politically stable, and economically developed than those that have endorsed the initiative” (Sacks, 2021).

The BRI has \$900 billion of planned investments to make it easier for China to trade globally, and consequently makes it easier for the world to trade with each other (Campbell, 2017). This program signals a new international presence from a previously-isolationist China on a scale that has the potential to “eclipse the role of the G-7 or G-20 Forums as a new framework for stimulating infrastructure development in low income developing countries” (Campbell, 2017). China is expanding its efforts mostly into areas that need heavy infrastructure investments—such as Asia, which, excluding China, needs \$900 billion in infrastructure investments each year over the next 10 years, which is 50% above current spending rates (Firzli, 2016). The ample need for investment in these regions is a major reason why many Asian and Eastern European countries have expressed considerable interest in this new avenue of investment (Firzli, 2015).

Much of China's investments are going towards developing countries in need of infrastructure. Africa is seen as a key part for China's BRI efforts due to the need for better infrastructure in the region, and as of April 2020, there are officially 42 African countries who have signed an agreement with China ("Profiles," 2020). The region is in great need for physical infrastructure, given that in 2018, only 40% of Africans had access to electricity and 33% had access to paved roads (Forje, 2018). Despite some countries pausing their plans with China because of consequences of their growing debt, Chinese investment has had a positive effect in the region, which also houses some of the fastest growing economies in the world (Risberg, 2019).

However, China's BRI has been criticized for its 'debt trap diplomacy'—in which China provides funding to developing countries with vague loan terms and then will use their leverage to request favors (economic, military, or political, for example). These countries are signing agreements for financing potentially without fully understanding the consequences of what they are agreeing to. China is also taking advantage of the needs of these developing countries for its own benefit, further discussed under *Consequences*.

For all its potential benefits (and disadvantages), the BRI remains an ill-defined concept. China has said any country or organization can join without limitations. There are some concerns about "the transparency of how China is financing these projects, and the extent to which China is able to manage security risks in OBOR countries" (Campbell, 2017). Some countries also interpret the plan as an effort towards global spread of Chinese influence and a China-centered global trading network. The U.S. has spoken up about security concerns over whether Huawei, China's largest telecommunications company, is trustworthy as a provider of fiber-optic technology and 5G networks (Arcesati, 2020).

In 2015, China introduced the Digital Silk Road (DSR) as part of the BRI. Like the overall program, there are few specific identifiable projects and it serves more as a "a brand for virtually any telecommunications or data-related business operations or product sales by China-based tech firms in the 100+ "BRI countries"" (Greene and Triolo, 2020). So far, the BRI's support in these projects has not met the projected level of coordination with the Chinese tech firms the Chinese government expected; however, BRI's coordinating role appears poised to grow with more long-term plans over "how telecommunications, data, financial, and other networks are built and governed, and how technical standards for these networks are set" (Greene and Triolo, 2020). The overall goal of the DSR is to increase China's capacity to participate in international technology standards setting and governance norms bodies and BRI is providing increasing financial support for DSR. Due to the ongoing pandemic, DSR is well-positioned to provide digital infrastructure as is increasingly required for students and those who work from home. However, pre-existing concerns over Chinese surveillance and data handling may limit the growth of Chinese tech companies in foreign markets.

As an alternative to BRI, the U.S. proposed the Free and Open Indo-Pacific strategy (FOIP) with three pillars of security, economics, and governance (Parameswaran, 2019). However, it does not

adequately respond to the digital aspect of China's initiative. Currently, not much literature is available about what China is doing in this area specifically and what the U.S. and our allies are doing for their own international development efforts. There is a need for legislation in this area to ensure that the U.S. can check China's efforts in the digital realm to preserve American values and interests globally.

Consequences

Chinese telecommunication networks challenge American national interests and partner relationships or put them at risk. Western countries like the United States are worried about several consequences of leaving the BRI unaddressed, such as "(1) data collected by Chinese companies on the BRI countries will be passed over to the Chinese government, (2) a surveillance society will spread around the world, and (3) the degree of freedom on the Internet will decline worldwide" (Iwasaki, 2020).

Issue #1: Security Concerns

If China continues unchecked, the U.S. could lose its place as the global leader in telecommunications, and with it, its influence upon other countries on what technology to use and provide. As China takes its place at the top, its expansion of its Digital Silk Road initiative could lead to large security concerns. The Council on Foreign Relations stated that "a big fear is that Chinese players will insert backdoor mechanisms that could increase [Beijing's] intelligence and propaganda operations in BRI partner countries" (Chandran, 2018). This surveillance would be mostly at the societal level in developing countries. As Chinese firms begin to install cables, which can transfer "massive amounts of personal, government and financial data," regulatory grey areas around the security emerge (Chandran, 2018). When laying down fiber optic cables in other countries, the technicians could clamp the fibers to let data leak, consistent with previous actions from the Chinese government. Though mostly private firms, such as Huawei, are involved in these projects, there are also concerns that those firms could promote China's standards. As far back as 2012, U.S. intelligence has called Huawei and ZTE products national security risks as those companies allegedly work with the Chinese government "to spy, steal trade secrets and cast cyberattacks" (Chandran, 2018).

Issue #2: Spread of Chinese Anti-Democratic Values

This chain of consequences begins largely the same as the previous one, where the U.S. could lose its position as a global leader in the telecommunications space to China. As a result, China could use its new influence to spread its values internationally, at the expense of American values. China pulled back on the BRI slightly in 2018 when it was heavily criticized by officials in Malaysia, Sri Lanka, Pakistan, and more for its projects being too costly in those countries. At the end of 2019, the BRI seemed to pick back up, with China saying that they have since trimmed waste in their practices. A main worry of the U.S. as the BRI returns is "that China is

building a globe-spanning bloc of nations that will mostly buy Chinese goods and tilt toward China's authoritarian political model" (Bradsher, 2020). Americans sometimes view this program "as a deliberate attempt to economically marginalize the United States, to create a Eurasian sphere of influence, or as a pretext for expanding China's overseas military presence" (Chance, 2016). To "prevent the rise of an illiberal world order," the U.S. must "promote open commerce, fair rules for the digital space and freedom of the seas"

American values of democracy and freedom around the world must be maintained because "free nations are more economically successful, stable, reliable partners, and democratic societies are less likely to produce terrorists, proliferate weapons of mass destruction, or engage in aggression and war" ("The Democracy," 2017). Additionally, "democracy advocates and human rights defenders look to the U.S. for moral, financial, and political leadership and support, making American leadership indispensable" in this situation ("The Democracy," 2017). Without U.S. leadership, it is difficult to find another country to lead this initiative globally. Internet freedom is a particularly important value the U.S. would like to protect. China has shown that it will restrict Internet freedom as it has previously done in Hong Kong, a situation which the U.S. decried (Mozur, 2020).

