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THESIS

THE 21ST CENTURY SCARLET LETTER: CHINA'S USE OF DIGITAL GLOBAL INFLUENCE TO GAIN POWER AND WEAKEN U.S. LEADERSHIP

by

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December 2020

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13. ABSTRACT (maximum 200 words)

China, the United States' greatest strategic rival, has notably tested a social credit system (SCS) since 2014 to regionally monitor citizens as part of a seemingly new digital caste system. The SCS, which was scheduled for nationwide release in 2020, is a concern for the United States and its allies, as the system will serve as an alternative means for China to exert its influence across the country. In addition, given Beijing's growing global presence through China's Digital Silk Road, the SCS equally poses a threat as an external influence on the government and business environments of participating countries who may model the system. China's increased presence and influence could threaten the United States' lead within the Great Power Competition. This thesis explores the impact of government social-media monitoring on the civil liberties of citizens through a binomial logistic regression and examines the potential for SCS to be adopted through a case study of differing governing structures. The thesis conceptually explains the vulnerabilities of China's internal and external influence tactics that should be tracked and countered by the United States in an effort to maintain its strategic advantage.

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ABSTRACT

China, the United States' greatest strategic rival, has notably tested a social credit system (SCS) since 2014 to regionally monitor citizens as part of a seemingly new digital caste system. The SCS, which was scheduled for nationwide release in 2020, is a concern for the United States and its allies, as the system will serve as an alternative means for China to exert its influence across the country. In addition, given Beijing's growing global presence through China's Digital Silk Road, the SCS equally poses a threat as an external influence on the government and business environments of participating countries who may model the system. China's increased presence and influence could threaten the United States' lead within the Great Power Competition. This thesis explores the impact of government social-media monitoring on the civil liberties of citizens through a binomial logistic regression and examines the potential for SCS to be adopted through a case study of differing governing structures. The thesis conceptually explains the vulnerabilities of China's internal and external influence tactics that should be tracked and countered by the United States in an effort to maintain its strategic advantage.

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LIST OF ACRONYMS AND ABBREVIATIONS

AIC   Akaike Information Criterion

ASEAN   Association of Southeast Asian Nations

BRI   Belt and Road Initiative

CPEC   China-Pakistan Economic Corridor

COVID-19   CCP Chinese Communist Party

DOD   U.S. Department of Defense

E.U.   European Union

FICO   Fair Isaac Company

GED   Georeferenced Event Dataset

GDP   Gross Domestic Product

GDPPC   Gross Domestic Product per capita

IMET   International Military Education and Training

MOU   memorandum of understanding

V-Dem   Varieties of Democracy

RCEP   Regional Comprehensive Economic Partnership

SCS   social credit system

SAC   Standardization Administration of China

TPP   Trans-Pacific Partnership

UCDP   Uppsala Conflict Data Program

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EXECUTIVE SUMMARY

Background

As the greatest strategic rival of the United States, China's national strategy to expand its power, while seeking a "great rejuvenation" of its nation by 2049, has serious implications for the interests of the U.S. and its allies.[1] For centuries, China has utilized trade routes, as part of the Silk Road, to spread influence throughout other countries. A resurgence of this expansion of power and influence has been observed as a continued pattern in recent years through China's creation and use of the Belt and Road Initiative (BRI) and the Digital Silk Road.

Since 2007, China has regionally tested a social credit system (SCS), a score-based reward and penalty system, designed to influence the personal behavior and public conduct of Chinese citizens and businesses. Unlike the U.S. FICO credit system that lowers a person score based on the timeliness of payments and the amount of debt incurred, China's social credit system is highly intrusive and the social credit scores are based on things such as social media behavior, purchasing habits, financial standing, number of children and social network. The Chinese government additionally produces a publicly available "Redlist" to praise citizens with high scores and a "Blacklist" to shame those with low scores.

Problem

Since 2014, the Chinese central government has made plans to launch the social credit system nationwide, with an original release scheduled for 2020. This is of great concern to the United States because the new Chinese system of control could potentially serve as a model for countries and businesses currently influenced by China through participation in the BRI and Digital Silk Road. A number of countries, including some U.S. allies, have notably become dependent on Chinese financial aid, along with support from various development projects and business arrangements, which have strengthened

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[1] "Military and Security Developments Involving the People's Republic of China," U.S. Department of Defense, September 1, 2020, 1, https://www.defense.gov/Newsroom/Releases/Release/Article/2332126/dod-releases-2020-report-on-military-and-security-developments-involving-the-pe/.

bilateral relations with China. If implemented by other nations, the social credit system—which oppresses the civil liberties and individual rights of citizens—could serve as a catalyst for a damaging paradigm shift in the approach to democracy across the globe.

