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CHINA'S DIGITAL SILK ROAD

by

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CHINA’S DIGITAL SILK ROAD

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ABSTRACT

China's Digital Silk Road (DSR) is a technology subset of the Belt and Road Initiative which represents a focal point of China's foreign policy. It aims to create markets for Chinese tech companies, establish international technological influence, and shape technical standards favoring Chinese data practices. This thesis employs two case studies to investigate factors influencing reception to the DSR. Analyzing the overall success of the BRI in Pakistan and Malaysia provides context for understanding similarities and differences in DSR reception patterns. This thesis finds that initial BRI success in Pakistan can be attributed to geopolitical ties and economic needs, but insecurity and debt problems have dramatically stalled progress. The DSR in Pakistan saw early and sustained success due to military influence in domestic politics and the general public's support of the initiative. In Malaysia, the BRI's reception was influenced by Sino-Malay relations, the need for investment, and a high-profile corruption scandal. When the corruption scandal surfaced, public backlash resulted in a foundational change in Malaysian domestic politics as well as opposition to Chinese BRI investment. The DSR found early success in Malaysia's booming digital economy, but reception waned as public sentiment toward China shifted, its political system became more democratic, and Malaysia undertook measures to diversify its technology investment, thus taking a more selective approach to the DSR.

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LIST OF ACRONYMS AND ABBREVIATIONS

4G	fourth-generation technology standard
5G	fifth-generation technology standard
AI	artificial intelligence
ASEAN	Association of Southeast Asian Nations
BRI	Belt and Road Initiative
CCP	Chinese Communist Party
CPEC	China-Pakistan Economic Corridor
DFTZ	Digital Free Trade Zone
DSR	Digital Silk Road
ECRL	East Coast Rail Link
GPS	Global Positioning System
ICT	information and communications technology
PEACE	Pakistan East Africa Connecting Europe
PLA	Peoples Liberation Army

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I. INTRODUCTION

A. MAJOR RESEARCH QUESTION

This thesis explores the factors that influence the receptiveness of prospective participant countries to China's Digital Silk Road (DSR) by analyzing how economic and political factors influence a country's reception to the initiative and why this is the case. The DSR is a subset of the Chinese Communist Party's (CCP's) signature foreign policy initiative, the Belt and Road Initiative (BRI).¹ The BRI, which is characterized by ambitious capital-intensive infrastructure projects aimed to boost economic development, provide global connectivity, and exert political influence has received much attention in academic and political spheres. It has also required much adaptation from the CCP in order to adequately respond to international criticism and backlash in some participant countries. The DSR, which is a more recent and less analyzed aspect of their foreign policy initiative, has since emerged as a less costly and more effective way to accomplish these same goals of economic development, connectivity, and political influence while simultaneously opening foreign markets for, and facilitating the growth of, China's state-backed technology companies.²

First referred to in 2015 as the Information Silk Road, the DSR provides an important addition to the stated connectivity goals of the BRI by introducing projects focused on the information and communications technology (ICT) realm, from undersea cables to space-based satellites and a host of advanced technologies in between. Its defining feature has been its core focus on digital infrastructure, both software and hardware, providing an attractive option for participant countries to enhance their technological capacity via telecommunications networks, artificial intelligence capabilities, cloud

¹ Jonathan E. Hillman, *The Digital Silk Road: China's Quest to Wire the World and Win the Future* (New York: HarperCollins Publishers, 2021).

² Joshua Kurlantzick and James West, "China's Digital Aid: The Risks and Rewards," Council on Foreign Relations, accessed June 21, 2022, <https://www.cfr.org/china-digital-silk-road>.

computing, data storage, e-commerce, surveillance technology, smart cities, and other high-tech solutions.³

This thesis assesses how economic and political factors affect the DSR's appeal for prospective participant countries by conducting two case studies on countries whose reception towards the DSR have proven to be quite different, Malaysia and Pakistan. These two case studies will help to explain what risks and benefits come with participation, what conditions foster eager participation versus vehement opposition, why some countries flip from receptive stance to a position of opposition, and why some countries find the DSR attractive regardless of its drawbacks.

The conclusion of the thesis will assess what successful implementation of the overall DSR initiative could mean for the current U.S.-led liberal international order and provide recommendations that will assist the U.S. government in strategic technological competition with China. Pakistan eagerly embraced the BRI and China was quick to facilitate their participation. This was due to longstanding Sino-Pakistani political relations, Pakistan's economic woes and dire need for infrastructure investment, as well as Pakistan's geostrategic location between China and the Indian Ocean. Progress for the BRI in Pakistan has seen much turbulence due to insecurity, debt concerns, and public protest. Pakistan embraced the DSR for similar reasons, but its progress has been steadfast due to the political factors such as Pakistan's military influence in their bureaucracy and economic factors where the general public find benefit from enhanced connectivity and the progress has seen less disruption due to their reduced visibility compared to the BRI.

In Malaysia the BRI its initial reception can be traced to a Sino-Malay relations as well as a corruption scandal among Malaysian elites who profited from the initial deals. The scandal contributed to the democratization of Malaysia's domestic politics, a change in public sentiment towards Chinese loans, and an increase in public influence over elected officials. With regards to the DSR, early Chinese presence in Malaysia's digital economy

³ Robert Greene and Paul Triolo, "Will China Control the Global Internet Via Its Digital Silk Road?," Carnegie Endowment for International Peace, May 8, 2020, <https://carnegieendowment.org/2020/05/08/will-china-control-global-internet-via-its-digital-silk-road-pub-81857>.

can be attributed to Sino-Malay relations and Beijing attempting to exert influence in the region and capitalize on Malaysia's high potential for digital economy. After the corruption scandal altered Malaysia's domestic political landscape, negative public sentiment towards Chinese practices influenced Malaysia's deliberate diversification of international investment in its technology sector, decreasing their reception to the DSR.

B. SIGNIFICANCE OF THE RESEARCH QUESTION

The Digital Silk Road can be seen as China's bid to establish itself as a global technological superpower, and success in this endeavor could have important economic, security, and geopolitical implications for China's role in Asia and across the globe.⁴ Economically, the DSR is a cheaper and more effective way for China to expand the BRI than its traditional capital-intensive infrastructure projects and comes with the added benefit of opening foreign markets for the expansion of China's biggest technology companies.⁵ Affordable and reliable technology is desperately needed in Africa, the Middle East, parts of Eastern Europe, Latin American, South Asia, and Southeast Asia in order to expand digital connectivity in these areas. As Chinese state-backed tech giants expand domestically and gain traction internationally to fill this void, the DSR will play an important role in China's domestic economic growth which is a key factor in the overall stability of the CCP regime.⁶

Another implication of the DSR is the economic advantage that comes with access to data and information. Information created by networks is the capital asset of our future, and doing business with China's DSR often implies handing over massive quantities of

⁴ Clayton Cheney, "China's Digital Silk Road: Strategic Technological Competition and Exporting Political Illiberalism" (Pacific Forum, August 1, 2019), <https://pacforum.org/publication/issues-insights-vol-19-wp8-chinas-digital-silk-road-strategic-technological-competition-and-exporting-political-illiberalism>.

⁵ Chi Lo, "The Case for Why Its Digital Silk Road Will Put China on Top," *The International Economy* 35, no. 2 (Spring 2021): 22–23, 47–48.

⁶ Alexis Leggeri, "What Happens to the CCP If China's Economic Growth Falters?," *The Diplomat*, October 29, 2020, <https://thediplomat.com/2020/10/what-happens-to-the-ccp-if-chinas-economic-growth-falters/>.

data with immeasurable value.⁷ Chinese investment in overseas data centers, coupled with data-localization policies that often require foreign corporations to maintain user data within China's borders, gives the CCP easy access to extensive quantities of data that can provide strategic advantages in terms of markets, supply chains, consumer preferences, and advertising.⁸ This access is intensified by the CCP's 2017 National Intelligence Law, specifically Article 7 and Article 14, which stipulates that organizations and citizens are required to support and assist intelligence organizations and authorizes intelligence organizations to demand this assistance.⁹ If China effectively builds the backbone of communications infrastructure in developing countries, it gives the PRC the ability to access, analyze, and exploit these large data sets of the DSR recipient countries, especially when considering the CCP's presence and influence within Chinese private enterprises.¹⁰ The 2017 scandal that involved Facebook and Cambridge Analytica using unauthorized harvesting of data to acquire competitive advantage and influence while simultaneously misleading users is an example of the benefits and advantages that can be had with access to big data.¹¹ Similarly, China's National Public Information Platform for Transportation and Logistics, also known as Logink, uses sophisticated data systems to provide unprecedented tracking of international shipping and privileged insight to the world of commerce, awareness which could also stand to produce immeasurable commercial economic advantage.¹²

⁷ Tom Wheeler, *From Gutenberg to Google: The History of Our Future* (Washington, D.C.: Brookings Institution Press, 2019).

⁸ Cheney, "China's Digital Silk Road: Strategic Technological Competition and Exporting Political Illiberalism."

⁹ Standing Committee of the Twelfth National People's Congress, "National Intelligence Law of the People's Republic of China," June 27, 2017, <http://www.npc.gov.cn/npc/c30834/201806/483221713dac4f31bda7f9d951108912.shtml>.

¹⁰ John Hemmings, "Reconstructing Order: The Geopolitical Risks in China's Digital Silk Road," *Asia Policy* 27, no. 1 (2020): 5–21, <https://doi.org/10.1353/asp.2020.0002>.

¹¹ Court Stroud, "Cambridge Analytica: The Turning Point in the Crisis About Big Data," *Forbes*, April 30, 2018, <https://www.forbes.com/sites/courtstroud/2018/04/30/cambridge-analytica-the-turning-point-in-the-crisis-about-big-data/>.

¹² Daniel Michaels, "China's Growing Access to Global Shipping Data Worries U.S.," *Wall Street Journal*, December 20, 2021, <https://www.wsj.com/articles/chinas-growing-access-to-global-shipping-data-worries-u-s-11640001601>.

From a security perspective, the advancements that stem from the CCP making domestic technological development a priority, coupled with their concept of civil-military fusion, have significant implications on China's military capacity. If successful in creating technological self-sufficiency and solidifying their status as a leading technology innovator and producer, as are the objectives of the "Made In China 2025" plan, the CCP can rid itself of the strategic vulnerability that comes with relying on status quo technology leaders the likes of the U.S., Japan, or select European countries, especially as China's bi-lateral relationships with these same countries become increasingly strained.¹³ The experience gained from successful implementation of DSR initiatives abroad will give Chinese technology companies a decisive advantage in the field of next generation technological development.¹⁴

The experience, know-how, and capital gained by successful implementation of the DSR can also be seen as a security threat to democratic order when considering the PRC's aspirations in quantum computing to develop technology with significant military implications the likes of advanced encryption decoding and covert maritime navigation capabilities for submarines.¹⁵ Similarly, China's Beidou Navigation Satellite System, which was originally developed with military implications in mind, to put an end to the People's Liberation Army (PLA) reliance on the U.S. Global Positioning System (GPS), now exceeds the GPS in the number of satellites in orbit and the areas which use Beidou across the globe is rapidly expanding.¹⁶ Finally, the Logink commercial shipping awareness database, mentioned above in relation to economic implications, has significant

¹³ Tin Hinane El Kadi, "The China Standards 2035 Plan: Is It a Follow-Up to Made in China 2025?," China Briefing News, July 2, 2020, <https://www.chathamhouse.org/2019/06/promise-and-peril-digital-silk-road>.

¹⁴ Tobias Burgers, "Assessing the Economic and Political Success of the Digital Silk Road throughout the Indo-Pacific Region," in *Middle Power Responses to China's Belt and Road Initiative and America's Indo-Pacific Strategy* (Emerald Publishing Limited, 2022), 197–210.

¹⁵ "Quantum Computing and Defence," International Institute of Strategic Studies, accessed June 22, 2022, <https://www.iiss.org/publications/the-military-balance/the-military-balance-2019/quantum-computing-and-defence>.

¹⁶ Raymond McConoly, "China's Beidou GPS Is a Strategic Challenge for the U.S – Naval Post-Naval News and Information," May 24, 2021, <https://navalpost.com/chinas-gps-beidou-is-a-strategic-challenge-for-the-u-s/>.

security implications considering its potential to provide awareness and potential targeting of the U.S. military's extensive use of commercial shipping as more Chinese technology infrastructure is installed in ports across the globe.¹⁷

Geopolitically, the DSR is pushing back on the western dominated global order in what is often considered an attempt to re-write the international order on China's terms by providing a model for authoritarian governance in the face of the liberal international order that has the capacity to spread authoritarianism, curtail democracy, and curb fundamental human rights.¹⁸ They are expanding the developing world's dependence on China, increasing Chinese influence in these areas, and thereby facilitating China's ability to take a leading role in the standards creation of a domain that is still largely ungoverned internationally.¹⁹ By achieving economic growth, while simultaneously enforcing stringent restrictions and regulation on their citizens' use of cyberspace, the CCP stands as a model for non-democratic regimes with similar aspirations to exert control over their citizens.²⁰

China's strict and hierarchal authoritarian governance emphasizes communitarian principles of social harmony in an attempt to maintain domestic legitimacy while simultaneously using technology to de-emphasize human rights and individual privacy.²¹ Many governments, especially authoritarian regimes in developing countries, find China's approach to cyberspace governance, surveillance, and censorship appealing as it gives increased control over the flow of information to their citizens and can strengthen a

¹⁷ Michaels, "China's Growing Access to Global Shipping Data Worries U.S."

¹⁸ Cheney, "China's Digital Silk Road: Strategic Technological Competition and Exporting Political Illiberalism."

¹⁹ Richard Ghiasy and Rajeshwari Krishnamurth, "China's Digital Silk Road and the Global Digital Order," April 13, 2021, <https://thediplomat.com/2021/04/chinas-digital-silk-road-and-the-global-digital-order/>.

²⁰ Ghiasy and Krishnamurth.

²¹ Tyson Barker, "Withstanding the Storm: Digital Silk Road, Covid-19 and Europe's Options," in *China After COVID-19: Economic Revival and Challenges to the World* (Milan, Italy: Ledizioni Ledi Publishing, 2021), 130–60.

regime's grip on power.²² Additionally, authoritarian leaders may find the reduced transparency useful in dealing with Chinese investment as DSR contracts could lead to financial gain for the ruling elites at the expense of their citizens.

Similarly, access to a country's data and putting them in a position of digital dependence can be valuable tools for geopolitical influence.²³ Control over a country's digital infrastructure can produce dependence in the form of leverage, as Chinese state-controlled companies could deny maintenance or requests for spare parts, potentially leaving the expensive systems inoperable.²⁴ Data that provides heightened awareness on shipping can be used for leverage over political and business elites, potentially applying pressure on the supply chain, for example, by holding up critical goods in a port as a plausibly deniable and unofficial type of sanction.²⁵ China has made great strides towards creating digital dependence via market dominance in many developing markets. For example, in Africa, Huawei owns roughly 70% of the 4G base stations.²⁶ While 4G is theoretically inexpensive compared to 5G, as technology progresses, and these countries potentially seek to upgrade to 5G, China has already established economic path-dependency. As Julia Voo, puts it, "it is costly to tear out the infrastructure and replace everything, and if China has the best products on the market, why would you?"²⁷

C. LITERATURE REVIEW

The DSR is a relatively recent concept which showcases the PRC's growing ambitions on the international stage and carries significant implications on the regime's

²² Cheney, "China's Digital Silk Road: Strategic Technological Competition and Exporting Political Illiberalism."

²³ Ghiasy and Krishnamurth, "China's Digital Silk Road and the Global Digital Order."

²⁴ Mary Kay Magistad, "China's Digital Silk Road," On China's New Silk Road Podcast, accessed June 23, 2022, <https://globalreportingcentre.org/on-chinas-new-silk-road-podcast/ep07-digital-silk-road/>.

²⁵ John Hemmings and Patrick Cha, "Exploring China's Orwellian Digital Silk Road," Text, *The National Interest* (blog) (The Center for the National Interest, January 7, 2020), <https://nationalinterest.org/feature/exploring-china%E2%80%99s-orwellian-digital-silk-road-111731>.

²⁶ Momoko Kidero, "Huawei's Deep Roots Put Africa Beyond Reach of U.S. Crackdown," *Nikkei Asia*, August 15, 2020, <https://asia.nikkei.com/Spotlight/Huawei-crackdown/Huawei-s-deep-roots-put-Africa-beyond-reach-of-US-crackdown>.