Issue #3: Predatory Lending Practices Lead to Debt



The Institute of International Finance reported "that many poor countries in the Belt and Road Initiative now find themselves with sharply increased debt burdens. Many of these countries could barely qualify to borrow money even before they took on the new debt" (Bradsher, 2020). In 2019, European International Contractors "cautioned that loans for Belt and Road Initiative projects tend to carry considerably higher interest rates than those from lending institutions like the World Bank" (Bradsher, 2020). Sri Lanka, Zambia, and Ecuador provide three important case studies to show the repercussions of allowing China to get too intertwined in their financing.

Case Study #1: Sri Lanka

Under the former Sri Lankan president, Mahinda Rajapaksa, “Sri Lanka relied heavily on China for economic support, military equipment and political cover at the United Nations to block potential sanctions” (Abi-Habib, 2018). When he called for a new port to be built in 2007, the first loan they received was from the Chinese government’s Export-Import Bank (Exim) for \$307 million.

Eventually, Sri Lanka’s new government struggled to make payments on the debt its former president, Mahinda Rajapaksa, had taken on. In 2015, Sri Lanka sold its Hambantota port and 15,000 acres of land around it to China for 99 years to pay off the debt accrued by building it. This gave China control of territory close to the shores of a rival, India, and a strategic foothold along a critical commercial and military waterway (Abi-Habib, 2018). Since China took over Sri Lanka’s Hambantota port and erased that debt, Sri Lanka is unable to gain any revenue from that port, a major opportunity cost, and China now has a strategic location next to a rival, India. Even after China took over Sri Lanka’s port, Sri Lanka is still in a difficult position: “though the deal erased roughly \$1 billion in debt for the port project, Sri Lanka is now in more debt to China than ever, as other loans have continued and rates remain much higher than from other international lenders” (Abi-Habib, 2018).

Case Study #2: Zambia

China is becoming the largest financier of infrastructure in Africa in an effort to gain access to raw materials and establish itself as an economic superpower, having reportedly “lent more than the International Monetary Fund, the World Bank, and the Club of Paris combined” (Soto and Hill, 2020). Since many of those loans aren’t public, there is heavy suspicion that Africa’s debt to China is bigger than what is currently reported.

Zambia is one of the many African countries with heavy Chinese investment, on the verge of damaging repercussions for Zambia. Zambia took out loans from Chinese banks to fund several projects, including airports, housing projects, hospitals, and roads. Zambian sovereignty now appears to be at risk over Chinese loans. Chinese entities now have equity stakes in “two hydroelectric power plants and a company tasked with digitizing Zambia’s airwaves” through ZESCO, the state electricity company, and ZNBC, the national broadcaster (Rosen, 2018). It was also reported that ZESCO was talking with a Chinese firm to take over the entire company as debt repayment, though the Zambian government denied such dealings.

A third of Zambia’s debt is owned by China (\$7.4 billion), a large onus given Zambia’s relatively small economy (Donnelly, 2018). Zambia’s debt overall has multiplied sevenfold in the past decade. In the 2000s, 30 African countries had most of their debt wiped away by initiatives led by the International Monetary Fund (IMF) and World Bank to help heavily indebted countries. Though Zambia received a bailout, its debt is higher now a decade later than it was pre-bailout (Rosen, 2018).

Case Study #3: Ecuador

Ecuador signed onto the BRI in December 2018 and already is the third largest recipient of Chinese investment in the region (Bermúdez Liévano, 2019). Like Sri Lanka's former president, former Ecuadorian president Rafael Correa wanted to speed up development projects and turned to China for financing help (Kraul, 2018). The billions of dollars he borrowed are now a major problem for current president Lenin Moreno, who struggled to find more flexible terms with the Chinese as Ecuador faces a huge budget deficit, in part due to these loans. Most of the projects are physical infrastructure, such as the reconstruction of an airport previously hit by an earthquake, a highway between two provinces, bridges, hydroelectric plants, copper mines, and more (Bermúdez Liévano, 2019). Some of these projects are overpriced and of subpar quality, such as the \$2.8 billion Coca Codo Sinclair dam seen in Figure 1 (Kraul, 2018). A common condition of China granting loans is for China to choose a Chinese company as a general contractor rather than having the typical bidding process for a government project. Once the project was completed, the Chinese contractor was criticized for its use of low quality materials and construction methods. The dam is now operating at half its capacity due to structural problems that may need hundreds of millions of dollars in reparations.

Over the last few years, Ecuador has borrowed a great deal from China, which has resulted in a high debt-to-GDP ratio (Koop, 2020). As the price of oil has declined globally and the developments financed by the loans have failed to produce the anticipated levels of revenue, Ecuador's terms of debt have become more burdensome. Concerns about debt-trap diplomacy in Ecuador have further arisen since Ecuador has agreed to sell 80%-90% of its crude oil to China through 2024 in exchange for \$6.5 billion in loans from China (Chauhan, 2019). Ecuador's deficit has been characterized as unsustainable, with one expert saying that even with relaxed loan terms from China, "Ecuador will still need a bailout loan from the International Monetary Fund of as much as \$10 billion" (Kraul, 2018).



Figure 3. The Coca Codo Sinclair Dam project in Ecuador has been highlighted as an example of an overpriced and low quality project financed by Chinese BRI loans.

Evidence on Potential Solutions

U.S. Background and International Development Efforts

The U.S. has historically been a world leader in international telecommunications systems in an effort to “liberalize international telecommunications, ie., to allow and indeed promote increased competition among telecommunication providers” (Harwood, 1997; Shen, 2018). As China’s DSR initiative within its broader BRI plans expands, there has been more contention over whether Western or Chinese approaches to international development are better (Ferchen, 2020). As a result, many developing countries are caught in the middle and must pick a side as the U.S. and China compete for influence in those regions (Ferchen, 2020).

The U.S. has so far been vocal in its recognition of the risk the BRI, and DSR in particular, pose to American interests. The Federal Communications Commission (FCC) took a step in July 2020 to prevent the use of Chinese tech in the U.S. by restricting those receiving funds from the universal service fund from using either Huawei or ZTE equipment or services (“Keeping America’s 5G,” 2020).