Research Question

The intent of this research is to address the question: How can the U.S. and its allies curtail the Chinese government's expanding digital influence? This thesis examines the impact of government social media monitoring and attempts to assess the probability that the perceived success of China's social credit system could serve as a model for other countries and help to further expand Chinese influence.

Methodology

To address this question, this thesis uses a mixed methodology (both quantitative and qualitative) to explore the current social credit systems that are being tested in China, the impact of government social media monitoring on civil liberties and democracy, as well as the potential for China to export SCS to influence the government and business environments of three countries with differing governing bodies—Mongolia, Thailand, and Pakistan. To better examine the effect of social media monitoring by the government, a logistic regression was conducted to test two hypotheses using country-specific data for the dependent variable of civil liberties and the independent variable of Government Social Media Monitoring.

Summary of Findings

The results of the quantitative assessment found that citizens in countries instituting greater government social media monitoring will more than likely have significantly less civil liberties. It additionally found that countries with greater democracy will more than likely have greater access to civil liberties. Given these findings, China's social credit system will likely have a significant impact on the civil liberties and democratic freedoms of citizens.

This thesis also finds that China has an extensive history of using trade routes to successfully expand power and exert influence over partner countries. As such, China's

success in using the social credit system could potentially incentivize countries to implement a similar governing structure in an attempt to increase political power. As a result, the citizens and businesses in those countries could ultimately become oppressed as civil liberties are restricted through government monitoring, which would likely complicate and undermine U.S. efforts to protect and preserve democratic freedoms around the world.

Key Takeaways

To mitigate the findings of this study, this thesis proposes for the U.S. to implement a new incentives-based system that recognizes governments and businesses for inclusive behaviors as a countermeasure. The U.S. should take full advantage of the upcoming change of administration by strengthening bilateral relations with allies and partner nations to help launch such a system and effectively assuage the potential spread of Chinese power and influence. This thesis also recommends continued future research to evaluate the domestic political environments around the world—particularly those that have tribal influences, dictatorships, or the financial means to sustain such a system—to best determine which countries are most likely to adopt a social credit system. The resulting information will serve as key criteria for helping the U.S. and its allies be best positioned to protect the global community from future oppressive practices that will significantly restrict democracy.

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I. BACKGROUND TO THE PROBLEM

In the anthology series "Black Mirror," an episode in the third season showcases a world where citizens, living their everyday lives, build a "social media score" based on their daily interactions with others.[1] In this society, people rate each other through their phones on a scale from one to five stars for every interaction they have—everything from talking to someone in passing and being perceived as rude, to the popularity of a social media post—which can greatly impact their socioeconomic status. Citizens, who can see the score of others as it changes in real time, are given privileges for having a high score and are penalized and shunned for having a low score. As Americans, this type of digital caste system sounds like a far-fetched work of fiction; however, this is very close to reality in China where the government has begun testing a social credit system (SCS) to be implemented nation-wide in 2020.[2] The State Council, the chief administrative authority of China, formally announced plans for the nationwide release of the system in 2014 in *Planning Outline for the Construction of an SCS*.[3] This is a concern for the United States and its allies, as the SCS system will serve as an additional means for China to exert its influence internally and externally by serving as a model for the government and business environments of other countries. This move could further threaten the United States, given the ongoing Great Power Competition with China, which former U.S. Defense Secretary James Mattis identified as the primary concern to U.S. national security.[4]

The purpose for China's nation-wide system, according to a CNBC translation, is to create "a social environment in which everyone knows the law, understands the law and

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[1] *Black Mirror*. 2016. Season 3, Episode 1, "Nosedive." Directed by Joe Wright. October 21, 2016, on Netflix. https://www.netflix.com/title/70264888.

[2] Genia Kostka, "China's Social Credit Systems and Public Opinion: Explaining High Levels of Approval," *New Media & Society* 21, no. 7 (February 13, 2019): 1567, https://doi.org/10.1177/1461444819826402.