²⁷ Magistad, "China's Digital Silk Road."

domestic stability and the existing liberal international order.²⁸ The literature on the topic is growing rapidly steadily as awareness of the DSR's significance becomes more prevalent. Much akin to the BRI, the DSR concept has proven to be quite flexible, regularly reacting and adapting to domestic and international developments, perceptions, and criticism. Analysis of the subject requires continuous recalibration due to the fluid geopolitical and economic conditions shaping China's technological ambitions. While there exist areas of consensus within the existing scholarship, such as CCP's heavy involvement in what it views as key sectors, there are debates surrounding what the actual driving force behind the DSR is, whether it is a tool for exporting authoritarianism, or simply a means for facilitating economic growth, creating dependency, and fostering geopolitical influence. The literature does well to document the risks and benefits of participating in the DSR, but the perceptions and reactions from participating nations are underexplored.

1. Top-down Plan or Bottom-up Demand?

One aspect of the literature that lacks consensus is whether the DSR is driven top down by coherent direction and policy implementation from the CCP, whether it is occurring bottom up by technology companies who are simply exploiting opportunities to fill a void in global information and communications technology (ICT), or some combination of both.

Greene and Triolo make an argument that the DSR has never been a top-down, tightly orchestrated plan for China's global digital expansion nor a masterplan to export their techno-authoritarian model.²⁹ They argue, rather, that the initiative can be viewed as a supply and demand issue, where countries need connectivity, and China is able to provide reliable technology at an affordable price. They propose that because there are no official criteria as to what constitutes a DSR project, many international tech projects are self-branded or labeled as part of the DSR to get political and financial support and capitalize

²⁸ Burgers, "Assessing the Economic and Political Success of the Digital Silk Road throughout the Indo-Pacific Region."

²⁹ Greene and Triolo, "Will China Control the Global Internet Via Its Digital Silk Road?"

on the CCP's ambitions for technological self-reliance. State involvement and overt influence within China's technology companies puts pressure on the company's leadership to align with state policy objectives, and, when coupled with the ambitious rhetoric the CCP uses regarding the BRI and DSR, can be counterproductive to the appeal of the initiative as pushback from abroad increases.

Kristin Shi-Kupfe and Mareike Ohlberg argue that China's efforts to become a international leader in digital technology is influenced both by well-executed policy coordination as well as interconnected interests of the party, state, and private entities.³⁰ The authors raise similar sentiments as Greene and Triolo regarding the counterproductive nature of CCP involvement, specifically noting that “[h]eightedened party control over private companies and inefficient allocation of capital may ultimately come at the expense of [technological] innovation.”

John Hemmings, takes a middle ground in arguing that the strategic intentions for the DSR are the result of centralized decision making, but that there is a nationalist ideology that effectively bridges the gap between the decisions and policies at the top of the hierarchical regime with the frenetic activity that occurs on the ground by the technology companies.³¹ In the end, the level of state involvement in the DSR, from private sector companies to state owned enterprises, has a significant impact on the calculus of prospective DSR participants. While countries who see China as a revisionist power whose untrustworthy motives pose a threat might find that the CCP's heavy handed influence and lack of transparency provide an unfair advantage in a capitalist market or are hazardous to the protection of intellectual property. The state involvement can be interpreted as unfair to their local companies and raise concerns about the risks posed by having their market being dominated from outside thus leaving little room for success of local companies.

In the end, whether the is DSR well-coordinated across the various stakeholders within the regime via coherent policy and guidance, or whether the DSR is simply a label

³⁰ Kristin Shi-Kupfer and Mareike Ohlberg, “China's Digital Rise: Challenges for Europe,” April 8, 2019, <https://merics.org/en/report/chinas-digital-rise>.

³¹ Hemmings, “Reconstructing Order.”

that Chinese technology companies can put on their projects to gain political and financial support from the state, it is clear that there are significant security and political risks for participant countries that arise from the interconnected nature of Chinese government, its state owned enterprises, and its private corporations and these risks have implications on the reception of the DSR abroad. For example, if a country questions the CCP's motives or finds their lack of transparency untrustworthy, it is going to be very difficult for the CCP to expand the DSR into their market. This thesis, however, transcends this debate by addressing an issue which is relevant regardless of the direction of influence between the regime and the state's technology sector.

2. Exporting Authoritarianism or Creating Economic Dependence?

Another main theme that varies amongst scholars is the extent to which the CCP is attempting to deliberately export illiberal practices and authoritarianism to undermine democracy as opposed to simply pursuing access to foreign markets to achieve economic growth and dependence. Tyson Barker emphasizes China's Digital Grand Strategy as a key vector in the export of China's model of authoritarianism.³² He notes the CCP's use of industrial-grade AI surveillance to track citizens, intrude on privacy, and undermine human rights in regions such as Xinjiang and Hong Kong as evidence of their growing competence in digital authoritarianism. This expanding know-how, coupled with the fact that, to date, China has exported surveillance and monitoring systems to 18 countries abroad, demonstrates the potential for adoption of their model of state-controlled internet censorship and high-tech repression.³³

Clayton Cheney provides similar sentiment to Barker when he portrays China's activity on the DSR as providing not just technology, but the blueprint for using censorship and surveillance on their respective citizens.³⁴ He asserts China is keen to foster an illiberal political international order by exporting their form of digital authoritarianism to DSR

³² Barker, "Withstanding the Storm: Digital Silk Road, Covid-19 and Europe's Options."

³³ Alina Polyakova and Chris Meserole, "Exporting Digital Authoritarianism: The Russian and Chinese Models," *Foreign Policy at Brookings*, August 26, 2019, 22.

³⁴ Cheney, "China's Digital Silk Road: Strategic Technological Competition and Exporting Political Illiberalism."

recipient nations and educating authoritarian regimes on how to most effectively use digital surveillance, censorship, and internet governance to control their populations.

Meanwhile, Parkinson, Bariyo, and Chin demonstrate that, regardless of whether China has a strategy that includes exporting authoritarianism, Chinese technology companies are willing and able to facilitate authoritarian governance and regimes are interested in employing their techniques.³⁵ The authors show that Chinese norms of governance and expertise in digital authoritarianism appeal to those governments who embrace illiberal political values and desire to use digital surveillance and censorship to maintain a firm grip over their population, suppress dissent, and spy on political opponents under the guise of bolstering national security.

Jessica Chen Weiss asserts that while China's actions abroad do undermine liberal values, make it "easier for authoritarianism to coexist alongside democracy," and offer alternatives to the U.S.-led international institutions, she contends that these actions are less a grand strategy to undermine democracy or spread autocracy and more an attempt to secure its position against potential threats domestically and internationally.³⁶ That is, the CCP does not have a vested interest in advancing authoritarianism, but is simply attempting to ensure its illiberal practices remain free from criticism or backlash.

While the literature is inconclusive as to whether a goal of the DSR is to make authoritarianism more prevalent and accepted internationally, the fact that this debate exists is important when analyzing political factors surrounding a state's receptiveness to the DSR. Receptiveness could largely depend on the political atmosphere and the level of democratic governance in potential participant countries, their view on the existing liberal international order, as well as their reliance on or relationship with existing democratic powers.

³⁵ Joe Parkinson, Nicholas Bariyo, and Josh Chin, "Huawei Technicians Helped African Governments Spy on Political Opponents," *WSJ*, August 15, 2019, <https://www.wsj.com/articles/huawei-technicians-helped-african-governments-spy-on-political-opponents-11565793017>.

³⁶ "China's Digital Authoritarianism: Surveillance, Influence, and Political Control" (U.S. House of Representatives, May 16, 2019), <https://docs.house.gov/meetings/IG/IG00/20190516/109462/HHRG-116-IG00-Wstate-ChenWeissJ-20190516.pdf>.

3. Market Domination and Economic Dependence

Another factor that plays into countries' calculus when considering whether to rely on the DSR to meet their technology needs is China's potential to dominate their market to create economic dependence. Agbebi notes that China is eager to expand opportunities for its technology firms' global operations in new markets and has goals of dominating developing markets.³⁷ He argues that success in this endeavor can be attributed to its state-backed export finance model and the lack of support from other major international donors; thus, those nations interested in developing their telecoms sectors and infrastructure have limited options. He notes that China is driving the technological development in many developing countries which sets the stage for their dependence on Chinese technology systems and the hazards associated with this dependence. Tobias Burgers argues that the China's effort to export technology in tandem with its model for authoritarian governance has been unsuccessful in the near abroad and demonstrates that their goal is not to export authoritarianism, but to achieve economic dependency in the region and gain geopolitical influence and advance their ability to mute criticism of their technology-enabled authoritarian governance.³⁸ He argues that increasingly negative geopolitical dynamics and public opinion abroad make it less likely that the DSR and its associated economic dependency networks will expand beyond those nations already within China's orbit. Further, that the CCP's focus will inevitably shift inwards, towards domestic productivity and stability, leaving the techno-economic competition at the hands of international market forces and leaving the DSR as a method for expansion of Chinese companies rather than an effective tool for expanding geopolitical influence.

John Hemmings demonstrates that the DSR overly favors Chinese companies in awarding contracts once a country agrees to participate in the initiative.³⁹ El Kadi notes that, because Chinese companies are so heavily backed by state subsidies, they are able to

³⁷ Motolani Agbebi, "China's Digital Silk Road and Africa's Technological Future," Council on Foreign Relations, February 1, 2022, <https://www.cfr.org/blog/chinas-digital-silk-road-and-africas-technological-future>.

³⁸ Burgers, "Assessing the Economic and Political Success of the Digital Silk Road throughout the Indo-Pacific Region."

³⁹ Hemmings, "Reconstructing Order."

provide goods at prices that are difficult to compete with, which severely impedes any participation from local and international companies.⁴⁰ CCP efforts to use the DSR to gain market dominance and create economic dependence is well documented throughout the literature as a risk that must be taken into consideration when a country chooses to rely on Chinese technology. As discussed previously, economic dependence can quickly lead to Chinese geopolitical influence and leverage while market domination can have negative effects on the DSR participating nation's domestic economic growth.

4. Big Data

When a nation participates in the DSR, agreements often result in handing over massive amounts to which the CCP is ensured access. Hemmings and Cha note that when Beijing builds and administers DSR networks internationally, they gain access to massive amounts of real-time data across a large portion of the world which facilitates a wide array of influence and power.⁴¹ The authors note that this data provides advantages to Chinese tech giants, giving them a decisive ability to tailor their services and outperform competition, or gain leverage over political and business elites by influencing supply chains and unofficially sanctioning the flow of goods.

Maily Fidler details one of the most prominent examples of the risk that the DSR poses on data security by describing data breach that the African Union (AU) was unwittingly exposed to after they had a Chinese company build their headquarters' digital network.⁴² For five years, data from their internal systems was sent to Shanghai before anyone at the AU was made aware of the breach. As technology continues to advance and the world is increasingly interconnected, other countries risk China gaining access to large amounts of their data by participating in the DSR, a risk that countries must take seriously to avoid Chinese leverage over their political and economic affairs.

⁴⁰ Tin Hanine El Kadi, "The Promise and Peril of the Digital Silk Road," *Chatham House – International Affairs Think Tank* (blog), June 6, 2019, <https://www.chathamhouse.org/2019/06/promise-and-peril-digital-silk-road>.

⁴¹ Hemmings and Cha, "Exploring China's Orwellian Digital Silk Road."

⁴² Maily Fidler, "African Union Bugged by China: Cyber Espionage as Evidence of Strategic Shifts," Council on Foreign Relations, March 7, 2018, <https://www.cfr.org/blog/african-union-bugged-china-cyber-espionage-evidence-strategic-shifts>.

5. Pakistan Reception

Literature on Pakistan's relationship with the Digital Silk Road that is accessible in English is limited. There are various news publications who have covered their reception as eager while many have cited their crippling debt situation, and the extreme risks of their impending overreliance. Kalbe Ali cites Pakistan's desire for technology exchange as an effort to learn from more experienced technology companies as a way to promote its own technology companies while also seeking to improve their domestic academia.⁴³ Hillman provides a cautionary tale regarding the risks of Pakistan's path towards digital dependence as they are already heavily indebted to Chinese BRI loans and the slew of DSR agreements could put Pakistan on a trajectory where "[i]ts data, and its future, are increasingly in Beijing's hands."⁴⁴ Some opine that despite the abundance of shortfalls for the BRI in Pakistan the time-tested military security relationship advances their digital relations and leaves Pakistan entangled in China's grip with strategic implications for Western influence in the region.⁴⁵

6. Malaysia Reception

The literature regarding Malaysia's reception to the DSR notes that, despite the shaky start, Malaysia's involvement in the BRI, including their East Coast Rail Link project, was an important catalyst where China demonstrated willingness to adapt to its partners' concerns, thus increasing Malaysia's reception to the DSR.⁴⁶ China's alleged debt trap diplomacy and overreliance on a single supplier have, however, stimulated

⁴³ Kalbe Ali, "Pakistan Seeks Tech Cooperation with China," Dawn, 07:21:04+05:00, <https://www.dawn.com/news/1673925>.

⁴⁴ Jonathan E. Hillman, "Pakistan's Cautionary Tale of Digital Dependence on China," Nikkei Asia, December 3, 2021, <https://asia.nikkei.com/Opinion/Pakistan-s-cautionary-tale-of-digital-dependence-on-China>.

⁴⁵ Ayesha Siddiqi, "Pakistan Has Walked Dangerously Deep into Chinese Grip. Wake up, West," *The Print* (blog), April 4, 2023, <https://theprint.in/opinion/pakistan-has-walked-dangerously-deep-into-chinese-grip-wake-up-west/1495374/>.

⁴⁶ Summer Wang, "A Future AI Park in Malaysia Shows How Criticism Is Changing China's Foreign Investment," Yahoo, April 24, 2019, <https://www.yahoo.com/video/future-ai-park-malaysia-shows-152032925.html>.

concerns that have impacted Malaysian receptiveness to the DSR.⁴⁷ Nonetheless, some government officials, such as former Prime Minister Mahathir Mohamad, dismiss the espionage concerns of doing business with the DSR.⁴⁸ Mahathir was quoted as responding to questions of espionage by saying, “... what is there to spy on in Malaysia? We are an open book.”⁴⁹

D. POTENTIAL EXPLANATIONS

There are many factors which contribute to a country’s willingness to participate in the Digital Silk Road initiative. This thesis will explore two hypotheses and analyze under what conditions economic factors or political factors prove to be more decisive in influencing a country’s reception of, or opposition to, the DSR initiative, and why this is the case. Perceptions regarding the DSR will also be analyzed from the perspective of political elites while accounting for broad public opinion, and the overall level of reception or opposition is likely to correlate with the level of the democratic versus authoritarian governance and the population’s ability to influence national decision-making.

The first hypothesis is that political factors can play a significant role in both attracting and deterring participation. The CCP’s track record for illiberal practices and human rights violations could prove to be ample reason, based on democratic principles alone, to avoid participation in the DSR among many developed countries. Political pressure, whether it comes endogenously from a government’s constituents or exogenously from other international powers, can have a significant impact on a democratic nation’s propensity to participate in the DSR. Similarly, the CCP’s increasingly coercive actions, bullying, and nationalist diplomacy could be sufficient reason to avoid participation. Meanwhile, those countries that have pre-existing positive relations with Beijing, and

⁴⁷ Wang.

⁴⁸ Paul Triolo et al., “The Digital Silk Road: Expanding China’s Digital Footprint,” accessed June 21, 2022, <https://www.eurasiagroup.net/files/upload/Digital-Silk-Road-Expanding-China-Digital-Footprint-1.pdf>.

⁴⁹ Anna Maria Romero, “‘What Is There to Spy in Malaysia? We Are an Open Book.’ Mahathir on the Possibility of Huawei Spying on the Country,” *Singapore Independent*, May 31, 2019, <https://theindependent.sg/what-is-there-to-spy-in-malaysia-we-are-an-open-book-dr-mahathir-on-the-possibility-of-huawei-spying-on-the-country/>.

whose norms and values align with the authoritarian regime, will be far more inclined to participate. This participation could further solidify a country's relationship with Beijing, advancing the accompanying political benefits of the relationship, while avoiding becoming the subject of political or economic backlash from China for denying participation. Similarly, corruption in the recipient country could lead to a greater propensity for participation as a lack of transparency of the DSR contracts could lead to great financial gain for political elites at the expense of their citizens.

The second hypothesis is that economic factors can play a significant role in both attracting and deterring participation. The DSR can provide reliable ICT infrastructure at an affordable price due to state subsidization of private and public technology companies. The CCP's lack of transparency, heavy involvement in private enterprise, and their persistence in data harboring has the potential to create lopsided strategic advantages in terms of markets, supply chains, consumer preferences, and advertising, which may be enough to deter participation. Conversely, in underdeveloped countries, the demand for affordable technological infrastructure may greatly outweigh the risks associated with doing business with state-backed and private Chinese technology companies, especially if comparable alternatives are unavailable at an affordable price.

E. RESEARCH DESIGN

The first chapter of the thesis will lay out the research question and its significance. The existing literature on the topic will be surveyed and analyzed, and hypotheses will be crafted which will detail potential economic and political factors which influence a country's propensity to participate in the DSR initiative.