In 2018, Secretary of State Mike Pompeo addressed how the US needs to be more competitive in the connectivity space in Asia and pledged an additional \$155 million toward connectivity projects in the Indo-Pacific (U.S. Mission to ASEAN, 2018). A bipartisan Congressional effort is also attempting to update U.S. development assistance to increase private-sector investments in development projects. The Overseas Private Investment Corp (OPIC) and the Development Credit Authority were consolidated into the IDFC to specifically “compete with “predatory Chinese infrastructure financing” (Seneca and Elken, 2019).

However, the U.S. has been lagging in its telecommunications projects in comparison to China’s expansion, risking its status as world leader in this area. By the end of the 20th century, the U.S. had established itself as the model to emulate, but, “the technological advantage of the West began to diminish as more production was outsourced to developing nations such as China. The role of digital communication technology therefore assumes fresh significance in the future of the Global South¹, echoing the themes of the mid-20th-century’s New Information and Communication World Order (NWICO)², which sought to rebalance the global flow of communication” (Keane and Yu, 2019).

¹ The Global South is an emerging term used as an alternative to "third world" and developing countries. These countries are usually newly industrialized, have “lower-quality democracies,” and have a history of colonialism by Global North countries. The term does not delineate a geographic status; most of the Global South is in the Northern Hemisphere. Examples include Brazil, India, Mexico, Indonesia, and China.

² NWICO was a term first used in a debate over media representations of the developing world in UNESCO in the late 1970s. It became the expression of the aspirations of many countries in the global south to rebalance information flows worldwide. This movement was part of a broader effort to formally tackle global economic inequality that was viewed as a legacy of imperialism upon the Global South.

As countries in Southeast Asia, such as Myanmar, have tried to distance themselves from overdependence on China, they have looked for alternative partners, like the U.S. or Japan. China's predatory lending practices, as exemplified in Sri Lanka, have led to concerns among developing countries that they might be left with unsustainable debt if they accept Chinese investment (Ferchen, 2020). This hesitation to work with China opens an ideal opportunity for the U.S. to enter as a partner to provide more development opportunities with less risky financing options. The U.S. has a chance to regain its position as a tech leader through renewed investment in developing countries.

Though the U.S. has begun to work towards reworking its international development efforts in the digital arena, this past March the Board of Directors of U.S. International Development Finance Corporation (IDFC)³ "approved \$881 million in financing and political risk insurance for multiple projects that will advance development around the world" (US Embassy Jakarta, 2020). Among the approved projects, some of the funding will go towards improving the availability of secure telecommunications across the Indo-Pacific region. Trans Pacific Networks (TPN), a Nevada-based developer, has received a \$190 million loan to support its development of the world's longest telecommunications cable. The 16,000 kilometer cable will connect the U.S. to Singapore and Indonesia and serve multiple markets in Southeast Asia and the Pacific. Ultimately, the cable will strengthen networks, increase capacity, as well as reduce internet costs in the region. In direct contrast to China's practices, OPIC says that "the project will be developed on terms that prioritize quality, high social and environmental standards, and financial sustainability" (O'Grady, 2019). The project is scheduled to be completed by 2023 (McBeth, 2020).

This project is currently the only telecommunications enterprise the U.S. has taken unilaterally "as a US-backed digital development counter to China's worldwide BRI" (McBeth, 2020). McBeth (2020) explores how the U.S. Justice Department blocked a U.S.-Hong Kong undersea cable because of the close government connections with the Chinese partner, Dr Peng Telecom & Media Group Co as well as Hong Kong's diminishing autonomy (McBeth, 2020). The Pacific Light Cable Network had already been midway to completion, with much of the \$300 million project already laid through a temporary permit. This has been the first time the U.S. denied an undersea cable license due to security issues, signaling the U.S.'s hardline stance against Chinese telecommunications expansion.

Another notable action the U.S. has taken is in helping BRI countries with debt renegotiations with China. In 2018, Myanmar successfully renegotiated terms for a Chinese-funded port and industrial zone with the help of a team of U.S. economists, diplomats and lawyers. In this pilot

³ IDFC is a new U.S. Government agency that modernized the U.S. Government's development finance capabilities—primarily the Overseas Private Investment Corporation (OPIC) and the Development Credit Authority (DCA) of the United States Agency for International Development (USAID). Equipped with an investment cap of \$60 billion and new financial tools, DFC has more resources and flexibility to invest in development and advance U.S. foreign policy (Akhtar and Tarnoff).

program, the U.S. interagency effort consisting of the State Department, U.S. Agency for International Development (USAID), IDFC, and the Treasury Department was meant “to scrutinize contracts, flag bad deals, and empower the country to push for better terms with Chinese agencies and companies” (Kesling & Emont, 2019). Though this endeavor was meant to potentially expand into a larger program in the U.S., there have been no follow ups to its initial outreach in Myanmar.

The U.S. also announced a trilateral partnership with Japan and Australia in 2018 to invest in infrastructure projects in the Indo-Pacific region. Among other problems it seeks to address, it will increase connectivity and address major development challenges. The first project is to construct a second subsea cable in Palau and connect it to a U.S.-Singapore trunk cable (Qiu, 2021).

A few pieces of legislation passed in Congress that target China and the Digital Silk Road specifically. Since the beginning of the 116th Congress, at least 360 bills were introduced with China-related content, showing a large spike in the amount of legislation targeting China (Kennedy, 2020). While most of this is due to the pandemic, other issues with China have been addressed legislatively as well. The Further Consolidated Appropriations Act, 2020 Funds included concerns about Chinese cyber threats and 5G, the BRI, and required “the President to develop a strategy and assist allies to ensure security of mobile telecommunications systems” (Kennedy, 2020). In March 2020, the Secure 5G and Beyond Act was enacted with similar language meant to “require the President to develop a strategy to ensure the security of next generation mobile telecommunications systems and infrastructure in the United States and to assist allies and strategic partners in maximizing the security of next generation mobile telecommunications systems, infrastructure, and software, and for other purposes” (“Secure 5G,” 2020).

Europe’s Relationship with the BRI

To inform alternatives, I chose to look at what the U.S.’s close allies are doing for their own international development efforts and to examine their relationship with China’s BRI. It is important to examine Europe’s attitudes towards the BRI. Like the U.S., other European nations occupied the top of the digital and telecommunications industry; therefore, they would likely have the same goals as the U.S. to stay ahead of other nations in this arena and to counter China’s plans. Should there have been similarities in their desire to expand their telecommunications technology and maintain a global Western dominance for a spread of values and a liberal telecommunications industry, the U.S. could have emulated what its allies are doing thus far and evaluate their success.