[3] Kostka, 1567.

[4] Jim Mattis, "Summary of the 2018 National Defense Strategy," National Defense Strategy (U.S. Department of Defense, January 19, 2018), 1–2, https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.

abides by the law."[5] The system, which will both reward and penalize Chinese nationals, has been regionally tested throughout China since the plan's announcement in 2014.[6] Through advancements in Artificial Intelligence and facial recognition software, SCS has become very sophisticated in a very short span of time. The United States has long served as the leader for commercial cyber capabilities, but with China preparing to launch the nation-wide SCS program, release 5G infrastructure, and fully harness AI technology, its new structure and lead could potentially serve as a model for other countries—particularly countries that are currently influenced by China through development efforts as part of the Belt and Road Initiative and Digital Silk Road.[7]

This thesis reviews the current SCS systems that are being tested in China; the impact of government social media monitoring; the potential for China to export SCS to influence the government and business environments in Mongolia, Thailand, and Pakistan; and the possible implications for the U.S. and its allies.

A.   APPROACH

This thesis identifies key vulnerabilities in China's internal and external influence efforts, through the use of its social credit system, that should be monitored and addressed by the United States to maintain its strategic advantage. Utilizing a regression analysis, this thesis assesses the global impact that government social media monitoring has on the civil liberties of citizens. The thesis then reviews China's successful history of expansion and influence through the use of trade routes over the centuries to present day.

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[5] Evenlyn Cheng and Shirley Tay. "China Wants to Track and Grade Each Citizen's Actions — It's in the Testing Phase." CNBC, July 26, 2019. https://www.cnbc.com/2019/07/26/china-social-credit-system-still-in-testing-phase-amid-trials.html.

[6] Rogier Creemers, "China's Social Credit System: An Evolving Practice of Control," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, May 9, 2018), 13–14, https://papers.ssrn.com/abstract=3175792.

[7] Andrew Chatzky and James McBride, "China's Massive Belt and Road Initiative | Council on Foreign Relations," January 28, 2020, https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative; Paul Triolo, Clarise Brown, and Kevin Allison, "The Digital Silk Road: Expanding China's Digital Footprint" (Eurasia Group, April 29, 2020), https://www.eurasiagroup.net/live-post/digital-silk-road-expanding-china-digital-footprint.

This research examines three countries—Mongolia, Thailand, and Pakistan—to identify weaknesses and assess the probability that the countries could be vulnerable to further Chinese influence, given their current involvement in China's Digital Silk Road. These three countries were selected due to their differing stages of democracy. This thesis examines research on the government and business environments of each country to look for patterns that may make them susceptible to China's influence tactics. Finally, the thesis analyzes the findings to determine measures that the United States can adopt to mitigate China's growing influence and maintain its strategic advantage.

B.   LITERATURE REVIEW

China has notably promoted domestic regime stability through its use of the social credit system. Scholars differ on the true purpose behind the system with some believing that it has been used by the government in an attempt to regain the trust of citizens,[8] while others suggest that the government is actually using the system to monitor and control the behavior of the local regions in China, whose rewards and punishments may be incorporated into its future nationwide system.[9] Genia Kostka explains in the *Washington Post* that local governments in over 43 Chinese cities have instituted mandatory pilot SCS programs during this test period, monitoring individuals, businesses, social organizations, and government departments.[10] A CNBC report finds that many of the programs either issued citizens with a base score of 1,000 or provided a letter grade from AAA to D. Rogier Creemer explains in a 2018 report that the nationwide SCS score would be based on data points from a variety of different actions, including online purchases, content posted on social media, and the types of friends kept by individuals.[11] Creemers stresses that these scores would have wide-ranging impact on people's livelihood, influencing their ability to

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[8] Martin Chorzempa, Paul Triolo, and Samm Sacks, "China's Social Credit System: A Mark of Progress or a Threat to Privacy?," *Policy Briefs*, Policy Briefs (Peterson Institute for International Economics, June 2018), https://ideas.repec.org/p/iie/pbrief/pb18-14.html.

[9] Creemers, "China's Evolving Practice of Control," 3.

[10] Genia Kostka, "Analysis | What Do People in China Think About 'Social Credit' Monitoring?," *Washington Post*, March 21, 2019, https://www.washingtonpost.com/politics/2019/03/21/what-do-people-china-think-about-social-credit-monitoring/.