Chapters two and three will consist of case studies on Pakistan and Malaysia, respectively. Both chapters will systematically examine political and economic factors which contribute to local responses to the DSR initiative. There are several reasons why these two countries were chosen as case studies for this thesis. First, the history of their participation in the DSR, the extent of their agreements, and the progress of their projects. While Malaysia was initially receptive to Chinese technology, their stance has shifted to one of skepticism and they have taken actions to diversify foreign investment in their

technology sector. Meanwhile, in Pakistan, after BRI projects faced turbulence and criticism from leaders and general public, DSR projects have hit the ground running as Pakistan welcomes large-scale digital economic investment. These two countries were also chosen as case studies due to the level of democracy in their governance, their geographic location vis-à-vis China, and their state of economic development. Finally, the abundance of newspapers, journals, think tank reports, blog posts, digital media, and other scholarly material available in English about both of these countries carried influence on the decision to include them as case studies.

Chapter four will consist of the conclusion to the thesis. It will summarize the thesis' findings and provide policy recommendations that will help the United States government ensure that China's technological ambition does not undermine U.S. political and economic influence, technological growth and influence on standards setting, liberal norms and values, or human rights on the international stage.

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II. DSR IN PAKISTAN

A. INTRODUCTION

The Belt and Road Initiative (BRI) and the Digital Silk Road (DSR) are two important aspects of China's foreign policy and economic strategy. The BRI is a massive infrastructure and development initiative that aims to connect Asia, Europe, and Africa to increase trade and growth, while the DSR is a subset of the BRI which enhances the technological connectivity and digital infrastructure of BRI countries.⁵⁰

Pakistan has emerged as a key BRI partner due to its important geo-strategic location, the two countries' long-existing strategic partnership, as well as their shared geopolitical rivalry with India. BRI success in Pakistan will allow Beijing to expand its influence and economic presence into the Indian Ocean region.⁵¹ It could also serve as a model for other prospective BRI participant countries and demonstrate China's arrival as a capable and reliable international power.⁵² When considering the amount of resources China has committed to making the BRI a success in Pakistan, mediocre results could bring discouraging implications regarding viability and utility of the BRI as a whole.⁵³

The BRI was initially received well and saw success in the energy sector by providing much needed improvement to Pakistan's power grid, but its projects in other sectors have not fared as well. Various political and economic factors have resulted in criticism, local discontent, and pushback leading to delayed progress, project cancellations, and overall insecurity of the initiative. The DSR has been received well in Pakistan for reasons that make it unique from the BRI, but its progress has been vulnerable to many of

⁵⁰ Joshua Kurlantzick and James West, "Assessing China's Digital Silk Road Initiative: A Transformative Approach to Technology Financing or a Danger to Freedoms?" Council on Foreign Relations, accessed February 1, 2023, <https://www.cfr.org/china-digital-silk-road>.

⁵¹ "The China-Pakistan Partnership Continues to Deepen," accessed March 8, 2023, <https://thediplomat.com/2021/07/the-china-pakistan-partnership-continues-to-deepen/>.

⁵² David Sacks, "The China-Pakistan Economic Corridor—Hard Reality Greet's BRI's Signature Initiative," *Council on Foreign Relations* (blog), March 30, 2021, <https://www.cfr.org/blog/china-pakistan-economic-corridor-hard-reality-greet's-bris-signature-initiative>.

⁵³ Khalid Mehmood, "China Has Invested \$19b in CPEC Projects: Yao Jing," *The Express Tribune*, April 19, 2019, <https://tribune.com.pk/story/1954843/china-invested-19b-cpec-projects-yao-jing>.

the same issues that have impeded the BRI's progress and plagued it with setbacks while introducing its own set of unique challenges.

While both the BRI and DSR have the potential to bring benefits to Pakistan, their reception, which is critical to their overall success, have been influenced by a range of economic and political factors. It remains to be seen what their impact will be on Pakistan's development or China's foreign policy goals in the medium and long-term. To find long term success the BRI will need to address concerns around security, transparency, and debt sustainability to gain wider support from the Pakistani's. For the DSR, addressing the challenges around labor expertise, digital dependency, data privacy, and concerns about the initiative's utility for implementing digital authoritarianism could prove to be useful to ensure continued success.

This chapter compares the reception and the effectiveness of the BRI with that of the DSR in Pakistan. It describes the BRI and provides details on energy and transport projects that are notable in size, cost, or geostrategic significance. Next, it discusses economic and political factors that influence Pakistan's reception of the BRI. Then it describes the DSR and three notable projects before discussing economic and political factors that influence Pakistan's reception of the DSR. The conclusion analyzes the differences in Pakistan's reception of the BRI versus the DSR.

B. BRI IN PAKISTAN

The CPEC is widely considered the flagship project of the BRI and these two acronyms will be used interchangeably in referring to China's signature development and infrastructure initiative in Pakistan.⁵⁴ This section will first define the CPEC and describe some of the major energy and infrastructure projects in order to understand the scale of BRI investment in Pakistan. Then, it will analyze Pakistan's reception of the BRI by describing challenges, criticism, progress, and success along economic and political lines.

⁵⁴ Jacob Mardell, "The BRI in Pakistan: China's Flagship Economic Corridor," Mercator Institute for China Studies (MERICS), May 20, 2020, <https://merics.org/en/analysis/bri-pakistan-chinas-flagship-economic-corridor>.

The CPEC is an estimated \$70 billion plan for developing highways, railways, ports, and power plants while connecting China's landlocked, western provinces to the Chinese financed Pakistani deep-water port in Gwadar on the Indian Ocean coastline.⁵⁵ Pakistani leaders see the injection of Chinese investment, production capacity, and know-how as a development package that could transform Pakistan by delivering significant growth of economy, stability of domestic politics, and overall security.⁵⁶ Despite Pakistan's development ambitions, many suggest that China sees far greater benefit from the corridor than Pakistan.⁵⁷ China finds benefit in improving security on its periphery, relieving its domestic over-capacity of labor and supplies, gaining direct access to the Indian Ocean, and enhancing its connectivity to Europe, Africa, and the Middle East.⁵⁸

1. Energy Sector

The energy sector, with an estimated \$35 billion in projects planned, is a major focus of the BRI in Pakistan although it draws less attention from media and analysts than other sectors do.⁵⁹ The energy sector accounts for approximately 75 percent of the \$25 billion worth of BRI projects thus far completed in Pakistan.⁶⁰ Energy projects account for nearly two-thirds of CPEC funding, but because nearly half of the energy projects are in fossil fuels, these projects intensify pre-existing environmental concerns and criticisms regarding the pollution level in Pakistan.⁶¹

⁵⁵ Muhammad Tayyab Safdar and Max C. Barte, "Can CPEC Move Beyond Infrastructure?" *The Diplomat*, September 10, 2021, <https://thediplomat.com/2021/09/can-cpec-move-beyond-infrastructure/>.

⁵⁶ Daniel Markey, "How the United States Should Deal with China in Pakistan," Carnegie Endowment for International Peace, accessed February 8, 2023, <https://carnegietsinghua.org/2020/04/08/how-united-states-should-deal-with-china-in-pakistan-pub-81456>.

⁵⁷ Kiran Hassan, "CPEC: A Win-Win for China and Pakistan," *Human Affairs* 30, no. 2 (2020): 212–23, <https://doi.org/10.1515/humaff-2020-0020>.

⁵⁸ Jacob Mardell and Thomas S. Eder, "The BRI in Pakistan: Too Big to Fail," Mercator Institute for China Studies (MERICS), September 20, 2018, <https://merics.org/en/analysis/bri-pakistan-too-big-fail>.

⁵⁹ Sheraz Aziz, "Can China Solve Pakistan's Energy Crisis?" *The Diplomat*, June 12, 2019, <https://thediplomat.com/2019/06/can-china-solve-pakistans-energy-crisis/>.

⁶⁰ Mardell, "The BRI in Pakistan."

⁶¹ Jonathan E. Hillman and Maesea McCalpin, "The China-Pakistan Economic Corridor at Five," April 2, 2020, <https://www.csis.org/analysis/china-pakistan-economic-corridor-five>.

Hydropower projects have played an important part in rectifying Pakistan's energy issues but have been criticized heavily for their negative environmental impact.⁶² Three projects by the China Three Gorges Corporation in the geopolitically sensitive Kashmir region were planned, but the results of the completed Karot hydropower project (\$1.7 billion, 720 megawatt) have left the planned Kohala hydropower project (\$2.4 billion, 1,124 megawatt) and the Azad Pattan hydropower project (\$1.5 billion, 700.7 megawatt) with little chance of success.⁶³ As large dams alter water flows and down-river water supplies, these projects draw intense criticism not only from the local residents for their negative environmental impacts, but also from rival and neighbor, India, due to the geopolitically sensitive nature of their location in the Kashmir region.⁶⁴

Another important project, the Matiari to Lahore High Voltage Direct Current Transmission Line project was completed in September 2021 with a cost of \$1.7 billion.⁶⁵ The agreement between the State Grid Cooperation of China and Pakistan involves a build-own-operate-transfer arrangement which stipulates the infrastructure will not be handed back from the Chinese company for at least 25 years leaving China in a position to control, operate, and profit from the project.⁶⁶ This project reduces Pakistan's energy cost by efficiently transporting cheaper electricity from southern CPEC power plants to the more populated areas of Pakistan to its north.⁶⁷ The Matiari to Lahore project has seen success

⁶² Faseeh Mangi, "Belt and Road Re-Emerges in Pakistan with Flurry of China Deals," Bloomberg.com, July 15, 2020, <https://www.bloomberg.com/news/articles/2020-07-15/belt-and-road-re-emerges-in-pakistan-with-flurry-of-china-deals>.

⁶³ Pakistan Ministry of Planning, Development, & Special Initiatives, "Energy Projects Under CPEC," China-Pakistan Economic Corridor (CPEC) Authority Official website, accessed March 12, 2023, <https://cpec.gov.pk/energy>.

⁶⁴ "What Are Azad Pattan and Kohala Hydropower Projects in Pakistan Occupied Kashmir?" Jagranjosh.com, July 11, 2020, <https://www.jagranjosh.com/general-knowledge/azad-pattan-and-kohala-hydropower-projects-in-pakistan-occupied-kashmir-1594464902-1>.

⁶⁵ Pakistan Ministry of Planning, Development, & Special Initiatives, "Energy Projects Under CPEC."

⁶⁶ Khaleeq Kiani, "Government Seeks Special Tariff for \$2.1bn Matiari-Lahore Transmission Line," Dawn, March 10, 2016, <http://www.dawn.com/news/1244621>.

⁶⁷ Xinhua, "CPEC Helped Check Pakistan's Power Crisis," The News International, June 27, 2021, <https://www.thenews.com.pk/print/855604-cpec-helped-check-pakistan-s-power-crisis>.

in reducing the power interruptions caused by the inefficiencies in distribution and transmission but has produced local discontent due to the questionable terms of the deal.⁶⁸

2. Transport Sector

In addition to the energy sector, the transportation sector of the BRI is important as it has potential to provide desperately need infrastructure improvement in Pakistan while facilitating trade, connectivity, and international market accessibility for Pakistan and China.⁶⁹ Investment in this sector is intended streamline China's energy and trade routes with the wider world while providing much needed development for Pakistan.⁷⁰ The size of investment is immense, as of 2017, approximately \$10 billion in BRI investment was allocated for rail, road, and port projects.⁷¹ The transportation sector also boasts \$6.3 billion in completed projects, nearly \$470 million worth of projects currently in progress, and many more planned.⁷² Overall, while reception is mixed among Pakistan's elites, many transport projects have not been received well by locals resulting in discontent and insecurity which has significantly impeded progress.

The Gwadar Port, developed and operated by China Overseas Port Holding Company is one of the most interesting projects regarding Pakistan's BRI reception. The port is located in Balochistan, Pakistan's largest province when measured by land area yet smallest if measured by total population.⁷³ Balochistan is notorious for insecurity and insurgency with an abundance of separatists who have longstanding grievances with, and deep-seeded mistrust against, the federal government.⁷⁴ With costs estimated between

⁶⁸ Maha Rehman, "Pakistan's Electricity Generation Has Increased over Time. So Why Do We Still Not Have Uninterrupted Supply?" DAWN.COM, 16:32:46+05:00, <https://www.dawn.com/news/1430728>.

⁶⁹ China Pakistan Institute, "Transportation Infrastructure," *China Pakistan Economic Corridor* (blog), accessed March 19, 2023, <https://cpecinfo.com/transportation-infrastructure/>.

⁷⁰ Hassan, "CPEC: A Win-Win for China and Pakistan."

⁷¹ Nasir Jamal, "The Cost of CPEC," Dawn, March 12, 2017, <https://www.dawn.com/news/1320028>.

⁷² Pakistan Ministry of Planning, Development, & Special Initiatives, "Transport Infrastructure Projects Under CPEC," China-Pakistan Economic Corridor (CPEC) Authority Official website, 2023, <https://cpec.gov.pk/infrastructure>.

⁷³ Ziad Haider, "Baluchis, Beijing, and Pakistan's Gwadar Port," *Georgetown Journal of International Affairs* 6, no. 1 (2005): 95–103.

⁷⁴ Haider.

\$600 million to \$1 billion, the port carries a 40-year lease during which China will be able to keep more than 90 percent of the port's revenues.⁷⁵

The port's construction has consistently been the target of terrorist attacks and protests, and the army has been heavy-handedly used to provide security for the project, which has sparked greater resistance from the separatists and locals.⁷⁶ Despite significant development to make it a useful deep-water port, its lack of connectivity and rampant insecurity have been significant barriers leaving scholars questioning the commercial viability of the seaport due to the minimal number of commercial port calls since its inception.⁷⁷ Many believe that Gwadar Port stands to provide greater benefit to China than it does to Pakistan, due to the potential economic impact it can create for China's western province as well as the possible utility as a resupply or basing port for the PLA Navy.⁷⁸

3. BRI Reception

Pakistan's reception to the BRI was enthusiastic initially, presenting a unique opportunity to stimulate the growth and development of its troubled economy and upgrade its infrastructure.⁷⁹ The Sino-Pakistani strategic partnership is an important factor in both the initial eagerness to participate, and, more recently, the persistence to endure challenges, criticism, and setbacks.⁸⁰ When BRI progress slowed and reception in Pakistan faltered due to Pakistan's domestic politics, debt concerns, and local discontent, the strong military

⁷⁵ Gurmeet Kanwal, "Pakistan's Gwadar Port: A New Naval Base in China's String of Pearls in the Indo-Pacific," *Center for Strategic and International Studies* (blog), April 2, 2018, <https://www.csis.org/analysis/pakistans-gwadar-port-new-naval-base-chinas-string-pearls-indo-pacific>.

⁷⁶ Muhammad Akbar Notezai, "What Happened to the China-Pakistan Economic Corridor?," *The Diplomat*, February 16, 2021, <https://thediplomat.com/2021/02/what-happened-to-the-china-pakistan-economic-corridor/>.

⁷⁷ Frédéric Grare, "Corridor to Nowhere: The Gwadar Protests and the Pakistan-China Relationship," *European Council on Foreign Relations* (blog), January 5, 2022, <https://ecfr.eu/article/corridor-to-nowhere-the-gwadar-protests-and-the-pakistan-china-relationship/>.

⁷⁸ Muhammad Akbar Notezai, "What Happened to the China-Pakistan Economic Corridor?," *The Diplomat*, February 16, 2021, <https://thediplomat.com/2021/02/what-happened-to-the-china-pakistan-economic-corridor/>.

⁷⁹ Kurlantzick and West, "China's Digital Aid."

⁸⁰ Manjari Chatterjee Miller, "How China and Pakistan Forged Close Ties," *Council on Foreign Relations*, October 3, 2022, <https://www.cfr.org/article/how-china-and-pakistan-forged-close-ties>.

bureaucracy of the Pakistan army played an important role in sustaining progress and maintaining amicable relations with Beijing.⁸¹ More recently, there has been an influx of public rhetoric from both China and Pakistan which gave the CPEC fresh momentum, but this rhetoric has not significantly altered the on the ground reality that Pakistan is slow to complete projects, and China is slow to fund new ones.⁸²

a. Economic Factors

Pakistan has long seen the development of highways, railways, and ports as critical to improving its connectivity, promoting trade, and achieving economic development.⁸³ Until China stepped in with the BRI, Pakistan was largely unable to secure funding for such endeavors.⁸⁴ For Pakistan, the potential economic benefits of the BRI were crucial for its positive initial reception.⁸⁵ As the initiative has progressed, various economic issues attract criticism and cause a decrease in Pakistan's overall receptiveness to the BRI.