However, the U.S. and the European Union (E.U.) are in different positions related to China, despite sharing concerns over the DSR’s expansion. Unlike China’s relationship with the U.S., China increased its investment in Europe “from under €1 billion in 2008 to €35 billion in

2016—more than triple the amount of European financing flowing in the opposite direction” (Brattberg and Soula, 2018). China is also increasingly investing more in Central, Eastern, and Southern Europe rather than in Western Europe where most of the U.S.’s allies lie (Brattberg and Soula, 2018). This is for two main reasons. First, these regions generally have political and regulatory environments that are more favorable to China. Second, they have substantial infrastructure needs and their available financing options are more limited.

The E.U. has stated that the BRI “runs counter to the EU agenda for liberalizing trade and pushes the balance of power in favor of subsidized Chinese companies,” and established a partnership with Japan for their own similar international development initiative, discussed later on in this report in a section about Japan’s actions towards the BRI thus far (Brattberg and Soula, 2018). However, several E.U. member states have already signed agreements with China for BRI cooperation, such as Hungary, Greece, and Italy. Other countries such as France, Germany, and the U.K. remain skeptical of the BRI, a more similar attitude to the U.S.’s. China’s bilateral relationship with the E.U. is still the basis of its relationships with the individual Member States. The E.U. therefore must figure out how to promote its ideals of democracy and maintain the set of rules it wants for a relationship with China’s BRI program, while not harming its own trade relations or the individual Member States’ relations with China (“Europe,” 2008).

The E.U. is more open to working with China than the U.S. is, and would like to increase engagement with the BRI as they believe it could potentially be largely positive, “as long as it adheres to EU market rules as well as to international requirements and standards, and also complements EU policies and projects” (Brattberg and Soula, 2018). Unlike the U.S., Europe will be a recipient of BRI investments, and is therefore more directly impacted by the BRI. Although they both share concerns about the BRI, Europe has held a more pragmatic view compared to the U.S.’s approach of escalating tariffs against China.

Rather than expanding their own international telecommunications networks, several European countries even accepted Chinese aid in their own national telecommunications projects, including the Netherlands and France, though little has been revealed about the extent of Chinese involvement in these projects (ETNC, 2016). Thus, the U.S. does not yet have a reliable model of global digital and telecommunications expansion countering China’s DSR to follow.

The Quadrilateral Security Dialogue

The Quad, as it is more informally known as, is a term that has emerged recently to describe the grouping of the U.S., Japan, Australia, and India. Countries in the Pacific region are of particular interest, since many of them have traditionally been closer to China but some are starting to distance themselves. If any of them are successful at doing so, it could again be a good model for other regions or yield an idea for a policy recommendation. All three countries currently treat the BRI with skepticism, though still engage with China to varying degrees. Japan and India

specifically see the BRI as Chinese expansion of power in the Indo-Pacific region, threatening their own statuses as regional leaders.

Like other Western allies, Japan is concerned with an authoritarian China spreading its values globally, as well as the opaque terms surrounding most BRI projects and their financial sustainability. Japan doesn't necessarily share the same level of hostility towards this initiative that the U.S. does though. Japan still holds hope in China conforming with international norms and wants to avoid confrontation. It has therefore confirmed it is willing to work with China on international development "if its concerns about the BRI are assuaged," while not explicitly endorsing the BRI (Fischetti and Roth, 2019).

At the same time, Japan has been building its own version of the Silk Road in a partnership with the EU. The two signed a free trade deal in 2018 and agreed to build infrastructure in areas such as transportation and digital services to bolster ties between Europe and Asia (Pandey, 2019). The EU has guaranteed \$65.48 billion towards this venture, to attract investments from other sources as well. In announcing this partnership, there were no direct mentions of China and the BRI, but both European and Japanese members previously spoke about endorsing free and open trade and financial sustainability, among other aspects. With this project, Japan hopes to solidify its status as a regional Asiatic leader, while also concerned about China's growing power. Though Japan is the largest lender to infrastructure projects in southeast Asia, it hasn't been marketed in the same way as the BRI has. Japan's idea for a "free and open Indo-Pacific strategy" is threatened by China (Neagle, 2020).

While other countries have distanced themselves from China, Australia is partially strengthening their ties instead. Australia has not officially joined the BRI; however, premier Daniel Andrews from Victoria signed a memorandum of understanding with China to work on BRI projects as the biggest infrastructure program in Victoria is under way (Taylor, 2020). The state of Victoria's inclusion in the BRI has led to tension with the Australian federal government who does not approve (Towell and Galloway, 2020). In contrast to Victoria, the Australian government overall has had a "cautious approach to Chinese investment in the region" (McDonald, 2020). In 2018, Canberra prevented Huawei from leading a project to lay an undersea cable between Sydney and the Solomon Islands (Cronin, 2021). Despite Canberra's criticism of the BRI, it has also previously signed a memorandum of understanding with China for building infrastructure in third world countries, though done privately.

Former U.S. Secretary of State Mike Pompeo commented that the U.S. would "not take any risk to our telecommunications infrastructure, any risk to the national security elements of what we need to do with our Five Eyes partners," adding that communication channels between the U.S. and Australia may be cut off if China funds telecommunications infrastructure in Victoria (McDonald, 2020). 4G networks in Australia use Huawei already but there is no sign of greater Chinese telecommunications infrastructure in Australia. China is Australia's largest trading

partner, yet their relations have deteriorated since Canberra banned Huawei from joining its 5G network (Taylor, 2020).

India has likely been the most explicitly critical of the BRI, having released a statement against it after refusing to participate in the 2017 Belt and Road Forum. However, a BRI map from April 2019 showed two Indian ports, as well as included territory disputed by both India and China as part of India, displaying little consistency (Rej, 2020).

Prime Minister Narendra Modi came to power in India around the same time that the BRI was initiated (Neagle, 2020). Modi initially promised economic cooperation between China and India. China could not see why India would refuse to join the BRI, especially since India is the second largest shareholder (after China itself) in the Asian Infrastructure Investment Bank launched by China. In his previous government position, Modi also actively invited Chinese investment. However, China's long military support for Pakistan and India's stance that an Indian state is part of South Tibet has long hindered their relationship. In 2015, China announced \$46 billion in funding for Pakistan for the China-Pakistan Economic Corridor (CPEC) in formerly-Indian territory. This, as well as several other slights, caused India to stand against the BRI, along with Indian national security concerns. India's participation in other financial institutions linked with the BRI, the AIIB and NDB, suggests that they "desire to participate in the initiative where it is truly multilateral and not, as New Delhi views it, a unilateral foreign policy initiative" (Neagle, 2020).