[11] Creemers, "China's Evolving Practice of Control," 3.

secure employment, loans, mortgages, and travel accommodations, even potentially impacting their relationships with family and friends.[12]

Scholarly research finds that China's nationwide SCS will use a reward and punishment system that publicly acknowledges and praises citizens, businesses, social organizations, and government departments with a high score, but will also serve as a new-age digital scarlet letter to shame those having a low score. Creemers reports that the incentive mechanisms would be implemented via the government, as well as through market mechanisms and self-regulatory regimes in certain areas.[13] Kostka reports that China plans to track those with particularly "trustworthy" behavior on "redlists,"[14] and says that specific conduct as minute as helping neighbors could potentially impact one's score.[15] To encourage citizens to strive for placement on the redlists, the government will reportedly make citizens eligible for rewards like tax reductions and easier access to government services.[16] Charlie Campbell explains in a *Time* magazine article that those not exemplifying good behavior will be placed on a "List of Untrustworthy Persons," also referred to as "blacklists."[17]

To help track citizens and companies, Campbell says government agencies compile and share details about various infractions, such as failure to pay fines and defaulting on debts, which are then used to deduct points from their SCS score. CNBC further reports that even things like being cited for driving under the influence and having children beyond the legally allowed limit could impact the score as well.[18] Creemers stresses that these scores would have wide-ranging impact on people's livelihood, influencing their ability to

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[12] Creemers, 3.

[13] Creemers, 13.

[14] Kostka, "What Do People in China Think"; Kostka, "China's Social Credit Systems and Public Opinion." 1566–1567.

[15] Kostka, "What Do People in China Think."

[16] Kostka, "China's Social Credit Systems and Public Opinion," 1567.

[17] Charlie Campbell, "How China Is Using 'Social Credit Scores' to Reward and Punish Its Citizens," Time, January 16, 2019, https://time.com/collection/davos-2019/5502592/china-social-credit-score/.

[18] Evenlyn Cheng and Shirley Tay, "China Wants to Track and Grade Each Citizen's Actions — It's in the Testing Phase," CNBC, July 26, 2019, https://www.cnbc.com/2019/07/26/china-social-credit-system-still-in-testing-phase-amid-trials.html.

secure employment, loans, mortgages, and travel accommodations, even potentially impacting their relationships with family and friends.[19] This type of system could potentially be modeled by other countries in an attempt to increase global standing. Mongolia, Thailand, and Pakistan have been identified to assess potential vulnerabilities based on their governance and business structures.

1.   Mongolia

Mongolia is a young and vulnerable democracy. Some scholars have found that external democracy promotion has had a significant impact on the country over the years.[20] Mongolia has been identified to be more susceptible to external influence given its small population and strong dependence on foreign aid.[21] In particular, scholars have observed that the Sino-Mongolian relationship has evolved into a comprehensive strategic partnership.[22] The scholars noted that in addition to participating in China's Belt and Road Initiative (BRI), Mongolia is also a founding member of the Asian Infrastructure Investment Bank that was proposed by China.

Scholarly research also has found that the United States has helped to support Mongolia's efforts to move into a more democratic direction since the early 1990s.[23] The countries have also maintained strong bilateral relations and growing commercial ties. During former Vice President Joe Biden's 2011 visit to Ulaanbaatar, he reportedly praised Mongolia for being an "emerging leader in the worldwide democratic movement" and for being a "close friend and partner of the United States."[24]

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[19] Creemers, "China's Evolving Practice of Control," 3.

[20] V. Fritz, "Mongolia: Dependent Democratization," *Journal of Communist Studies and Transition Politics* 18, no. 4 (December 1, 2002): 75–100, https://doi.org/10.1080/714003620.

[21] Fritz.

[22] Sharad K. Soni, "China–Mongolia–Russia Economic Corridor: Opportunities and Challenges," in *China's Global Rebalancing and the New Silk Road*, ed. B. R. Deepak (Singapore: Springer, 2018), 101–17, https://doi.org/10.1007/978-981-10-5972-8_9.

[23] Jonathan S. Addleton, *Mongolia and the United States: A Diplomatic History*, 1st ed. (Hong Kong University Press, 2013), 38, https://muse.jhu.edu/book/26809.