Two important economic concerns that have weakened Pakistan's reception to the BRI are unsustainable debt levels and commercial viability.⁸⁶ Many are concerned about Pakistan's economic outlook with its current debt and inflation levels, the lopsided terms on the Chinese loans, or whether the projects will be capable of generating enough capital to make payments on the loans.⁸⁷ Pakistan is currently struggling to revive a roughly \$7 billion lending program from the International Monetary Fund, is at risk of defaulting on

⁸¹ Mangi, "Belt and Road Re-Emerges in Pakistan with Flurry of China Deals."

⁸² Michael Kugelman, "Have China and Pakistan Hit a Roadblock?" *Foreign Policy* (blog), February 9, 2023, <https://foreignpolicy.com/2023/02/09/china-pakistan-cpec-infrastructure-economy/>.

⁸³ Ignacio Artaza, "More Connectivity," *Dawn*, June 17, 2020, <https://www.dawn.com/news/1564060>.

⁸⁴ Hassan, "CPEC: A Win-Win for China and Pakistan."

⁸⁵ "The China-Pakistan Partnership Continues to Deepen."

⁸⁶ Asif Shahzad, "Pakistan's Sharif Lands in Beijing to Discuss Economy, Debt," *Reuters*, November 1, 2022, <https://www.reuters.com/world/asia-pacific/pakistans-sharif-lands-beijing-discuss-economy-debt-2022-11-01/>.

⁸⁷ Amy Hawkins, "Pakistan's Fresh £580m Loan from China Intensifies Debt Burden Fears," *Guardian*, February 23, 2023, <https://www.theguardian.com/world/2023/feb/23/pakistan-loan-china-intensifies-debt-burden-fears>.

its loans, and its foreign reserves have fallen to \$4.2 billion, which is less than enough for one month's worth of imports.⁸⁸

Additionally, the influx of Chinese citizens employed to facilitate the projects has been a source of discontent for locals.⁸⁹ As Pakistan becomes flooded with Chinese workers, many locals are left wondering if they will see the benefits of the projects, if they will be displaced by the construction, or if the projects simply benefit Chinese and the Pakistani elite.⁹⁰ This economic discontent among the locals has brought insecurity and an increase in terrorism which targets both the highly visible construction of BRI infrastructure as well as the presence of Chinese nationals in Pakistan.⁹¹

b. Political Factors

There are many political factors which have influenced the reception of the BRI in Pakistan. The long history of strong Sino-Pakistani strategic partnership facilitated Pakistan's quick participation in the BRI when it was unveiled.⁹² Domestic politics have played a significant role in encouraging investment and facilitating progress while also causing delays in progress. The instability of Pakistan's civilian government, the lack of transparency of the BRI deals, and accusations of corruption have severely impeded reception and the resulting discontent and insecurity have slowed the BRI's progress significantly.

Domestic politics have a significant impact on Pakistan's reception to the BRI and a politician's stance on the BRI impacts the amount of popular support they receive. For example, prior to his election in 2018, former Prime Minister Khan gained popularity by criticizing the BRI, promising to review all projects, and renegotiate any unfavorable terms

⁸⁸ Benjamin Parkin and Farhan Bokhari, "Imran Khan Says Pakistan's Economic Crisis Requires Conducting 'Surgery,'" *Financial Times*, April 13, 2023, <https://www.ft.com/content/481b1d9c-dd54-4748-8d3d-ecb2addbf081>.

⁸⁹ Isaac Kardon, "China's Geopolitical Gambit in Gwadar," *Wilson Center*, accessed March 16, 2023, <https://www.wilsoncenter.org/blog-post/chinas-geopolitical-gambit-gwadar>.

⁹⁰ Notezai, "What Happened to the China-Pakistan Economic Corridor?"

⁹¹ Notezai.

⁹² "The China-Pakistan Partnership Continues to Deepen."

while others in his cabinet publicly suggested pausing all projects to conduct a thorough assessment of the CPEC.⁹³ These campaign tactics were not received well in Beijing, especially when, upon his election, he launched a commission to investigate the costs, level of transparency, and the process for awarding of contracts.⁹⁴ This move caused strain in the Sino-Pakistani relationship and resulted in significant delays in the overall progress of the CPEC despite achieving favorable results for individual political elites.⁹⁵

The chronic instability of Pakistan's civilian government and its relationship vis-à-vis the military has resulted in varied enthusiasm among national leadership. The military's strong relationship with Beijing, coupled with its formidable presence in Pakistan's bureaucracy, has helped maintain BRI progress despite its challenges.⁹⁶ When the enthusiasm waned among Pakistani politicians and CPEC progress faltered, China found success by turning to the Pakistani military to smooth out economic and political issues which effectively sidelined the civilian government.⁹⁷

This civil-military tension can be further illustrated by Pakistan's introduction of a supranational CPEC Authority, another point of contention significantly impacts Pakistan's reception of the BRI. In 2020, Pakistan shifted control of CPEC projects from the Ministry of Planning and Development to the newly established, military-led CPEC Authority.⁹⁸ Through the CPEC Authority, Pakistan's military takes a leading role in Sino-Pakistan relations and has decision making authority over Pakistan's most important economic and foreign policy initiative. While some praise this move for the efficiency it

⁹³ Maria Abi-Habib, "China's 'Belt and Road' Plan in Pakistan Takes a Military Turn," New York Times, December 19, 2018, <https://www.nytimes.com/2018/12/19/world/asia/pakistan-china-belt-road-military.html>.

⁹⁴ Sabrina Toppa, "Lahore's Metro Line Opened to Fanfare – but What Is the Real Cost of China's 'Gift'?" *The Guardian*, November 5, 2020, sec. Global development, <https://www.theguardian.com/global-development/2020/nov/05/lahore-metro-line-opened-to-fanfare-but-what-is-the-real-cost-of-china-gift>.

⁹⁵ Notezai, "What Happened to the China-Pakistan Economic Corridor?"

⁹⁶ Abi-Habib, "China's 'Belt and Road' Plan in Pakistan Takes a Military Turn."

⁹⁷ Mangi, "Belt and Road Re-Emerges in Pakistan with Flurry of China Deals."

⁹⁸ Mifrah Haq, "Pakistan Army Set to Gain Sweeping Belt and Road Authority," Nikkei Asia, November 30, 2020, <https://asia.nikkei.com/Spotlight/Belt-and-Road/Pakistan-Army-set-to-gain-sweeping-Belt-and-Road-authority>.

brings to Pakistan's CPEC policy making, critics point to the lack of civilian accountability and oversight as a sign of weakening democracy and creeping authoritarianism in Pakistan.⁹⁹ The Pakistani military's influence over the reception of the BRI can also be associated with the flurry of project agreements that occurred after Pakistan founded the CPEC Authority in 2019.¹⁰⁰

C. DSR IN PAKISTAN

The Digital Silk Road (DSR) is a relatively new initiative by China designed to create new markets for their tech companies and generate international technological influence by investing in digital enterprises such as fiber optic cables, communications infrastructure, smart cities, artificial intelligence, and satellites along the BRI.¹⁰¹ The DSR subset of the BRI came to the forefront in 2020 when the global economy was under strain, and many of the BRI participant countries lacked the fiscal resources to pay for infrastructure projects.¹⁰² Beijing responded by shifting emphasis from the traditional BRI infrastructure projects to more cost-effective and less manpower intensive projects of the DSR.¹⁰³

One of the main reasons for the DSR's warm reception when the BRI faltered is the difference in visibility of the two initiatives. The size of the BRI infrastructure projects makes an easy target for opposition parties, civil society groups, and the media.¹⁰⁴ This heightened visibility makes it impossible to guarantee the security of both the projects and its workers against terrorism and insecurity bringing hesitancy from Chinese investors.¹⁰⁵

⁹⁹ Sacks, "The China-Pakistan Economic Corridor—Hard Reality Greet BRI's Signature Initiative."

¹⁰⁰ Mangi, "Belt and Road Re-Emerges in Pakistan with Flurry of China Deals."

¹⁰¹ Hillman, "Pakistan's Cautionary Tale of Digital Dependence on China."

¹⁰² Hillman.

¹⁰³ Mifrah Haq, "China Builds Digital Silk Road in Pakistan to Africa and Europe," January 29, 2021, <https://asia.nikkei.com/Spotlight/Belt-and-Road/China-builds-Digital-Silk-Road-in-Pakistan-to-Africa-and-Europe>.

¹⁰⁴ "CPEC 2.0: Full Speed Ahead – The Diplomat," accessed February 15, 2023, <https://thediplomat.com/2020/09/cpec-2-0-full-speed-ahead/>.

¹⁰⁵ Haider, "Baluchis, Beijing, and Pakistan's Gwadar Port."

The DSR on the other hand requires far less physical infrastructure and without an overbearing presence of Chinese labor and is therefore less easily targeted by opposition.

For Pakistan, the DSR provides more reliable and advanced communications infrastructure, an internet connection secure from its strategic rival, and opportunities for economic growth into the future. From a Chinese perspective, the DSR is more sustainable than the BRI's high-risk, debt-dependent model because of its lower upfront costs and faster timelines for project completion.¹⁰⁶ The DSR is a way for China to maintain progress in its overseas engagement while demonstrating that the BRI is, and will continue to be, a major global initiative.¹⁰⁷ The shift also ensures an increase in expertise and international reach of China's technology sector which opens the door for Beijing to exert increased influence over international technological standard setting and shape a digital future more accommodating to its widely criticized domestic censorship practices.¹⁰⁸

The next section will describe three DSR projects in Pakistan that are notable in terms of size, cost, and geopolitical significance; the PEACE Cable, the Pakistan-China Fiber Optic Project, and the BeiDou satellite positioning service.

1. PEACE Cable

The PEACE (Pakistan East Africa Connecting Europe) Cable is a 15,000-kilometer fiber-optic cable connecting Pakistan to East Africa and China which is intended to improve connectivity and provide faster internet speeds throughout the region.¹⁰⁹ It provides China with a more direct link for internet traffic to Europe and Africa as compared to its previous connection which traversed Mongolia, Russia, and Kazakhstan.¹¹⁰ The PEACE cable also allows both Pakistan and China to circumvent international telecommunications consortiums dominated by Western and Indian companies while

¹⁰⁶ Hillman, "Pakistan's Cautionary Tale of Digital Dependence on China."

¹⁰⁷ Haq, "China Builds Digital Silk Road in Pakistan to Africa and Europe."

¹⁰⁸ Hillman, *The Digital Silk Road: China's Quest to Wire the World and Win the Future*.

¹⁰⁹ Haq, "China Builds Digital Silk Road in Pakistan to Africa and Europe."

¹¹⁰ News Desk, "China Builds 'Digital Silk Road' to Bypass India for Pakistani Internet Traffic," *The Express Tribune*, February 6, 2021, <https://tribune.com.pk/story/2282931/china-builds-digital-silk-road-to-bypass-india-for-pakistani-internet-traffic>.

improving data transfer speed.¹¹¹ This project went live in late 2022 and the additional connectivity route is expected to reduce Pakistan's frequent internet disruptions caused by damage to submarine cables.¹¹²

2. Pakistan-China Fiber Optic Project

The Pakistan-China Fiber Optic Project is an important DSR project that involves laying fiber optic cable alongside major national transport routes, spanning the length of Pakistan by connecting Gwadar in southern Pakistan to China's western province of Xinjiang. The project has been separated into two parts, the northern portion, the Cross Border Optical Fiber Cable (Khunjrab – Rawalpindi), connects China's Xinjiang Province, through the grueling 4,500 meter high terrain of the Khunjerab Pass, to the Pakistani city of Rawalpindi.¹¹³ The project, which has a stated goal of improving telecom and ICT industry of Pakistan and providing the ICT infrastructure for 3G/4G services in remote areas of northern Pakistan, was completed in 2018 after 3 years of construction and 820 kilometers of cable laid.¹¹⁴ The northern portion boasts an estimated cost of \$44 million, 85% of which was financed by concessionary loans from the Export-Import Bank of China.¹¹⁵

The southern portion of the Pakistan-China Fiber Optic Project will connect Rawalpindi to the port cities of Gwadar and Karachi. This \$240 million endeavor is being built by the telecommunications branch of the Pakistan Army in partnership with China's Huawei technology.¹¹⁶ This portion, initiated with a soft launch in 2021, plans for approximately 8,000 kilometers of fiber optic cable connecting Rawalpindi to the port

¹¹¹ Haq, "China Builds Digital Silk Road in Pakistan to Africa and Europe."

¹¹² Haq.

¹¹³ Fm Shakil, "Huawei Digitally Connects Pakistan beyond India's Reach," Asia Times, February 15, 2021, <https://asiatimes.com/2021/02/huawei-digitally-connects-pakistan-beyond-indias-reach/>.

¹¹⁴ Pakistan Ministry of Planning, Development, & Special Initiatives, "Cross Border Optical Fiber Cable (Khunjrab – Rawalpindi)," China-Pakistan Economic Corridor (CPEC) Authority Official website, accessed March 8, 2023, <https://cpec.gov.pk/project-details/40>.

¹¹⁵ Andrew Kitson and Kenny Liew, "China Doubles Down on Its Digital Silk Road," Reconnecting Asia, November 14, 2019, <https://reconasia.csis.org/china-doubles-down-its-digital-silk-road/>.

¹¹⁶ Shakil, "Huawei Digitally Connects Pakistan beyond India's Reach."

cities of Gwadar and Karachi. Not only will it provide connectivity in remote areas such as the sparsely populated Balochistan province upon completion, but it also stands to make Pakistan into a hub of regional connectivity.¹¹⁷ This project seems to be a success thus far, but there is much room for improvement as Pakistanis still do not have access to internet speeds on par with the global average and the connection is frequently disrupted by damage from extreme weather and rockslides.¹¹⁸

3. BeiDou Satellite Navigation System

China's BeiDou satellite navigation system came online for use by the PLA in 2014 and has put an end to China's reliance on U.S.-owned Global Positioning System (GPS).¹¹⁹ Pakistan was one of the first countries to switch from GPS to Beidou, and was the first country granted access to the military version with enhanced features useful for precision munitions, long range communications, and navigation guidance for ships and aircraft.¹²⁰

Pakistan has agreed to the installation of five different BeiDou ground augmentation stations as well as a processing center to increase local accuracy of the system.¹²¹ The BeiDou services are useful in various tangible areas which increase public reception of the DSR including transport, farming, fishing, disaster response, hydrology, geology, weather, security, digital development, and port construction.¹²²

Islamabad's access to military grade satellite navigation via Beijing is an important step for the DSR and the Sino-Pakistani relationship overall. This cooperation demonstrates the deep entrenchment of the bilateral relationship and potentially closes

¹¹⁷ Tahir Amin, "Delay in OFC Phase-II Project Escalating Cost, Govt Warned," Business Recorder, November 8, 2021, <https://www.brecorder.com/news/40131864>.

¹¹⁸ Nabil Tahir, "Network Error: You Have Been Disconnected by the Rain," September 4, 2022, <https://tribune.com.pk/story/2374786/network-error-you-have-been-disconnected-by-the-rain>.

¹¹⁹ David H. Millner, Stephen Maksim, and Marissa Huhmann, "BeiDou: China's GPS Challenger Takes Its Place on the World Stage," National Defense University Press, April 14, 2022, <https://ndupress.ndu.edu/Media/News/News-Article-View/Article/2999161/beidou-chinas-gps-challenger-takes-its-place-on-the-world-stage/>.

¹²⁰ Sadia Kazmi, "China's BeiDou Navigation System for Pakistan," *Strategic Vision Institute* (blog), August 30, 2020, <https://thesvi.org/chinas-beidou-navigation-system-for-pakistan/>.

¹²¹ Millner, Maksim, and Huhmann, "BeiDou."

¹²² Kazmi, "China's BeiDou Navigation System for Pakistan."

some doors on Pakistan's relationship with the United States. When combined with actions and agreements in the digital realm, BeiDou brings Pakistan closer to digital dependency on China and increases the likelihood that they will continue steadfast participation in the DSR despite the potential risks and downsides.

4. DSR Reception

Pakistan's initial warm reception to the DSR can be attributed to the benefits provided to individual citizens, the troubled state of Pakistani technology sector, as well as the unique opportunities the DSR provides for economic growth. The UN's E-government Development Index of 2019 highlights Pakistan's need for digital infrastructure, ranking them 153rd out of 193 countries due to the poor state of their digital infrastructure, lack of digital skills in the work force, rampant data insecurity, privacy issues, and cyber threats.¹²³

Pakistan's reception of the DSR is hampered by the lack of labor force expertise, the sizeable gap between the two countries current technology level, and the perception that DSR solutions are far more advanced than Pakistan needs or is ready for.¹²⁴ Yet Pakistani reception also seems unphased by the mounting criticism of the DSR writ large such as the risks of China saturating the host nation's technology market, creating digital dependency, and the potential data vulnerability.¹²⁵ While the DSR in Pakistan is praised for ensuring that its data is no longer susceptible to monitoring from India, there is little academic discussion of the undesirable consequences of Chinese access to Pakistan's data.¹²⁶

As Chinese companies saturate the technology sector in Pakistan, the growth of Pakistan's domestic tech companies may be severely constrained, potentially resulting in

¹²³ Digital Policy Team, "Pakistan Drops Down to 153rd Position in UN's E-Government Development Index," *Digital Pakistan* (blog), August 23, 2021, <https://digitalpakistan.pk/blog/pakistan-drops-down-to-153rd-position-in-uns-e-government-development-index/>.