Lessons Learned

Overall, most of the available research is focused on their international development in physical infrastructure and there is a dearth of literature focused on China's DSR. Kaine and Yu (2019) commented about "a lack of attention to how the technological advances of the West have allowed the Third World to move forward," as well as how "more empirical research is needed to understand how digital China's empire aspirations fare in and beyond the region." Part of this problem may be because the DSR was only launched around three years ago, whereas the BRI overall has been operating for several years and has more projects to report on. Regardless, there should be more research on China's goals and motivations for the BRI, as well as more focus on its DSR component.

Though the U.S. had started to become complacent in its position at the top for international telecommunications, it has new opportunities in working with developing countries who are concerned about working with China. Additionally, the U.S. began investing in international telecommunications earlier this year with a \$190 million loan to support the development of the world's longest telecommunications cable between the U.S. and Indonesia.

Other Western countries, particularly in Western Europe, had a similarly laid back approach to China's DSR expansion. The EU as a whole has raised concerns about working with China, but overall is willing to work with them within certain constraints. Several member states have,

however, signed agreements with China and even some skeptical European nations introduced Chinese telecommunications investment into their own countries. Unlike the U.S., no Western European countries have plans for international development.

The new version of the Silk Road sponsored by the EU and Japan is the closest form of fighting back against China's projects. The U.S. has been mostly going forward unilaterally to establish relationships with countries in need of investments, similar to China's own policy. However, partnering with other allies to do so could be more influential. Though the EU has some BRI investments of their own, Japan does not yet have any in their country. This provides an alignment of goals between the two countries that could perhaps be leveraged into an official partnership.

Criteria

In developing a final recommendation, I will consider potential costs and benefits to a variety of stakeholders, including the U.S. and developing countries in need of financing and telecommunications technology. Specifically, I will evaluate alternatives based on following criteria:

Budget Efficiency — Cost is an integral part of evaluating any plan. It is particularly important in assessing a policy's feasibility by making sure a solution is not too expensive and therefore can actually be implemented. A low-cost alternative can also free up the budget to potentially carry out several other alternatives in conjunction with one another. Alternatives will be evaluated on their budget efficiency by comparing dollar amounts, while also categorized more generally into high, medium, and low cost for ease of comparison.

Effectiveness — If an alternative is not effective, there is little use in its implementation. The effectiveness of each option will be reviewed to determine whether the end result of increasing the U.S.'s global standing as a telecommunications leader and therefore curbing the spread of China's DSR is actually met. While each alternative has a different process, the main point is to see whether this new option is desirable internationally and can prevent some countries from gravitating towards China for solutions. Effectiveness will be judged through the categories of high, medium, and low effectiveness.

Logistical Feasibility — My aim is to provide Senator Hassan's office with policy alternatives that Congress can realistically execute. Some alternatives may carry more or less logistical burdens, whose differences will be rigorously evaluated. An example of a potential tradeoff that I anticipate encountering will be having a highly effective proposal that is difficult to pass as actual legislation or that carries unreasonably high costs. This criteria will again be measured through high, medium, and low feasibility.

- *Bipartisan support* — In evaluating an alternative's realistic chances of implementation, it is important to consider the amount of bipartisan support that it carries. The more bipartisan support an alternative has, the more likely it is to pass in Congress and the stronger its staying power so that it is less likely to be undone by a new presidential administration. Ideally, this sub-criteria will be measured with a vote count of each Member of Congress to judge where they stand on this issue, again further categorized into high, medium, and low levels of bipartisan support in a final evaluation chart. Republican members of Congress have been more active on legislation against China than their Democratic counterparts, even forming a House Republican China Task Force to help coordinate legislation among the party.

Equity — Countries who are in great need of development will be the most affected by these policy alternatives. These populations currently turn to China for financing because they are

unable to receive funding elsewhere at agreeable terms to advance their development goals. It is critical to judge these alternatives on how they deal with global economic inequality and whether they indeed provide better outcomes for developing countries that would have otherwise gone to China for financial help. Equity will be split into high, medium, and low levels of equity depending on how many developing countries that would have gone to China's DSR for help end up in a better position after each alternative is introduced (for example, having less debt, better quality infrastructure, or more secure networks to name a few measures of what constitutes 'better outcomes').

Alternatives

The majority of research on China's Belt and Road Initiative (BRI) is focused on the physical infrastructure and not on the digital or telecommunications infrastructure this report aims to address. What little information is available on how other nations are responding to China's international telecommunications development shows insufficient legislation or implemented processes to improve their own global development in this field. Additionally, the previous presidential administration's foreign policy goals were not aligned with what is envisioned for addressing this policy problem, though they certainly have some useful proposals to consider. The Biden administration signals a more ideal shift towards policies to advance American telecommunications globally, but we must also account for rebuilding necessary global relationships that have deteriorated in the past four years. The current alternatives are presented within two frameworks: limiting China's Digital Silk Road (DSR) expansion and advancing American telecommunications. Both goals are interrelated; as one succeeds, so does the other, in near zero-sum terms. However, the approaches of each alternative differ on which goal to tackle.

Alternative #1: Increase Messaging about Problems with China's BRI

In an effort to limit China's global expansion and influence, the U.S. should make it clear why other countries should not partake in the BRI, particularly for countries already with high debt-to-GDP ratios. Many of these countries might not realize the debt burden they are taking on or the low quality of Chinese projects. While the U.S. has warned against the BRI, it could use much stronger signaling and examples. By increasing its messaging around why joining China's BRI is a bad decision, the U.S. can work against China's foreign policy in a cost-efficient manner and help developing countries find less risky solutions to increasing digital and telecommunications development. Countries also often see the U.S. as an adversary to China, which can reduce the credibility of the U.S.'s messaging if it is only seen as a way for them to gain power rather than real criticisms of China. If other allies that are major donors in the region also join the U.S. on this messaging, the credibility of these claims increases and potential BRI host countries may be more skeptical of joining. Without providing a concrete alternative to China, however, this solution is not likely to be very effective. While it may deter some

developed countries from joining, developing countries with a severe need for development financing may not have any choice but to join.

Cost: This policy will have little to no cost to the U.S. government, receiving a low score for this criteria.

Effectiveness: The U.S. has already released some warnings against the BRI to little avail. Based on previous, albeit limited, attempts of executing this alternative, this would be categorized as having low effectiveness. With allies in official support of this message, specific examples of BRI problems, and a greater effort to distribute communications to BRI partners, this could have a more forceful effort behind it and lead to greater effectiveness from BRI countries taking this message seriously. However, there is still the problem of providing a tangible alternative to the BRI, which this does not solve. Without providing an alternative to the BRI, this alternative on its own would not be particularly effective deterring BRI buy-in.

Logistical Feasibility/Bipartisan Support: This has a high chance of implementation given the relatively low lack of cost and resources it would require. There is high bipartisan support in Congress to take a stronger stance against China. The difficulty would come in convincing other allies to join in on this messaging and creating a united front; however, several EU countries and other allies such as Japan have also already condemned some BRI projects. Therefore, it should also be likely that they join the U.S. on this messaging.

Equity: This plan has low equity since it does not provide an explicit BRI alternative to countries that are in desperate need of infrastructure financing. Should those countries listen to the messaging sent out, they would still be left without any funding and few paths forward to development.

Outcome: This alternative would work best in conjunction with another, more effective alternative that could provide a substantive substitute to the BRI for countries that need it. On its own, this alternative is not particularly useful.

Alternative #2: Assist Countries in Renegotiating Chinese Debt

With this alternative, the U.S. does not appear as a direct adversary to China, which allows host countries to work with both countries rather than choosing sides in Sino-American relations—a strategy that has proven to be ineffective.

Alternative #2.1: Direct U.S. Intervention

The U.S. should help countries in negotiating their debt with China and also in the original negotiations. Helping countries avoid debt distress will make it less likely for China to leverage geopolitical favors. Following the successful U.S. intervention in Myanmar, the State Department, IDFC, ASAID, and the Treasury Department can emulate this success and expand this program with budgetary priority.

Cost: Direct U.S. intervention would cost the U.S. time in personnel and agency coordination but the U.S. would not have any direct costs in facilitating these meetings and renegotiations. There is a low level of cost associated with this alternative.

Effectiveness: Although there has only been one previous example of this alternative being implemented, it was done successfully. China was successfully thwarted in its attempt to extract geopolitical favors and the U.S. appeared as a helpful ally to relevant countries. However, the problem lies in that this is a reactive measure, not a preventative one. While the issue of debt may be resolved, the consequences of security concerns and the spread of anti-democratic values are still present.

Logistical Feasibility/Bipartisan Support: Bipartisan support will be mixed as this has proven to be an effective program in the past, yet some will still call for stronger action against China, rather than adopting a more passive role in debt renegotiations. Implementation is obviously feasible given that it has occurred before.

Equity: Developing countries in need of financing receive help in providing better financial outcomes for themselves with U.S. intervention, therefore, this is medium-high equity. It is not high equity because it does not address countries who still need financing but cannot find a source of funding (countries who haven't yet gone to the BRI).

Outcome: This alternative is more responsive rather than preventative. While this could be highly useful in working with BRI countries to prevent any Chinese leverage of debt, it does not effectively address the BRI moving forward.

Alternative #2.2: Indirect U.S. Intervention

The U.S. could also indirectly support countries renegotiating debt through its participation in the Paris Club⁴. The U.S. should participate more in the Paris Club to strengthen its own role within that organization, as well as increasing formality in Club rules, setting standards to expel members that do not follow, and endorse membership for some developing countries to signal a welcome of South development assistance. By not having the U.S. name directly attached to renegotiations, other countries won't feel as though they are trapped in a choice between China and the U.S.

Cost: Costs would be minimal given that the Paris Club would be intervening rather than the U.S. itself.

⁴ The Paris Club is “an informal group of official creditors whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries. Paris Club creditors provide debt treatments to debtor countries in the form of rescheduling, which is debt relief by postponement or, in the case of concessional rescheduling, reduction in debt service obligations during a defined period (flow treatment) or as of a set date (stock treatment)” (“Club de Paris”). The U.S. is a Permanent Member of the Paris Club while China is an Ad Hoc Participant.

Effectiveness: The Paris Club is an established institution which has had a large role in debt crisis resolution in developing countries for several decades now. Their rules for negotiations have proven to be highly efficient through pragmatism and flexibility. This option would be highly effective—should the U.S. be successful in its participation in the Paris Club. Again, this resolution would be dealing with the problem after it has occurred, rather than preventing China's BRI from spreading by including more countries. It would address the issue of debt negotiations and the potential for China to leverage favors in place of the debt; however, the U.S. would still be at a disadvantage in the telecommunications field compared to China and the security concerns would still be present.

Logistical Feasibility/Bipartisan Support: Similarly to Alternative #2.1, bipartisan support will be mixed since this is an even more passive stance from the U.S. Implementation will again be high.

Equity: While this would be an equitable solution to countries who are already in debt, this does not address how to provide for developing countries. This also has a medium-high equity rating. Again, it does not provide for countries still in need of telecommunications development, so it cannot receive a high equity score.

Outcome: This alternative is effective in helping countries who have already joined the BRI, but not in preventing the further spread of the network. Additionally, it does not put the U.S. at the forefront of the renegotiations.

Alternative #3: Enter Bilateral Agreements to Limit Spread of BRI

The U.S. should start building its connections with other countries strongly opposed to China's telecommunications expansion, such as Japan, which is forming its own version of the Silk Road with the European Union, or Australia. Working internationally with other countries could help the U.S. encourage China to adopt international standards and clarify its opaque lending practices.

Alternative #3.1: Limit BRI Expansion

The U.S. may have to begin working bilaterally to rebuild relationships and move its goals along internationally, but ideally this could lead to multilateral bodies. These agreements could entail simply a promise between countries to not allow any BRI expansion within their borders; should this prove successful, it could expand to a partnership in developing a joint telecommunications program globally to developing countries, a rival to China's Huawei. A simple agreement to not use BRI money or technology is cost-effective and feasible. Again, this may not work well for developing countries however, unless the U.S. offers some form of aid instead. A partnership among developed countries to launch a separate telecommunications program would conversely be costly yet effective.