¹²⁴ Hillman, "Pakistan's Cautionary Tale of Digital Dependence on China."

¹²⁵ Kurlantzick and West, "China's Digital Aid."

¹²⁶ News Desk, "China Builds 'Digital Silk Road' to Bypass India for Pakistani Internet Traffic."

digital dependence on China as opposed to generating domestic development.¹²⁷ As Chinese technology companies continue to receive state subsidies which allow them to offer quality products at the cheapest prices, there is little room left for Pakistan's tech companies to compete or grow in their domestic market.¹²⁸

a. Economic Factors

Since the DSR's introduction in Pakistan, its projects have been well-received for various economic reasons, such as providing tangible benefits it to the economy and the individual citizen as well as improving the current state of its digital landscape. Other economic factors have resulted in criticism and pushback, such as the need for Chinese labor to sustain DSR initiatives and the possibility of becoming dependent on Beijing.

First, the development of Pakistan's ICT infrastructure provides benefit of improved connectivity to the individual citizen.¹²⁹ As of 2020, only 46 percent of Pakistanis accessed the internet on a daily basis and 76 percent of those with frequent access were located in four of the most populous urban areas of Karachi, Lahore, Rawalpindi, and Islamabad.¹³⁰ Those Pakistanis located in remote areas that previously had unreliable or nonexistent connectivity find immediate benefit when DSR projects are completed and new services come online.¹³¹

Another economic factor that has made the DSR well-received are the tangible commerce benefits. As undersea cables converge in Pakistan, and fiber optic cables transit the country, Pakistan may find itself at the center of a regional hub of connectivity.¹³² As data traverses the Chinese built fiber optic network in Pakistan to and from other countries,

¹²⁷ Ghiasy and Krishnamurth, "China's Digital Silk Road and the Global Digital Order."

¹²⁸ Robert Greene and Paul Triolo, "Will China Control the Global Internet Via Its Digital Silk Road?" Carnegie Endowment for International Peace, May 8, 2020, <https://carnegieendowment.org/2020/05/08/will-china-control-global-internet-via-its-digital-silk-road-pub-81857>.

¹²⁹ Haq, "China Builds Digital Silk Road in Pakistan to Africa and Europe."

¹³⁰ "Country's Internet Penetration Stands at 54%," The Express Tribune, July 30, 2021, <https://tribune.com.pk/story/2312994/countrys-internet-penetration-stands-at-54>.

¹³¹ Amin, "Delay in OFC Phase-II Project Escalating Cost, Govt Warned."

¹³² Amin.

Pakistan stands to earn foreign exchange which contributes to their economy and opens business and job opportunities.¹³³

An economic challenge that results in pushback against the DSR is lack of labor expertise. Pakistan's labor force has a drastic shortage in the amount of skilled labor and expertise required to build, maintain, or operate much of the high-tech equipment and services the DSR provides.¹³⁴ This domestic labor shortage brings an influx of Chinese labor whose presence provokes discontent from the locals who resort to protests and extreme measures to demonstrate their opposition.¹³⁵ While the DSR projects are significantly less visible to the general public and less easily disrupted by insurgency than the infrastructure intensive BRI construction projects, this presence of Chinese nationals still leaves room for dissatisfied Pakistani individuals or groups to take extreme measures to express their discontent, disrupt progress, and cause strain bilateral relations.

Additionally, considering that the two countries are at very different levels in terms of economic development, digital infrastructure, internet penetration, and the size of their e-commerce, the high-tech solutions provided via the DSR can be considered too advanced for Pakistan's current digital needs.¹³⁶ DSR projects create digital dependence by both generating a need for further investment in digital infrastructure to gain utility as well as significant Chinese presence to maintain and operate.¹³⁷

b. Political Factors

Political factors have been important for the swift implementation of DSR projects despite outside criticism regarding undermining civilian control of government and the potential utility for facilitating authoritarian practices. The DSR in Pakistan is often

¹³³ Amin.

¹³⁴ Jawad Khan, Mashal Yousaf, and Myra Mufti, "This Is How Pakistan Is Closing Its Skills Gap," World Economic Forum, November 25, 2020, <https://www.weforum.org/agenda/2020/11/this-is-how-pakistan-is-closing-its-skills-gap/>.

¹³⁵ Sara Mahmood, "Why Is China Vulnerable to Terrorism in Pakistan?" Diplomat, January 12, 2019, <https://thediplomat.com/2019/01/why-is-china-vulnerable-to-terrorism-in-pakistan/>.

¹³⁶ Hillman, *The Digital Silk Road: China's Quest to Wire the World and Win the Future*.

¹³⁷ Hillman, "Pakistan's Cautionary Tale of Digital Dependence on China."

characterized as a military-led initiative and the Pakistan military has been instrumental in ensuring its successful implementation.¹³⁸ Considering Pakistan's military is markedly more pro-China than the civilian government, the DSR's success potentially indicates weakening of civilian control of the government and democratic deconsolidation in Pakistan.¹³⁹ The military, with a reputation for being the strongest and most capable state institution, has much to gain from Pakistan's close relationship to China and will continue to nurture the relationship, especially with regards to the DSR.¹⁴⁰

The military played an important role in convincing Pakistan's national leadership that the DSR provides a necessary solution to a strategic network vulnerability.¹⁴¹ Prior to the PEACE cable and the Pakistan-China Fiber Optic Project, all internet traffic was brought into Pakistan by a consortium whose board of directors hailed from various countries, including India.¹⁴² Military leadership characterized its current data flows as a national threat and pushed to acquire Chinese digital infrastructure as a more secure link to the outside world.¹⁴³ China was quick to provide loans, equipment, and engineering services to help Pakistan circumvent India in the telecommunications realm, but many observers and analysts question if enough scrutiny was placed on China's intentions.¹⁴⁴

The DSR has the potential to help the military increase its grip on national power while simultaneously providing the tools for implementing Beijing's authoritarian model of digital governance. With a history of political instability and military coups, when the civilian government is sidelined and the military takes a leading role on ensuring the DSR is implemented in Pakistan, this could be seen as an indication of the erosion of democratic

¹³⁸ Kartik Bommakanti, "The Collusive Threat: Chinese and Pakistani Cooperation in Strategic Capabilities," Observer Research Foundation, accessed July 30, 2023, <https://www.orfonline.org/expert-speak/the-collusive-threat/>.

¹³⁹ Azeem Ibrahim, "A Coup Would Put Pakistan Squarely in China's Bloc," *Foreign Policy* (blog), March 20, 2023, <https://foreignpolicy.com/2023/03/20/pakistan-imran-khan-coup-china/>.

¹⁴⁰ Husain Haqqani, "Pakistan's Military Is Here to Stay," *Foreign Policy* (blog), October 20, 2022, <https://foreignpolicy.com/2022/10/20/imran-khan-pakistan-military-establishment-courts-pti/>.

¹⁴¹ Haq, "China Builds Digital Silk Road in Pakistan to Africa and Europe."

¹⁴² Shakil, "Huawei Digitally Connects Pakistan beyond India's Reach."

¹⁴³ Shakil.

¹⁴⁴ Shakil.

values and creeping authoritarianism in Pakistan.¹⁴⁵ China's DSR provides the tools for cracking down on individual freedoms and increasing the military's control over society in Pakistan.¹⁴⁶

D. CONCLUSION

The BRI has significant implications on the state of Pakistan's economy, China's foreign policy objectives, and the geopolitical dynamics of the Indian Ocean region. When the progress of the BRI slowed, its DSR subset came to the forefront and provided a much-needed boost to BRI progress to prevent failure of China's signature foreign policy initiative. The Pakistan military played an important role in the DSR's strong initial reception, but as the DSR progressed, it has fallen victim to many of the same political and economic challenges as the BRI while also generating new challenges.

BRI progress slowed despite its initial warm reception and Pakistan's enthusiasm waned for various political and economic reasons. Criticism has been directed at the questionable commercial viability of the projects as well as the corruption, lack of transparency, and debt concerns surrounding the deals. Progress was also affected by Pakistan's political instability, civilian-military rivalry, and troubled economy.

The DSR also received a warm embrace when first introduced, but progress has been slowed by the more complex nature of the projects. Pakistan's reception of the DSR seems to remain high despite the various potential downsides including the risks of data insecurity, digital dependency as Chinese companies dominate Pakistan's tech sector, and the increased potential for digital authoritarianism.¹⁴⁷

One of the main reasons for the DSR's warm reception when the BRI faltered is the difference in visibility of the two initiatives. The size of the BRI infrastructure projects makes an easy target for opposition parties, civil society groups, and the media.¹⁴⁸ This

¹⁴⁵ Haq, "Pakistan Army Set to Gain Sweeping Belt and Road Authority."

¹⁴⁶ Kurlantzick and West, "China's Digital Aid."

¹⁴⁷ Kurlantzick and West.

¹⁴⁸ "CPEC 2.0: Full Speed Ahead – The Diplomat."

heightened visibility makes it impossible to guarantee the security of both the projects and its workers against terrorism and insecurity bringing hesitancy from Chinese investors.¹⁴⁹ The DSR on the other hand requires far less physical infrastructure and without an overbearing presence of Chinese labor and is therefore less easily targeted by opposition.

Another important difference between the reception of the BRI and DSR is the local perception of who benefits from the projects. With the BRI there is much criticism that China benefits more than Pakistan does because the economic benefits are largely unseen by the average Pakistani.¹⁵⁰ With the DSR on the other hand, the average Pakistani sees tangible benefits and improvements to their digital connectivity and therefore makes it easier to look past the potential downsides and outside criticism of the DSR. Similarly, while the BRI has been criticized for funding projects that are not economically viable and are unlikely to generate returns sufficient to pay off the loans, the DSR's focus on high-tech projects is seen as being more economically viable, with fewer up-front costs, and more likely to generate higher returns on investment.

Additionally, while the BRI has the potential to generate much needed growth and development, the DSR can be seen as more directly achieving Pakistan's national security interests by alleviating concerns that strategic rival India can monitor its data flows. This strategic vulnerability is even more pronounced due to the Pakistani military's role in facilitating the DSR. While new digital infrastructure addresses this network vulnerability, Pakistan does not currently seem to have similar concerns regarding China's access to their data.

In the end, due to the opacity of the reporting, it is too early to tell whether the DSR will be necessary or adequate for China to advance its foreign policy objectives of the BRI, or whether it will reliably help Pakistan facilitate economic growth. Considering the strategic partnership, the benefits to be had by both countries, and the Pakistani military's formidable presence in Pakistan's bureaucracy and strong relationship with Beijing, it is

¹⁴⁹ Haider, "Baluchis, Beijing, and Pakistan's Gwadar Port."

¹⁵⁰ Sacks, "The China-Pakistan Economic Corridor—Hard Reality Greets BRI's Signature Initiative."

likely that the BRI and DSR will continue to overcome challenges and make progress regardless of the abundance of criticisms, delays, and setbacks.

The CPEC will remain essential for Beijing to achieve its foreign policy objectives of shoring up insecurity on its periphery and providing an exit to the ocean for its western provinces to facilitate the stability and growth domestically and in their near-abroad.¹⁵¹ For Islamabad, time will tell whether the BRI or DSR will help achieve their goals for infrastructure development and economic growth or whether the mounting concerns of debt, dependency, economic viability, data security, or creeping authoritarianism are indeed well-founded.

¹⁵¹ Kardon, “China’s Geopolitical Gambit in Gwadar.”

III. DSR IN MALAYSIA

A. INTRODUCTION

Malaysia is an interesting case study from which to explore factors that influence DSR reception compared to that of the BRI. Malaysia and China have a long history of warm political relations and a strong history of economic relations with Malaysia being both supportive of Chinese policies as well as long-term recipients of Chinese economic aid and investment.¹⁵² Malaysia's strategic location situated on the Strait of Malacca in the heart of Southeast Asia and its status as a founding member of ASEAN make it an important target for the connectivity goals of the BRI and China's desire for regional influence.¹⁵³ As the BRI's ambitious infrastructure investment agenda seems to have faltered in recent years, and China has placed greater emphasis on its DSR initiative, Malaysia's booming digital economy has made it an increasingly important market for China to penetrate and exert influence in the digital domain.¹⁵⁴

Under Prime Minister Najib, Malaysia was quick to participate in the BRI, and a slew of large deals were agreed to shortly after the initiative was first unveiled.¹⁵⁵ Malaysian domestic politics were dramatically shaken when Najib was at the center of a corruption scandal in which Malaysian leaders used funds generated from inflated BRI deals to embezzle more than \$7 billion worth of national sovereign wealth funds.¹⁵⁶ This corruption scandal elevated the BRI to a central issue in Malaysia's domestic politics and

¹⁵² Burgers, "Assessing the Economic and Political Success of the Digital Silk Road throughout the Indo-Pacific Region."

¹⁵³ Thomas Daniel and Kuik Cheng-Chwee, "Malaysia's Relations with the United States and China: Asymmetries (and Anxieties) Amplified," *Southeast Asian Affairs* 2022 (May 5, 2022): 211–31.

¹⁵⁴ Ralph Jennings, "For China, Malaysia's Digital Economy Is First Stop in 'Value Added' Campaign to Bolster Trade Routes," *South China Morning Post*, October 8, 2022, <https://www.scmp.com/economy/china-economy/article/3195198/china-malaysias-digital-economy-first-stop-value-added>.

¹⁵⁵ Hannah Beech, Richard Paddock, and Alexandra Stevenson, "A Stunning, Sudden Fall for Najib Razak, Malaysia's 'Man of Steal,'" May 15, 2018, <https://www.nytimes.com/2018/05/15/world/asia/malaysia-najib-razak-fall.html>.

¹⁵⁶ Lee Jones and Shahar Hameiri, "Debunking the Myth of 'Debt-Trap Diplomacy': How Recipient Countries Shape China's Belt and Road Initiative," *Chatham House Royal Institute of International Affairs*, August 19, 2020, 44.

the attitudes of the local populace towards the BRI have since had a significant impact on elected government, political elites, and their policies.¹⁵⁷

Although Najib's party had maintained continuous control of the government since Malaysia's 1957 independence, the public backlash related to the corruption scandal and dubious terms of BRI deals saw the party ousted from office.¹⁵⁸ Najib's opposition, former Prime Minister Mahathir, found success in a campaign which harnessed public sentiment towards BRI initiatives targeting the BRI's negative overall impact on domestic economy bringing accusations of inflated costs, Chinese debt trap, embezzlement, and corruption surrounding the deals.¹⁵⁹ Upon his election, Mahathir made good on his campaign promise to suspend and review all BRI deals, most of which were soon thereafter resumed under renegotiated terms that were slightly more favorable for Malaysia.¹⁶⁰

Many BRI megaprojects provide potential economic benefits and enhance regional integration as politicians attempt to gain legitimacy by improving the economy, upgrading infrastructure, and bringing in Chinese investment. While there has been pushback against the BRI due to opaque terms and unfavorable deals among other things, many of the projects progress forward because, without viable alternatives, Chinese investment remains critical to Malaysia's growth and development.

Malaysia's reception to the DSR was similarly impacted by the corruption scandal. The scandals generated societal contestation which pushed Malaysia towards a more competitive democracy where a politician's success relied more heavily on support from constituents who became increasingly skeptical of the intentions behind Chinese

¹⁵⁷ Robin Bush, "Belt and Road Initiative in Malaysia – A Tool for Domestic Political Elites," *Devpolicy Blog from the Development Policy Centre* (blog), August 2, 2022, <https://devpolicy.org/belt-and-road-initiative-in-malaysia-20220802/>.

¹⁵⁸ Beech, Paddock, and Stevenson, "A Stunning, Sudden Fall for Najib Razak, Malaysia's 'Man of Steal.'"

¹⁵⁹ Amy Freedman and Naomi Bekele, "China's Belt and Road Initiative in Malaysia and Ethiopia: Domestic Politics Overshadows International Relations," *Indian Journal of Asian Affairs* 35, no. 1 (2022): 1–22.

¹⁶⁰ Ngeow Chow Bing, "Have Friendly Malaysia-China Relations Gone Awry?," Carnegie Endowment for International Peace, accessed November 26, 2022, <https://carnegieendowment.org/2021/07/16/have-friendly-malaysia-china-relations-gone-awry-pub-84981>.

investment. As public sentiment shifted, China's presence in Malaysia's technology sector brought concerns of over-reliance, lack of competition, and potential risks associated with Chinese dominance in the Malaysian digital sector.