The Indo-Pacific region is of particular importance for the U.S. to step in because several countries, such as Japan and Myanmar, are hesitant in allowing China's influence to expand towards them. Preserving the secure flow of information is prioritized in the Indo-Pacific "because of China's crackdown on Hong Kong, which has served as a regional internet exchange hub" (Cronin, 2021). In an effort to provide another option for those countries that are actively seeking partners other than China in the region, the U.S. could rejoin the Trans-Pacific Partnership (now the Comprehensive Progressive Trans-Pacific Partnership).

Cost: Simply entering into agreements to promise not to use Chinese BRI technology would have little to no cost (if not taking opportunity cost into account). Simply beginning with agreements and no financing like re-entering the Trans-Pacific Partnership, will have little upfront costs, and therefore will be categorized as a low cost alternative.

Effectiveness: The effectiveness of this alternative lies in preventing further spread among countries that have not already committed to joining the BRI, making this another retroactive policy. It could effectively curb the spread of the BRI, but doesn't solidify the U.S.'s position as a telecommunications leader or deal with security concerns.

Logistical Feasibility/Bipartisan Support: While certainly feasible to implement (depending on which allies would like to join), this is a passive approach by the U.S., which may not receive as much bipartisan support in Congress from those who would prefer a stronger stance; however some Republican lawmakers, such as Senator Thom Tillis (R-NC), have proposed this directly, showing there is at least some interest from Republicans in this alternative. There is high logistical feasibility and high bipartisan support as a result.

Equity: There is a low equity score associated with this alternative since it does not directly aid developing countries.

Outcome: Overall, this alternative is not the most effective or equitable, but has good potential for implementation and cost through the passive nature of this action.

Alternative #3.2: Global Telecommunications Expansion with Allies

The U.S. could form agreements with other countries outside of simply promising not to use Chinese technology, a more aggressive stance to begin countering the BRI with the U.S.'s own financing and infrastructure development to developing countries. To lower costs and engage other allies in this effort to mitigate any negative impacts from the U.S. being attached to such projects, the U.S. should work with countries on this effort. By partnering with countries such as Japan, the U.S. can make use of the procedures and relationships their allies already have in place in their home regions to accelerate such investments in developing countries that desire it. In doing so, the U.S. and its partners can provide a direct substitute to the BRI on more transparent terms for countries that seek such an offer. In working in the Indo-Pacific at first, the U.S. could partner with regional allies such as Japan and Australia. As the U.S. expands their operations to other key regions, they can partner with strong regional allies.

Cost: Bilateral agreements to increase global infrastructure spending, as with the Japan-EU agreement, would have a considerably higher cost than the 3.1 version of this alternative. It would require promising millions of dollars in investments around the world, taking a more active stance in telecommunications infrastructure, but a more expensive one as well.

Effectiveness: The effectiveness of this alternative lies in actively working to create another version of the Silk Road, providing an alternative to the BRI. Japan and the EU have already partnered with a free trade deal and agreed to build infrastructure and bolster ties among their regions. Japan, as the largest lender to infrastructure projects in southeast Asia, is a notable partner to potentially work with. Providing direct funding in conjunction with other allies both has a direct effect on the BRI and lowers the cost for the U.S. so they don't finance it all themselves.

Logistical Feasibility/Bipartisan Support: The high costs associated with this option makes implementation and bipartisan support less likely—though some may prefer the more aggressive stance the U.S. will take in this alternative compared to others. The U.S. has already committed to a large infrastructure project in the Indo-Pacific region, therefore this action should also be feasible, given that it would only reduce costs. Logistical feasibility is at a medium level, as is bipartisan support.

Equity: There is a high equity score given that this option will directly provide financing to countries in need, without the predatory lending practices associated with China's BRI.

Outcome: Though costly, this alternative has relatively high scores for equity, effectiveness, logistical feasibility, and bipartisan support.

Alternative #4: Provide Subsidies for Current American Companies to Expand into 5G Globally

In order to fully dissuade the use of China's technology internationally, there must be an alternative provided to Huawei and the national security threat it poses. If Huawei is the only option for 5G, simply providing messaging alone may not be enough to dissuade others from using its technologies, regardless of quality and security concerns. Providing subsidies to American telecommunications companies to work on developing 5G technology, not just for the U.S. but to be used globally, will advance any current efforts from private companies in creating this software. The Trump Administration was reportedly in talks with Microsoft, Dell, and AT&T to develop 5G software that can be used with any hardware. However, hardware development should still be subsidized to offer this equipment to less developed countries in place of Huawei rather than just the software. This would decrease the reliance on Huawei completely rather than having to use their hardware still. It would however come at a greater cost than just using the software.

Cost: There is a high cost associated with this alternative as it mainly revolves around providing subsidies.

Effectiveness: The U.S. currently does not have a national company with 5G the same way that Huawei operates in China. Providing a direct competitor to the 5G technology that currently only Huawei is distributing globally would be highly effective.

Logistical Feasibility/Bipartisan Support: This is currently happening so it is clearly logically feasible. Republican members of Congress such as Senator Thom Tillis (R-NC) have also supported this stance previously, so there is a high score for both.

Equity: There will be a high equity component since developing countries will now have more than one option (Huawei) to turn to for 5G and telecommunications needs.

Outcome: Everything other than the cost makes this option desirable, given that it directly addresses creating direct competition to the BRI and Huawei for countries that need it.

Alternative #5: Provide Direct Grants or Loans to Most-Targeted Areas

Under the Trump Administration, the International Development Finance Corporation (IDFC)⁵ was formed and has undertaken large financial projects to advance global development, including for secure telecommunications. The IDFC has focused mainly in the Indo-Pacific region where countries are already hesitant to accept China's offer of aid. This alternative proposes that they expand into Africa, where China has made large strides and that has severe unmet need for development. While the Trump Administration largely ignored its relationships in the continent, the Biden Administration is focusing on building up those relationships again (Moore). The Biden Administration can use the framework of the IDFC projects to apply them to African countries through grants, such as building greater telecommunications networks there like they are building in Indonesia to improve connectivity and security. The U.S. has an opportunity to meet a great deal of telecommunications needs in this country and to steer them away from what China offers, in an effort to bolster America's standing with those countries.

Cost: There is a high cost associated with this option, given that it requires likely millions in investment projects, but without the benefit of having other countries split the cost, as in Alternative #3.1. This option would be similar to the development of the telecommunications cable between the U.S. and Indonesia done in 2020, which required a \$190 million loan to implement.

⁵ IDFC is a new U.S. Government agency that modernized the U.S. Government's development finance capabilities—primarily the Overseas Private Investment Corporation (OPIC) and the Development Credit Authority (DCA) of the United States Agency for International Development (USAID). Equipped with an investment cap of \$60 billion and new financial tools, DFC has more resources and flexibility to invest in development and advance U.S. foreign policy (Akhtar and Tarnoff).

Effectiveness: This would be highly effective, as it provides competition to Huawei and direct aid to developing countries, both establishing the U.S. in the telecommunications field and also thwarting the BRI in their goal.

Logistical Feasibility/Bipartisan Support: This has a medium level of feasibility on a project-by-project basis, as well as through the IDFC. Many countries will not like the terms set by the U.S., and currently turn to China's BRI because of the more lax policies they have to join. The high costs associated with each project could be a hindrance in implementation, as well as with bipartisan support. However, many will like the direct competition the U.S. will bring against China, leading to a medium level of bipartisan support.

Equity: There is a high level of equity with this option since the U.S. will be directly providing countries with the financing they need with better terms than they would receive with Huawei.

Outcome: Though there would be high equity and effectiveness, there are many tradeoffs due to high costs and medium levels of bipartisan support and logistical feasibility.

Outcomes Matrix

	<i>Cost*</i>	<i>Effectiveness</i>	<i>Logistical Feasibility</i>	<i>Bipartisan Support</i>	<i>Equity</i>
Alt #1: Messaging	Low	Low	High	High	Low
Alt #2.1: Renegotiate Debt Directly	Low	Medium	High	Medium	Medium
Alt #2.2: Renegotiate Debt Indirectly	Low	Medium-High	High	Medium	Medium
Alt #3.1: Bilateral Agreements to Limit BRI	Low	Low-Medium	High	High	Low
Alt #3.2: Bilateral Agreements to Expand Telecoms	High	High	Medium	Medium	High
Alt #4: Subsidies for Current US Companies	High	High	High	High	High
Alt #5: Provide Grants/Loans to Needed Areas	High	High	Medium	Medium	High

*High costs are undesirable whereas for every other category high is the best outcome

Recommendation

I recommend **Alternative 1**: increased message about the dangers of the BRI, **Alternative 2.1**: direct U.S. intervention in debt renegotiations for BRI member countries, and **Alternative 3.2**: forming bilateral agreements with allies to finance international telecommunications development. Each option accomplished different goals and none are mutually exclusive, so they can be carried out in conjunction with one another. Due to the low cost and high logistical feasibility and bipartisan support, Alternative 1 is easy to implement. Its low equity and effectiveness scores make it rank lower overall on its own compared to other alternatives, yet it can be a useful supplement to the other alternatives.

Alternatives 2 and 3 are both recommended because they address different parts of the problem: Alternative 2 works with countries who have already joined the BRI whereas Alternative 3 takes a preventative approach to attract countries away from the BRI. Alternative 2.1 should be chosen over Alternative 2.2 because while they may accomplish the same end goals, the U.S. has less control in the second alternative and it requires more steps to work through the Paris Club than for the U.S. to do it directly. Additionally the U.S. can build a name for itself as a trusted ally for countries that are dealing with negative consequences of BRI involvement, which could not happen as effectively if this were done through a third party organization such as the Paris Club. Overall, Alternative 2.1 has low cost and high logistical feasibility, which make it a good candidate for implementation. It has only a medium level of effectiveness and equity due to its reactive nature of working with countries who are struggling to pay back their loans to China, but Alternative 3.2 is able to adequately address those areas.

Though it has high costs and medium logistical feasibility due to needing international support, Alternative 3.2 excels in its high equity and effectiveness, the opposite of Alternative 2. Alternative 3.1 can be implemented with the goal of eventually moving to Alternative 3.2, but 3.2 should be given the main priority since it is more effective. Alternative 5 essentially is the same as Alternative 3.2, but with higher costs and less international cooperation from allies, both of which are detrimental to the U.S. While all the other alternatives can also be implemented, Alternatives 2.1 and 3.2 should be prioritized ahead of more passive alternatives such as Alternative 2.2 to have the strongest impact as soon as possible.

Implementation

Key Stakeholders

Senator Hassan's office will lead this recommendation moving forward. Republican lawmakers are a key stakeholder perspective to consider as they will be involved in implementation. Together, these groups will coordinate passage of legislation and outreach to allies. Partner countries' perspectives will be important as they will work with the U.S. in their home regions and can know best practices to begin implementation in developing countries. Finally, the populations of the developing countries receiving this financing or aid in debt renegotiations are necessary to consider for equity purposes, as they are ultimately the most affected groups and intended beneficiaries.

Action Steps

The first step for implementation would be to establish support in Congress. China has been one of the few issues with high partisan bipartisan support in the U.S. Congress. Passing any legislation would benefit from, if not require, bipartisan support on all three alternatives recommended. Receiving Republican support is necessary for successful passage. Of Republican lawmakers, Senator Thom Tillis (R-NC) has the most explicit plan of action against China—including to implement the U.S. ban on Huawei and coordinate with our allies to implement similar bans (Alternative 3.1) and to expose and counter China's predatory debt-trap diplomacy targeting developing countries (Alternatives 2.1 and 3.2). While Senator Tillis' plan addresses military alliances rather than technological infrastructure ones, he also supports focusing on China's neighbors in the Indo-Pacific region.

After gaining Congressional bipartisan support, Alternative 2.1 requires the assemblage of the same team of U.S. economists, diplomats, and lawyers from the State Department, USAID, IDFC, and the Treasury Department that had earlier success. International cooperation is required for Alternatives 1 and 3.2. The U.S. will need to reach out to allies who have taken the strongest stance against the BRI already, such as those from the Quad and the EU in order to coordinate messaging campaigns and financing development projects. Japan is a key country to partner with, given that they are already starting their own BRI-esque program with the EU. Several EU countries have joined the BRI already, making the EU as a whole a less certain partner than Japan, but they should still be in consideration for partnership as they have their agreement with Japan. India and Australia are other potential partners, particularly Australia since they already joined the Trilateral Partnership for Infrastructure Investment in the Indo-Pacific.

The final step would be to reach out to countries who actively shun Chinese assistance. The U.S. should first work on establishing a sphere of influence in southeast Asia, since many countries there seek to escape Chinese influence, through Japan's existing network as the largest lender to

infrastructure projects in the area. The Biden Administration has begun increasing U.S. presence in Africa, which had been ignored throughout the Trump Administration, and the Indo-Pacific to connect with countries such as Thailand and Myanmar who previously wanted Western financial assistance and not Chinese support.

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