While the reception of the BRI and DSR have both been significantly impacted by domestic politics in Malaysia, the DSR can be generally distinguished by Malaysia's cautious approach to Chinese digital investment and its ability to attract this investment from alternate sources across the globe due to its outsized digital potential. This cautious approach to Chinese involvement in Malaysia's technology sector is driven by concerns of Chinese dominance and over-reliance which results in a lack of competition and stymies the growth of domestic companies. Similarly, critics see the DSR as a threat to sovereignty when looking at the lack of data security and privacy as well as the potential for digital surveillance. Malaysia has a demonstrated national interest in advancing its digital capacity and has developed national plans for capitalizing on its digital growth potential as a means to achieve lasting economic development into the future.

This chapter explores the reception and the effectiveness of the BRI with that of the DSR in Malaysia. It will first describe the BRI and provide details on projects that have political and economic notoriety. Next, it will discuss economic and political factors that influence Malaysia's reception of the BRI. Then it will describe the notable DSR projects and discuss economic and political factors that influence Malaysia's reception of the DSR. The chapter will conclude by analyzing the differences in Malaysia's reception of the BRI versus the DSR.

B. BRI IN MALAYSIA

The BRI was warmly embraced by Malaysia when it was first unveiled, and the two countries signed a flurry of deals for various development and infrastructure projects including railways, ports, pipelines, industrial projects, and urban developments.¹⁶¹ The

¹⁶¹ Francis E. Hutchinson and Tham Siew Yean, "The BRI in Malaysia's Port Sector: Drivers of Success and Failure," *Asian Affairs* 52, no. 3 (August 18, 2021), <https://www.tandfonline.com/doi/abs/10.1080/03068374.2021.1957305>.

immense scale of the BRI can be seen when looking at the 11 largest projects in Malaysia whose combined cost totals more than \$130 billion.¹⁶²

Due to Malaysia's strategic location, Chinese interests in funding infrastructure projects can be viewed from a strategic lens beyond attracting foreign revenue and generating regional economic influence. BRI infrastructure projects in Malaysia also have the potential to provide China with access to ports on Malaysia's east and west coast as well as a land bridge across the peninsula.¹⁶³ This access to strategic infrastructure could help China circumvent its reliance on the shipping lanes through the Strait of Malacca, a strategic chokepoint through which the bulk of China's trade passes, including 80 percent of its oil and gas imports.¹⁶⁴

Malaysia finds the BRI attractive as it provides the investment required for growth in an economy which has historically been constrained by lack of investment, especially in its infrastructure sector.¹⁶⁵ Due to the small size of their domestic market, attracting international trade and foreign direct investment is important for Malaysia's economic development.¹⁶⁶ The BRI is an attractive opportunity for Malaysia to leverage its strategic location to boost development and better integrate the country into the global economy.¹⁶⁷

¹⁶² Bhavan Jaipragas, "11 Projects That Show China's Influence Over Malaysia," *South China Morning Post*, August 5, 2017, <https://www.scmp.com/week-asia/politics/article/2105440/11-projects-show-chinas-influence-over-malaysia-and-could>.

¹⁶³ Wade Shepard, "Inside the Belt And Road's Premier White Elephant: Melaka Gateway," *Forbes*, January 31, 2020, <https://www.forbes.com/sites/wadeshepard/2020/01/31/inside-the-belt-and-roads-premier-white-elephant-melaka-gateway/>.

¹⁶⁴ Guanle Lim, "Resolving the Malacca Dilemma: Malaysia's Role in the Belt and Road Initiative," 2018, 81–99, https://doi.org/10.1007/978-981-10-7116-4_5.

¹⁶⁵ Ji Xianbai, Li Chen, and Lim Guanle, "Debunking 3 Myths About Chinese Investment in Malaysia," *The Diplomat*, March 26, 2021, <https://thediplomat.com/2021/03/debunking-3-myths-about-chinese-investment-in-malaysia/>.

¹⁶⁶ Imran Shamsunahar, "Malaysia's Democratization Poses New Challenges to China's BRI Projects," *Diplomat*, November 23, 2022, <https://thediplomat.com/2022/11/malaysias-democratization-poses-new-challenges-to-chinas-bri-projects/>.

¹⁶⁷ Ming Yu Cheng et al., "The 'Twin Industrial Parks': A Study on the Development of MCKIP and Its Perceived Impacts on Local Communities," in *China's Belt and Road Initiative – Going Global and Transformation in the Global Arena* (World Scientific Publishing Company), 31–55, accessed November 27, 2022, https://www.worldscientific.com/doi/abs/10.1142/9789811221873_0002.

The instability in Malaysia's domestic political situation caused by the corruption scandal also made the BRI a more contentious issue, created greater competition amongst political parties, and brought negative public sentiment towards China overall, and the BRI specifically. Many of the large scale and highly visible BRI projects became political tools used to generate popular support by politicians.¹⁶⁸ Domestic infighting caused many of the projects to become on-again, off-again deals riddled with cancellations and renegotiations as politicians attempted to use public sentiment around BRI projects to leverage support for their election campaigns.¹⁶⁹ Politicians who used these massive projects in a corrupt fashion, inflating costs and embezzling money for their own financial gain, were ousted by politicians who capitalized on the BRI's controversy to gain support from their constituents.¹⁷⁰

The following section will provide details of two BRI projects in Malaysia, the East Coast Rail Link and the Malacca Gateway. These projects are notable for their size and cost, their potential for promoting development, the corruption surrounding the deals, and the progress they have achieved or failed to achieve. The section will conclude by analyzing political, economic, and social factors which have boosted or detracted from Malaysia's reception to the BRI.

1. The East Coast Rail Link

The East Coast Rail Link (ECRL) is a 600-kilometer rail link construction project designed to connect eastern and western Malaysia. When complete, it will provide a land bridge between Port Klang, Malaysia's largest port on the Strait of Malacca, with Kuantan Port, a BRI associated deep-water port under-construction on Malaysia's east coast.¹⁷¹ The

¹⁶⁸ Bush, "Belt and Road Initiative in Malaysia – A Tool for Domestic Political Elites."

¹⁶⁹ Alifah Zainuddin, "What Happened to China's BRI Projects in Malaysia?," *Diplomat*, October 5, 2021, <https://thediplomat.com/2021/10/what-happened-to-chinas-bri-projects-in-malaysia/>.

¹⁷⁰ Jones and Hameiri, "Debunking the Myth of 'Debt-Trap Diplomacy': How Recipient Countries Shape China's Belt and Road Initiative."

¹⁷¹ Cheng-Chwee Kuik, "Malaysia's Fluctuating Engagement with China's Belt and Road Initiative: Leveraging Asymmetry, Legitimizing Authority," *Asian Perspective* 45, no. 2 (2021): 421–44, <https://doi.org/10.1353/apr.2021.0007>.

project was initially proposed in 2017 with an agreed cost in excess of \$16 billion.¹⁷² After a change of Malaysian leadership and renegotiated terms, the project's price tag dropped to \$11.9 billion.¹⁷³ It uses Chinese banks for financing and Chinese firms for construction from the Export-Import Bank of China and the China Communications Construction Company, respectively.¹⁷⁴

For Malaysia, the ECRL is intended to improve Malaysia's societal integration, bridge the development gap between eastern and western Malaysia, stimulate balanced development in the country, and improve regional connectivity and integration.¹⁷⁵ For China, access to a coast-to-coast rail in Malaysia brings potential for soft-power influence and flexibility for its trade routes in vicinity of the Strait of Malacca.

The terms of the initial ECRL deal were dubious, and the project has been mired in controversy from corruption allegations and negative environmental impact, causing it to be canceled and renegotiated several times over.¹⁷⁶ The original cost was inflated by billions of dollars to pay down debts associated with the embezzlement corruption scandal, and 90 percent of the agreed costs were paid when only 13 percent of the work had been finished.¹⁷⁷ Progress on this project will likely continue to be pushed forward due to the sunken costs and the terms of the original loan which require Malaysia to pay additional fees to cancel the project.¹⁷⁸ It is currently 40 percent complete and is expected to be

¹⁷² Liz Lee and Joseph Sipalan, "China Offered to Nearly Halve Cost of Malaysia's \$20-Billion Rail Project: Sources," U.S., January 31, 2019, <https://www.reuters.com/article/us-china-malaysia-railway-idUSKCN1PP0QK>.

¹⁷³ Jaipragas, "11 Projects That Show China's Influence Over Malaysia."

¹⁷⁴ Jaipragas.

¹⁷⁵ Collins Chong Yew Keat, "Malaysia's Costly East Coast Rail Link Reflects Its Self Trap and China Pander – Analysis," Eurasia Review, January 8, 2023, <https://www.eurasiareview.com/08012023-malaysias-costly-east-coast-rail-link-reflects-its-self-trap-and-china-pander-analysis/>.

¹⁷⁶ Zainuddin, "What Happened to China's BRI Projects in Malaysia?"

¹⁷⁷ Eileen Ng, "Malaysia Revives China-Backed Rail Link, Cost Cut by a Third," AP News, April 12, 2019, <https://apnews.com/article/a0f65e80af9e4503af2ae9991724b81b>.

¹⁷⁸ Justin Ong, "Too Late for Malaysia to Escape China's Web with ECRL," Malay Mail, April 22, 2019, <https://www.malaymail.com/news/malaysia/2019/04/22/us-don-it-was-too-late-for-malaysia-to-escape-chinas-web-with-ecrl/1745555>.

operational in 2027 with 665 kilometers of rail and 59 tunnels across four Malaysian states.¹⁷⁹

2. Malacca Gateway

The Malacca Gateway is an urban development project which carries a cost of \$10.5 billion and includes construction of several reclaimed, purpose built islands, a deep-water port, the biggest cruise ship terminal in Southeast Asia, hotels, luxury housing, as well as a variety of tourist attractions.¹⁸⁰ This BRI project is funded by investments from Power China International Group and construction contracts are dominated by Chinese companies such as Shenzhen Yantian Port Group and Rizhao Port Group.¹⁸¹

The project has been on again, off again since its inception. It was initially inaugurated in 2014, projected to be open in 2018, and completed by 2025 – but has seen little tangible progress to date.¹⁸² It was terminated in 2018 by the Mahathir administration and later reinstated by the same government under renegotiated terms.¹⁸³ When it was given the green light shortly after its first cancellation, there was little progress up until it was canceled again in 2020.¹⁸⁴ Malaysian authorities have declared that the project will not be abandoned, but that new developers will be identified after the project’s technical issues can be overcome.¹⁸⁵

Much akin to other similar BRI projects in Malaysia, it is seen as effective means for Malaysia to stimulate its local economy by drawing in foreign capital to build infrastructure and attract further investment. The project has the potential to bring in

¹⁷⁹ Bernama, “ECRL in 4 States 41% Completed, Says Project Owner MRL,” Free Malaysia Today, March 28, 2023, <https://www.freemalaysiatoday.com/category/highlight/2023/03/28/ecrl-in-4-states-41-completed-says-mrl/>.

¹⁸⁰ Shepard, “Inside the Belt and Road’s Premier White Elephant.”

¹⁸¹ Jaipragas, “11 Projects That Show China’s Influence Over Malaysia.”

¹⁸² Shepard, “Inside the Belt and Road’s Premier White Elephant.”

¹⁸³ Shamsunahar, “Malaysia’s Democratization Poses New Challenges to China’s BRI Projects.”

¹⁸⁴ Shepard, “Inside the Belt and Road’s Premier White Elephant.”

¹⁸⁵ Prem Kumar, “Canceled \$10.5bn Malaysia Port Project Plays Down China Role,” Nikkei Asia, December 3, 2020, <https://asia.nikkei.com/Business/Transportation/Canceled-10.5bn-Malaysia-port-project-plays-down-China-role>.

massive amounts of foreign direct investment and loans while also helping to attract a greater share of the more than 100,000 vessels that pass by offshore each year on the busiest shipping lane in the world.¹⁸⁶ China's motivation beyond generating revenue from abroad can be attributed to facilitating maritime expansion and securing trade routes for its domestic energy requirements while exerting influence in the region and enhancing its String of Pearls along the Maritime Silk Road.¹⁸⁷

3. BRI Reception

Malaysia was initially extremely receptive to BRI projects, but many political and economic factors have had an impact on this receptiveness. They remain receptive to Chinese investment due to their need for infrastructure, the economic benefits of Chinese investment and financing, deep seeded political relations, and the importance of Chinese trade relations to Malaysia's economy. They are cautious in their approach to the BRI due to the recent changes in the domestic political system, public backlash regarding corrupt deals, desire for geopolitical balance among global powers, and environmental concerns.

a. Political Factors

From a political lens, reception of the BRI has been influenced both positively and negatively by elite agencies. It has been hampered by changes in Malaysia's domestic politics as the country trends towards a more democratic system of governance and politicians are increasingly accountable to the demands of their constituents.

In a country known for its long history of political stability, the BRI brought a new level of social accountability for political elites in Malaysia. Despite having only six prime ministers in the first six decades of its independence, there have already been four changes of governance in the less than five years since the BRI corruption scandal surfaced.¹⁸⁸ As Malaysia's political scene became more contested, the slew of BRI deals that were

¹⁸⁶ Shepard, "Inside the Belt and Road's Premier White Elephant."

¹⁸⁷ Anjelina Patrick, "Melaka Gateway Port: An Analysis," National Maritime Foundation, October 11, 2017, <https://maritimeindia.org/melaka-gateway-port-an-analysis/>.

¹⁸⁸ Daniel and Cheng-Chwee, "Malaysia's Relations with the United States and China."

originally put in place soon became political tools for gaining support from an electorate that is increasingly skeptical of China's BRI practices.¹⁸⁹ Domestic pressure on political leaders to deliver on issues that matter to their electorate makes attracting foreign direct investment critical which requires a delicate balance be taken in their approach towards China.¹⁹⁰

The recent changes in domestic politics have seen Malaysia become more democratic as elections have become more contested, society has an increasingly influential voice in national decision making, and politicians are forced to shape BRI projects to demonstrate tangible benefits to their electorate to maintain popularity.¹⁹¹ BRI developments in Malaysia have left politicians in a predicament between taking a hard line against increasingly unpopular Chinese practices while simultaneously avoiding damage of the critical Sino-Malay relationship which provides a steady source of much-needed capital.

The ECRL and Malacca Gateway are both telling examples of elite agency which provide indication of strengthening democracy in Malaysia. In both projects, corrupt elites agreed to projects with opaque and inflated terms for their personal benefit. When the corruption scandal was revealed, public backlash saw corrupt politicians ousted from office and the projects quickly cancelled by their incumbents. These projects were later reinstated, albeit under renegotiated and slightly more favorable terms, due to the newly elected officials' need to demonstrate performance legitimacy to maintain office.

b. Economic and Social Factors

From an economic perspective, Malaysia's reception of the BRI is boosted by its need for international investment and its desire to develop its economy to better integrate

¹⁸⁹ Jones and Hameiri, "Debunking the Myth of 'Debt-Trap Diplomacy': How Recipient Countries Shape China's Belt and Road Initiative."

¹⁹⁰ Lye Liang Fook, "China-Malaysia Relations Back on Track?," *Institution of Southeast Asia Studies – Yusof Ishak Institute* 2019, no. 38 (May 15, 2019), <https://think-asia.org/handle/11540/10256>.

¹⁹¹ Chanrith Ngin, "How Recipient Countries in Southeast Asia Manage 'Belt and Road Initiative' Projects" 2022, no. 99 (October 10, 2022), <https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2022-99-how-recipient-countries-in-southeast-asia-manage-belt-and-road-initiative-projects-by-chanrith-ngin/>.

into the global economy. The reception is hampered by criticism and domestic discontent regarding the negative environmental impact of BRI construction, the opaque terms of the deals, and the hefty costs that are perceived to outweigh the anticipated benefits of the projects.

Environmental concerns and protest have plagued the BRI reception in Malaysia. The Malacca Gateway project has received criticism because of the negative environmental effects involved with reclaiming land to build islands.¹⁹² The ECRL has received criticism for the negative environmental effects of cutting through protected forestry and disrupting endangered wildlife.¹⁹³ Both projects have received criticism for unsatisfactory environmental impact assessments and ecological mitigation plans prior to beginning construction.¹⁹⁴

Both projects, along with most other BRI projects in Malaysia, are mired in allegations of questionable viability and profitability considering their exorbitant cost.¹⁹⁵ Critics argue that building an additional deep-water port for the Malacca Gateway project is simply not a necessary or profitable investment considering that Malaysia's three largest ports currently operate at just 70 percent of their capacity.¹⁹⁶

For the ECRL, while the current cost of the project is \$2.5 billion less than the initial agreement, there is looming skepticism about whether it is a worthwhile endeavor at such a high cost or whether it will successfully facilitate the intended economic growth.¹⁹⁷ The latest Malaysian government considered scrapping the ECRL altogether, but the terms

¹⁹² Shepard, "Inside the Belt and Road's Premier White Elephant."

¹⁹³ Kate Mayberry, "Malaysia's East Coast Rail Link a Double-Edged Sword for Environment, Wildlife," Mongabay, August 9, 2017, <https://news.mongabay.com/2017/08/malaysias-east-coast-rail-link-a-double-edged-sword-for-environment-wildlife/>.

¹⁹⁴ Predeep Nambiar, "Activists Call for Freeze on Melaka Gateway Project," Free Malaysia Today, August 20, 2022, <https://www.freemalaysiatoday.com/category/nation/2022/08/20/activists-call-for-freeze-on-melaka-gateway-project/>.

¹⁹⁵ Shamsunahar, "Malaysia's Democratization Poses New Challenges to China's BRI Projects."

¹⁹⁶ Shepard, "Inside the Belt and Road's Premier White Elephant."

¹⁹⁷ Pennington, "Will the East Coast Rail Link Be a Game Changer for Malaysian International Trade?," ASEAN Today, September 30, 2017, <https://www.aseantoday.com/2017/10/will-malaysias-east-coast-rail-link-be-a-benefit-or-a-burden/>.

of the original deal and the amount that has been paid already have largely prevented this due to sunken costs of the project.¹⁹⁸

C. DSR IN MALAYSIA

China's DSR aims to achieve international technological influence and a formidable presence in Malaysia's digital technology sector is important for this endeavor considering Malaysia's standing as a booming digital hub in the region.¹⁹⁹ Malaysia is known for having a fast-growing digital economy with an estimated value of \$21 billion.²⁰⁰ Its e-commerce industry alone has experienced significant recent growth and is currently projected to be worth more than \$8 billion by 2025.²⁰¹

Internet penetration in Malaysia also makes it an important target for the DSR in Southeast Asia. Currently over 80 percent of Malaysia's population is connected to the internet and 90 percent of those connected are using smart phones, which is especially important for the booming e-commerce sector.²⁰² When considering that nearly 60 percent of all e-commerce orders are placed via smartphone, this penetration rate is a significant factor contributing to Malaysia's digital growth and China's interest in digital presence there.²⁰³

Malaysia's initial reception to the DSR was largely positive and a steady flow of DSR investment in Malaysia was agreed to by Chinese companies including cloud data centers, e-commerce free-trade zones, artificial intelligence industrial parks, and smart city projects. This positive reception can be attributed to Malaysia's desire to enhance its digital

¹⁹⁸ Collins Chong Yew Keat, "Malaysia's Costly East Coast Rail Link Reflects Its Self Trap and China Pander – Analysis."

¹⁹⁹ Jennings, "For China, Malaysia's Digital Economy Is First Stop in 'Value Added' Campaign to Bolster Trade Routes."

²⁰⁰ Jennings.

²⁰¹ Hugh Harsono, "The China-Malaysia Digital Free Trade Zone: National Security Considerations," *Diplomat*, July 25, 2020, <https://thediplomat.com/2020/07/the-china-malaysia-digital-free-trade-zone-national-security-considerations/>.

²⁰² Ethan Cramer-Flood and Briana Boland, "CCP Inc. in Malaysia," Center for Strategic and International Studies, December 16, 2022, 10, <https://www.csis.org/analysis/ccp-inc-malaysia>.

²⁰³ Harsono, "The China-Malaysia Digital Free Trade Zone."

connectivity and stimulate the country's technological advancement in an effort to achieve overall economic prosperity into the future.

Malaysia's reception to China's DSR has steadily waned over time. Much of Malaysia's waning reception can be attributed to the corruption scandal that led to a change in Malaysia's domestic political atmosphere, public wariness of Chinese practices, heightened awareness of the risks of Chinese dominance in their digital market, and skepticism surrounding the CCP's hands on involvement in Chinese private sector technology companies.

This section will describe two DSR projects in Malaysia that are notable for their size and significance, the Digital Free Trade Zone and the Alibaba Cloud Data Center. It will then analyze political and economic factors that influence Malaysia's reception to the DSR overall.

1. E-commerce Free Trade Zone (DFTZ)

The Digital Free Trade Zone is a physical zone near Malaysia's capital designed to facilitate trade between Malaysian and Chinese firms and facilitate the growth of small and medium enterprises by connecting them to the global market.²⁰⁴ This collaborative effort intends to streamline e-commerce specific functions and remove barriers by connecting businesses, facilitating customs clearances, and reducing taxes via government financial assistance.²⁰⁵ It is spearheaded by the Malaysia Digital Economy Corporation, an agency under its Ministry of Communications which is charged with leading the digital transformation of the economy.²⁰⁶ The DFTZ also has notable backing from Alibaba's Electronic World Trade Platform, a multi-stakeholder initiative led by the Chinese company designed to promote collaboration between the public and private sector in order to produce international trade that is more inclusive.²⁰⁷

²⁰⁴ Harsono.

²⁰⁵ "Malaysia Digital Economy Corporation," accessed May 8, 2023, <https://mdec.my/digital-economy-initiatives/for-the-industry/entrepreneurs/dftz>.

²⁰⁶ "Malaysia Digital Economy Corporation."

²⁰⁷ Harsono, "The China-Malaysia Digital Free Trade Zone."

Within months of its 2017 launch, the DFTZ rapidly expanded Malaysia's e-commerce industry as foreign direct investment from Chinese private companies registered nearly \$300 million.²⁰⁸ The initiative is projected to produce thousands of jobs for tech-savvy entrepreneurs, warehouse workers in fulfilment centers, and logistics professionals.²⁰⁹ The DFTZ has demonstrated continued success and remains an important factor in facilitating China's ability to account for more than 60 percent of Malaysia's cross-border e-commerce.²¹⁰

2. Alibaba Cloud Data Center

In 2021, Malaysia's chief government security office appointed Alibaba Cloud as government approved provider of cloud services, joining Telekom Malaysia, Google, Microsoft, and Amazon in the cloud service provider space in Malaysia.²¹¹ Alibaba Cloud has two data centers in the country which allow the company to provide a host of cloud products and services which includes elastic computing, database services, networking, cyber security, middleware, intelligence, and analytics.²¹²

In an effort to enhance Malaysia's reception to China's DSR, Alibaba Cloud has undertaken several initiatives towards building people-to-people bonds between China and Malaysia, strengthening Malaysia's tech talent pool, and enhancing its readiness to embrace its digital future. For instance, the Alibaba Cloud Academic Empowerment Program intends to bring digital know-how to academic institutions and provide resources

²⁰⁸ Tham Siew Yean, "The Digital Free Trade Zone (DFTZ): Putting Malaysia's SMEs onto the Digital Silk Road," Hong Kong Trade Development Council, September 11, 2018, <https://beltandroad.hktdc.com/index.php/en/insights/digital-free-trade-zone-dftz-putting-malaysias-smes-digital-silk-road>.

²⁰⁹ Harsono, "The China-Malaysia Digital Free Trade Zone."

²¹⁰ Statista, "Malaysia E-Commerce Cross-Border Share by Origin Country 2022," Statista, May 4, 2023, <https://www.statista.com/statistics/1176914/malaysia-e-commerce-cross-border-share-by-country/>.

²¹¹ Digital News Asia, "Alibaba Cloud Appointed as Official Cloud Service Provider to Accelerate Malaysia's Digital Transformation," Digital News Asia, October 8, 2021, <https://www.digitalnewsasia.com/business/alibaba-cloud-appointed-official-cloud-service-provider-accelerate-malaysias-digital>.

²¹² Digital News Asia.

and opportunities to help budding tech talents gain a foothold in the industry.²¹³ Similarly, its Digital Heroes program provides Malaysian students with innovative digital experiences designed to create a sustainable pool of digital talent that will continue to contribute to the industry.²¹⁴

3. DSR Reception

The DSR was initially well received in Malaysia, but the reception has waned over time. This initial positive reception can be attributed to Malaysia's desire for digital connectivity and technological advancement as well as the CCP's hands-on efforts to boost its top performing companies at home into successful technology giants abroad. As Malaysia recognized its potential for digital growth, deliberate governmental strategy played an important role in its ability to avoid over-reliance and dependence on any one country, bringing diversification of international investment into its digital sector.

The waning reception of the DSR can be seen when looking at the current status of the once dominant Chinese technology giants in Malaysia. Huawei officially missed out on its goal of building and running Malaysia's 5G network when Malaysia entered a 10-year, \$2.6 billion contract with Swedish company, Ericsson, in collaboration with the American company, Intel Technologies.²¹⁵ Similarly, Alibaba, who once held a dominant position in Malaysian e-commerce is losing ground to regional rivals and its City Brain project in Kuala Lumpur, which was once a flagship project, now has almost completely lost momentum.²¹⁶

²¹³ Dale John Wong, "Alibaba Cloud Launches New Program to Level Up Digital Talents in Malaysia," Mashable SEA, August 25, 2022, <https://sea.mashable.com/tech/21219/alibaba-cloud-launches-new-program-to-level-up-digital-talents-in-malaysia>.

²¹⁴ Wong.

²¹⁵ Prem Kumar, "Malaysia Picks Ericsson Over Huawei to Build 5G Network," Nikkei Asia, July 1, 2021, <https://asia.nikkei.com/Spotlight/5G-networks/Malaysia-picks-Ericsson-over-Huawei-to-build-5G-network>.

²¹⁶ Cramer-Flood and Boland, "CCP Inc. in Malaysia," 3.

a. Political Factors

From a political lens, DSR reception in Malaysia was facilitated initially by the warm history of Sino-Malay relations and the CCP's hands-on development of its technology companies. On the other hand, it was hampered by domestic and international political pressure against Chinese technology companies' practices and the CCP's heavy involvement in its private sector companies.

The long history of warm Sino-Malay political relations was an important factor that facilitated the DSR's early success. This relationship created an inviting atmosphere in Malaysia that enthusiastically received Chinese technology companies from the early 2010s, well before the DSR was announced as a foreign policy initiative.²¹⁷ The CCP's hands-on approach to its domestic economy made its most competitive technology companies into global technology giants.²¹⁸ State backed companies the likes of Huawei and Alibaba developed into technological powerhouses and, upon arrival in Malaysia, were able to offer equipment and services of superior quality at a more competitive price than what other major international tech companies could offer.²¹⁹

This CCP support gave them distinct advantages over their competition and facilitated their deep integration into Malaysia's national telecommunications, artificial intelligence, and e-commerce infrastructure.²²⁰ Due to the political support from the CCP and the warm Sino-Malaysian political relationship, these tech giants dominated Malaysia's digital space and opened the door for smaller Chinese technology companies and Chinese companies soon saturated Malaysia's digital market, leaving little room for companies from Malaysia or elsewhere to find success.²²¹

The CCP's technology crackdown has also played an important role in the DSR's success in Malaysia. Beginning in November 2020, Beijing enacted a sweeping regulatory

²¹⁷ Cramer-Flood and Boland, 1.

²¹⁸ Cramer-Flood and Boland, 4.

²¹⁹ Cramer-Flood and Boland, 10.

²²⁰ Cramer-Flood and Boland, 1.

²²¹ Cramer-Flood and Boland, 11.

crackdown on its technology firms, which curbed the growth and influence of their biggest and most influential companies.²²² This crackdown is intended to quash any challenge to the CCP's authoritarian power by reigning in its leading technology players and subjugating the domestic technology landscape to the party so as to maintain tight governance over its domestic data.²²³

Domestic and international political pressure regarding the CCP's ties to its technology companies has also hampered Malaysia's reception to the DSR. When international pressure from the United States urged other countries to take a more skeptical stance towards the risks of Chinese intellectual property theft and industrial espionage that comes with their involvement in strategic technology infrastructure the DSR's reception in Malaysia stalled.²²⁴ Cyber security and surveillance are oft cited as significant risks involved with reliance on Chinese technology companies as the CCP has put laws in place which compel Chinese firms to provide data, access, and other vital information while potentially installing easily exploitable back-door security flaws.²²⁵ Although Malaysia publicly points to their position of neutrality with regards to Sino-American technology competition and their domestic economy's free market policy, their actions to diversify their technology sector coincide with these developments.²²⁶

Similarly, domestic political pressure played an important role in waning reception as public awareness and skepticism of Chinese practices became prevalent after the multi-

²²² Donny Kwok, Scott Murdoch, and Scott Murdoch, "Beijing's Regulatory Crackdown Wipes \$1.1 Trillion Off Chinese Big Tech," *Reuters*, July 12, 2023, sec. Technology, <https://www.reuters.com/technology/beijings-regulatory-crackdown-wipes-11-trln-off-chinese-big-tech-2023-07-12/>.

²²³ Emily De La Bruyère and Nathan Picarsic, "A 'Techlash' with Chinese Characteristics," *TechCrunch* (blog), November 21, 2021, <https://techcrunch.com/2021/11/21/a-techlash-with-chinese-characteristics/>.

²²⁴ Noah Berman, Lindsey Maizland, and Andrew Chatzky, "Is China's Huawei a Threat to U.S. National Security?," Council on Foreign Relations, February 8, 2023, <https://www.cfr.org/backgrounder/chinas-huawei-threat-us-national-security>.

²²⁵ U.S. Department of Homeland Security, "Data Security Business Advisory," December 22, 2020, <https://www.dhs.gov/publication/data-security-business-advisory>.

²²⁶ Mark Scott and Brendan Bordelon, "Countries Push Back Against US's Anti-China Tech Policy," *Politico* (blog), June 15, 2023, <https://www.politico.eu/article/countries-push-back-against-uss-anti-china-tech-policy/>.

billion-dollar corruption scandal. Widespread awareness of the dubious terms of the deals shifted public sentiment and cast doubt on China's intentions. It brought awareness of the dangers of over reliance on Chinese technology including the potential for data insecurity, surveillance, and digital authoritarianism.

b. Economic Factors

From an economic perspective, Malaysia's strong initial reception of the DSR was facilitated by robust trade relations and economic cooperation with China but has waned as Malaysia recognized its own digital potential and set in motion a deliberate national strategy to develop its digital economy, diversify international investment in its technology sector, promote the growth of its domestic technology companies, and safeguard its digital sovereignty.

Malaysia's reception to the DSR has been hampered by criticism pointing to the downsides of an overbearing Chinese presence in the country's digital economy.²²⁷ When Chinese technology companies dominated the Malaysian market, competition from both domestic and international companies was stymied.²²⁸ Malaysian leadership recognized the risks associated with over-reliance and digital dependence on Chinese digital economy and capitalized on their heightened potential for e-commerce development and digital growth by ensuring diversification of foreign investment.²²⁹

Indicative of Malaysia's waning reception are the deliberate efforts the Malaysian government took at the national level to capitalize on its digital growth potential. They released the Malaysian Digital Economic Blueprint which serves as a three-phase roadmap for growing its digital economy from 2021 to 2030, designed to develop Malaysia into a

²²⁷ Sofia Zahari, "Consider Limiting Reliance on China for 5G Rollout, Says Expert," Free Malaysia Today, May 18, 2023, <https://www.freemalaysiatoday.com/category/nation/2023/05/18/consider-limiting-reliance-on-china-for-5g-rollout-says-expert/>.

²²⁸ Cramer-Flood and Boland, "CCP Inc. in Malaysia," 14.

²²⁹ Joseph Sipalan, "'Best Deal Wins': Malaysia Not Ruling Out China's Huawei for Second 5G Network," South China Morning Post, May 3, 2023, <https://www.scmp.com/week-asia/economics/article/3219300/best-deal-wins-malaysia-not-ruling-out-chinas-huawei-it-eyes-second-5g-network>.

regional pioneer in digital content and cybersecurity.²³⁰ It has resulted in deliberate diversification of foreign investment in its technology sector, which has correspondingly hampered their initially eager reception towards China's DSR efforts. This can be seen in the digital cloud example above, where Alibaba Cloud Data Center missed the opportunity to dominate the market but only ended up with a small share as they were quickly surrounded by other major international developers.

The Malaysian Digital Economic Blueprint has been an important government initiative for ensuring the diversification of international investment to avoid over reliance on any individual country for its strategic national infrastructure needs. With the establishment of the Malaysia Digital Coordinating Committee, the government built and executed a coordinated plan to diversify international presence in their technology sector.²³¹ This national strategy took measures to leverage its booming digital economy capitalizing on what the DSR has to offer while avoiding the negative aspects that are associated with the DSR and over reliance on Chinese technology.

Another key goal of this strategy for digital development is to foster local innovation and economic growth. The government has taken action to promote its domestic companies and help them to operate and expand.²³² Providing incentives for small companies, this strategy helps to bridge gaps in technology, provides access to digital advancement, and overall supports the development of a mature and innovative digital ecosystem.²³³

²³⁰ Jennings, "For China, Malaysia's Digital Economy Is First Stop in 'Value Added' Campaign to Bolster Trade Routes."

²³¹ Anis Zalani, "Digital Economy Programmes in Malaysia Over the Years," The Malaysian Reserve, May 5, 2023, <https://themalaysianreserve.com/2023/05/05/digital-economy-programmes-in-malaysia-over-the-years/>.

²³² Malaysia Investment Development Authority, "Malaysia Accelerates Tech Transformation with Industry4WRD," Reuters, April 12, 2023, <https://www.reuters.com/plus/malaysia-accelerates-tech-transformation-with-industry4wrdr>.

²³³ Jennings, "For China, Malaysia's Digital Economy Is First Stop in 'Value Added' Campaign to Bolster Trade Routes."

Further, reception to the DSR has waned as the digital strategy pursues economic diversification and diversity of foreign investment to safeguard its digital sovereignty.²³⁴ Due to its outsized digital economy potential, Malaysia has found success in attracting investment from a variety of sources, creating mutually beneficial deals, and avoiding over-reliance on any single country or provider. This diversity is apparent when looking at the digital cloud marketplace which, despite Alibaba Cloud's aspirations for dominance, maintains a healthy mix of domestic and international presence.

The China-Malaysia Digital Free Trade Zone provides a compelling example of the risk of over reliance on Chinese companies and digital economy. While the DFTZ has been hailed as a milestone in Malaysia's digital economy agenda and promises growth for both Malaysian and Chinese enterprises, there is a notable lack of diversity as the entire structure shows strong favoritism to Alibaba's hardware and software tools.²³⁵ China's influence is evident as companies who choose to participate in Alibaba's tools and services, such as the Alipay digital payment tool to Alibaba's Lazada e-commerce platform, find significant advantage in terms of functionality and speed over those who choose to use alternative services.²³⁶

While the DFTZ is intended to facilitate growth of Malaysian startups by facilitating exports, it simultaneously detracts from the national strategy of developing domestic companies by easing Chinese imports thus enhancing competition for these same Malaysian companies in their domestic market.²³⁷ Critics point to the disastrous effects over-reliance on foreign infrastructure can have on Malaysia's economy and self-determination as Malaysian companies are increasingly exposed to potential digital surveillance.²³⁸

²³⁴ Zalani, "Digital Economy Programmes in Malaysia Over the Years."

²³⁵ Tham Siew Yean, "The Digital Free Trade Zone (DFTZ): Putting Malaysia's SMEs onto the Digital Silk Road."

²³⁶ Harsono, "The China-Malaysia Digital Free Trade Zone."

²³⁷ Tham Siew Yean, "The Digital Free Trade Zone (DFTZ): Putting Malaysia's SMEs onto the Digital Silk Road."

²³⁸ Harsono, "The China-Malaysia Digital Free Trade Zone."

D. CONCLUSION

While the BRI and DSR were both initially well received in Malaysia, both initiatives have had their share of issues and yet remain influential. First looking at the BRI, the corruption scandal surrounding the BRI deals brought instability to Malaysia's domestic politics which heavily impacted their reception to both the BRI and the DSR. Both initiatives have seen many extravagant projects with enormous price tags fail to materialize. As Malaysia's democratic system matures, elites are required to place more emphasis on development-based legitimacy to maintain their position of authority than was required during the single-party dominated era of Malaysian politics prior to 2018. The more competitive multi-party system has changed the population's expectations of their government who are seeking more accountability and better governance from their leadership which seems to have curbed corruption and pressured policymakers to address gaps in the country's development strategy.²³⁹

Malaysia's unique digital economic potential plays an important role in the difference between their reception to the BRI versus the DSR. As rapid technological advancements the likes of 5G and artificial intelligence have emerged globally, concerns about Chinese practices led Malaysia to take deliberate steps towards diversifying the presence in their digital sector and avoiding over reliance on China or any single provider. This diversification is much more easily achieved with digital investment than infrastructure because Malaysia's widely recognized digital potential is more attractive to a broader array of international investors when compared with the type of investment that the BRI provides which is less readily available from countries other than China due to the questionable profitability of the megaprojects Malaysia seems to desire. Additionally, the CCPs crackdown on its tech giants stymied their success abroad and leveled the playing field facilitating healthy competition for international investment into Malaysia.

Malaysia's national approach to digital strategy is also important in distinguishing its reception of the DSR when compared to the BRI. Malaysia's reception to the DSR has

²³⁹ "Malaysia's Democratization Poses New Challenges to China's BRI Projects – The Diplomat," accessed November 28, 2022, <https://thediplomat.com/2022/11/malaysias-democratization-poses-new-challenges-to-chinas-bri-projects/>.

been much more pragmatic to produce sustainable growth and development.²⁴⁰ Their forward-thinking governance regarding their rapidly developing technology market seems poised to achieve continued digital growth despite the troubled financial picture that the original BRI deals produced in the country's economy overall.

Great power politics also has an influence as Malaysia strives to maintain a delicate balance in its relationship with China. Although Malaysia's initial warm reception to the BRI was spearheaded by Malaysian elites who personally reaped the benefits of the deals and this warm reception was tarnished by corruption and scandal resulting in many megaprojects being put on hold, subsequent Malaysian leaders were careful not to cause irreparable damage to the relations with its largest trading partner. Chinese investment remains crucial to Malaysia's infrastructure development goals as it has struggled to generate investment from other sources. Malaysia is keen to continue to foster its trade relations with China as indicated by bilateral partnerships such as the Digital Free Trade Zone and other special economic zones that enhance cross border trade relations.

In the end, gauging the true status of Sino-Malaysian relations remains a challenge.²⁴¹ When considering the strong political and economic ties between the two countries, it is likely that the BRI and DSR will continue to overcome challenges and make progress regardless of the abundance of criticisms, delays, and setbacks. Malaysia will continue to play a balancing act to avoid an overbearing presence of any single international power and will likely attempt to add a degree of diversity in the origin of their future infrastructure investment to avoid excessive entanglement with the BRI. The future of those two projects will be explored more in the concluding chapter that follows.

²⁴⁰ Anna Gelpern et al., "How China Lends: A Rare Look into 100 Debt Contracts with Foreign Governments" (Williamsburg, VA), accessed February 25, 2022, <https://www.aiddata.org/publications/how-china-lends>.

²⁴¹ Bing, "Have Friendly Malaysia-China Relations Gone Awry?"

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IV. CONCLUSION

A. INTRODUCTION

This chapter will revisit the hypotheses of the thesis, summarize the major research findings in the case of Malaysia and Pakistan, and extrapolate on these findings to provide policy recommendations for the U.S. government. The central research question of the thesis aimed to explore China's DSR and identify the political and economic factors which drive reception in key partner countries. The insights derived from the two case studies proves valuable for understanding the complexities of China's digital expansion as well as potential policy implications for the U.S. in strategic technology competition.

This thesis used two hypotheses as the central thread for the research conducted. The first hypothesis was that political factors play a significant role in both attracting and deterring participation. Countries with more corrupt, authoritarian governments with historically warm relations with China might be more inclined to be attracted to what the DSR has to offer. Those countries who exhibit democratic principles where politicians are accountable to public sentiment and are responsive to domestic backlash or international pressure might be less inclined to participate in a meaningful way with the DSR. Similarly, countries which value their sovereignty or whose population is generally skeptical of the CCP's intentions abroad and authoritarian practices at home could also be less receptive to the DSR.

The second hypothesis was that economic factors are important in both attracting and deterring participation. That countries with troubled economic outlook, pre-existing trade reliance and economic interdependence with China, who desire digital growth, and demonstrate a demand for technological infrastructure but have limited options for outside digital investment might be attracted to what the DSR has to offer. Pre-existing trade relations and economic interdependence may also prevent a country from rejecting the DSR completely because of the potential economic backlash in other sectors that could result from Beijing. Meanwhile, those countries who value their sovereignty, have widely recognized digital economic potential may be dissuaded by the economic risks of digital

dependence and potential market saturation of Chinese companies in their domestic economy.

B. SUMMARY OF FINDINGS

This thesis examined factors which influence how receptive a country is to the DSR. It used two case studies to examine reception to the BRI and DSR, and identified similarities and differences regarding their reception. The goal of this approach was to reach insight into the difference between the BRI and DSR and understand the key factors driving DSR reception as a unique initiative from the BRI. In the end, the case studies seem to validate both hypotheses and suggest that these political and economic factors are useful in predicting whether a country will find the DSR attractive.

In the case of Pakistan, the BRI has been largely embraced as an opportunity for economic growth and infrastructure development for its troubled economy although concerns over debt sustainability and sovereignty issues have been raised. While BRI in Pakistan saw much success initially in alleviating energy shortfalls, the BRI's progress in other sectors, especially the transport sector, has not fared as well. Rampant domestic insecurity has impeded progress and Chinese investors have shown hesitancy due to the security of the projects and risks to its workers. Nonetheless, the CPEC remains a flagship project for the BRI, and its progress continues despite its challenges. This maintained momentum can be largely attributed to the Pakistani military's bureaucratic influence, the historic political relations between the two countries, and the geostrategic importance of the project regarding China's connectivity to the Indian Ocean.

Malaysia's eager reception to the BRI can be largely attributed to corrupt politicians and desire for foreign investment. When this corruption was exposed, their domestic political scene was dramatically altered, thereafter displaying more caution towards the BRI. Aside from the corruption, other significant factors that influenced its initial reception were the desire to achieve growth, the warm history of Sino-Malaysian relations, and the high level of economic interdependence. Concerns over sovereignty, negative environmental impact, and the lack of transparency of the deals have also had a negative impact on the BRI's reception. The corruption scandal has pushed the country towards

more democratic governance where politicians are increasingly influenced by public opinion. As elites become more accountable to the demands of the wider public, politicians used opposition to the DSR to gain political support but were careful to avoid actions that could strain relations with their most important economic partner due to the potential for economic backlash. Malaysia is keen to enhance its digital connectivity but strives to maintain a balanced relationship between global powers to maintain sovereignty and a capitalize on its position as a developing technology hub.

For Pakistan, the DSR reception has been enthusiastic due to its strategic importance to both parties. There has been much success with the PEACE Cable and the Pakistan-China Fiber Optic Cable which both connect Pakistan internally as well as providing connection for China through Pakistan and on to Europe, Africa and the Middle East. As suggested by the second hypothesis, this success can be attributed to Pakistan's poor state of connectivity prior to China's presence and the tangible benefits seen by the average Pakistani both in terms of individual connectivity and economic opportunities. As the first hypothesis suggests, due to their strong political ties Pakistan's support for Chinese presence continues despite the significant lack of domestic labor force expertise in the digital workforce and rampant data insecurity, privacy issues, and cyber threats. Due to Pakistan's reliance on Chinese infrastructure in the digital realm, its government is quick to overlook potential downfalls of data vulnerability and digital dependency despite being praised for circumventing data flows that potentially include access by strategic rival India.

Malaysia was eager to commit to participation in the DSR initially for various economic and political reasons as demonstrated by the slew of ambitious agreements and heightened presence of Chinese companies in their domestic digital landscape. Over time, Malaysia has become more cautious and selective regarding foreign investment due to changes in their domestic political atmosphere, awareness of illiberal Chinese practices in the digital realm, and their ability to capitalize on their well-recognized digital potential by attracting a variety of foreign investment. Malaysia retains a level of reception, as the second hypothesis suggests, that avoids tarnishing their overall political and economic relationship with Beijing.

In the end, both hypotheses have played out as expected regarding Pakistani and Malaysian reception to the DSR. For the first hypothesis, political factors such as corruption and lack of democratic governance led to initial reception in Malaysia, but the reception dwindled significantly as the politicians were held responsible by the desires of their constituents. In Pakistan, political factors seem to have the most influence as the military's influence over the deeply engrained bureaucracy has maintained warm embrace to the DSR despite impediments to progress. Regarding the second hypothesis, Malaysia's digital economic potential has facilitated their ability to diversify foreign investment while leaving the door open to cooperation with China in a manner that does not tarnish their significant economic relations. Regarding Pakistan, the poor state of their digital economy and lack of foreign investment options makes the DSR an easy choice as they have much to gain from digital investment and few other options due to their debt levels.

C. U.S. POLICY IMPLICATIONS

For the United States, China's Digital Silk Road presents both challenges and opportunities. As the U.S. seeks to maintain its leadership in the digital realm and protect its strategic interests, it is crucial that U.S. policymakers carefully assess the impact of the DSR on its allies and partners. By proactively addressing the challenges posed by the DSR and offering competitive alternatives, the U.S. can ensure its continued influence in the digital arena and foster sustainable and mutually beneficial partnerships with countries along the BRI. The following are potential policy implications for the U.S.

First, the U.S. should do their best to understand and support the digital needs of partner nations and offer alternative solutions that are competitive with China's digital offerings. This requires engaging partner countries to understand their digital needs and tangibly support their desires for digital development in a direction that aligns with U.S. standards and values. This can be accomplished through technology transfer, capacity building initiatives, and fostering collaborations with U.S. tech companies. It also requires investment in the research and development of cutting-edge technology to ensure alternatives to China's DSR offerings are available at a comparable price. This policy implication is important in the case of Pakistan, a historically important partner to the U.S.

despite recent trends towards greater cooperation with China. The U.S. must continue to engage to identify Pakistan's needs, help them understand the threats that come with the DSR, and direct them towards alternate solutions that meet their digital needs.

Next, the U.S. can leverage its diplomatic ties to promote a shared vision of a free and open digital environment, advocating for inclusivity, transparency, and adherence to international norms and regulations. The U.S. must work with like-minded countries to develop international standards for cybersecurity and data privacy, addressing concerns related to the use of Chinese technology and potential data breaches. These international standards will eventually come to fruition, and it is important that the U.S. and like-minded partners see that they are in line with the current liberal international system. This is especially true in the case of Malaysia, a country with high potential to influence the digital economy of Southeast Asia into the future. Continued engagement will ensure that they continue to diversify their technological sector and continue in a direction that avoids the dangers of the DSR while promoting a free and open digital environment in Asia.

Also, the U.S. should do their best to understand and highlight China's illiberal practices both domestically and internationally. U.S. policymakers must ensure that their counterintelligence apparatus is capable and effective at understanding and preventing Chinese acts of malice which allow them to gain advantage in the technology domain. More should be done to prevent instances of intellectual property theft and espionage in the digital realm and when identified they should be brought to the attention of a wider audience to ensure awareness of the measures the CCP is willing to take to compete. A stronger international understanding of the CCP's deliberate and illiberal actions in cyberspace could help deter those countries whose economic or political situation might otherwise lead them towards a warm reception of the DSR.

D. FUTURE PROJECTIONS

Looking ahead, China's Digital Silk Road is likely to continue expanding its reach and influence in the global digital landscape. As China invests heavily in cutting-edge technologies such as 5G, AI, and big data, it will continue to export these technologies and establish digital infrastructure presence in more countries. The DSR's expansion may

further strengthen China's economic ties and soft power globally. On the other hand, it may also face challenges, including cybersecurity concerns, data privacy issues, and potential resistance from countries wary of becoming overly reliant on Chinese technology.

The success of the DSR will depend on China's ability to address the concerns of partner countries by demonstrating a commitment to transparency, sustainability, and equitable partnerships. It is quite possible, however, that the DSR finds success in countries where authoritarian leaders want a tighter grip on power without addressing these concerns. This would not only facilitate repression and control in various parts of the world along the BRI, but also increase China's global influence as more participants in the DSR could lead to more effective DSR capabilities and the accompanying technological advances in China. Rapid advances in the CCP's ability to develop leading technology could make their digital offerings more attractive to those countries who are on the fence and increased influence could allow for the creation of international technological standards with Chinese characteristics if the CCP's model for digital authoritarianism becomes more accepted globally. In the end, this outcome would advance the global level of internet censorship, facilitate everyday surveillance of individuals, and otherwise curb individual freedoms some have grown accustomed to in their everyday life.

Collaboration with international stakeholders, including technology companies and international organizations, may be essential for building trust and ensuring the initiative's long-term viability. As China continues to extend its digital influence through the DSR, the international community must closely monitor its impact on partner nations and work collaboratively to ensure that digital connectivity contributes to inclusive and sustainable development for all. As the digital landscape continues to evolve, it is crucial for policymakers and stakeholders to foster transparent communication and cooperation, addressing mutual interests and concerns. An inclusive approach that considers the aspirations and priorities of partner countries will be essential for building trust and fostering successful digital collaborations.

In conclusion, this thesis has contributed to the understanding of the dynamics surrounding China's DSR and its reception in Pakistan and Malaysia. The case studies of Pakistan and Malaysia provide valuable insights into the reception and differentiation of

DSR in diverse partner countries. The findings highlight the importance of understanding each country's unique geopolitical and economic situation which shapes their response to the DSR. China's ability to adapt its digital expansion strategy to the specific needs and concerns of partner nations will be critical for ensuring the long-term success and sustainability of the initiative.

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