[24] Addleton, 44.

2.   Thailand

Thailand's governance structure is unique given its incomplete transition from an absolute monarchy after the 1932 revolution.[25] Scholars note that democratization in Thailand cannot be discussed without taking the monarchy into consideration.[26] This has led to constraints between military rule and a democratically elected administration. Scholarly research notes that deepening political polarization and increasing violence have resulted in two coups, including the most recent in May 2014 that was led by the National Council for Peace and Order.[27] The coup reportedly was launched in an effort to restore "perfect democracy" and to "return happiness to people in the nation."[28]

Scholarly research has found that China's BRI efforts have resulted in practical achievements in various areas, including Thailand.[29] In particular, China has a joint BRI deal between Thailand and Laos for the construction of a new high-speed railway that will run from southern China through Laos to the industrial eastern coast of Thailand.[30] The United States has had a longstanding relationship with Thailand, which became America's first diplomatic partner in 1833, when the two states signed the Treaty of Amity and Commerce.[31] In recent years, relations between the two countries have reportedly progressed as a result of the 1966 Treaty of Amity and Economic Relations, which gave the United States unique privileges despite Thailand's predominately restrictive conditions

[25] Federico Ferrara, "Democracy in Thailand: Theory and Practice," in *Routledge Handbook of Southeast Asian Democratization*, ed. William Case, Routledge Handbooks (United Kingdom: Routledge, 2015), 351–69, https://doi.org/10.4324/9781315674735-31.

[26] Michael J. Montesano, Terence Chong, and Mark Heng Shu Xun, *After the Coup: The National Council for Peace and Order Era and the Future of Thailand* (Singapore: ISEAS-Yusof Ishak Institute, 2019).

[27] Vachararutai Boontinand and Sriprapha Petcharamesree, "Civic/Citizenship Learning and the Challenges for Democracy in Thailand," *Education, Citizenship and Social Justice* 13, no. 1 (March 1, 2018): 36–50, https://doi.org/10.1177/1746197917699413.

[28] Boontinand and Petcharamesree.

[29] Sarah Chan, "The Belt and Road Initiative: Implications for China and East Asian Economies," *The Copenhagen Journal of Asian Studies* 35, no. 2 (2017): 65, https://doi.org/10.22439/cjas.v35i2.5446.

[30] Chan, 65–66.

[31] Kitti Prasirtsuk, "An Ally at the Crossroads: Thailand in the U.S. Alliance System," in *Global Allies: Comparing U.S. Alliances in the 21st Century* (Australia: ANU Press, 2017), 116, https://www.jstor.org/stable/j.ctt1sq5twz.11.

for foreign investment.[32] Scholars noted that the treaty has allowed American citizens and businesses incorporated in the United States or Thailand to maintain a majority shareholding or to wholly own companies in Thailand. This effectively gave Americans the ability to engage in business in Thailand on the same level as a Thai national, which stands true today.[33]

3. Pakistan

Scholars have found that Pakistan's economy is a mix between a democracy and a dictatorship, which has caused the government to face a number of issues due to the inconsistent political structure.[34] Research finds that the Pakistan military has repeatedly intervened with coups over the years to prevent the full development of democracy in the country and has ruled for nearly half of the country's existence.[35] Even when not in power, the military has reportedly managed to maintain a firm grip on national politics. Scholarly research has claimed that the United States has used aid to undermined democracy in Pakistan.[36] The scholars observed that the United States has primarily provided high flows of support to Pakistan under military dictatorships and low support flows for democratic governments.

Scholarly research finds that Pakistan has had a long history of friendly relations with China since the 1950s.[37] By the 1970s, China became heavily involved in support efforts for key areas in Pakistan, including its military, missile and nuclear program, and economic sector. Scholars observed that China also notably supported Pakistan during

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[32] Prasirtsuk, 117.

[33] Prasirtsuk, 117.

[34] University of Balochistan Quetta, Pakistan et al., "Economic Performance of Pakistan Under Democracy and Military Regimes," *Journal of Economics, Business and Management* 4, no. 12 (December 2016): 690–94, https://doi.org/10.18178/joebm.2016.4.12.474.

[35] Aqil Shah, "1. The Military and Democracy," in *Pakistan at the Crossroads*, ed. Christophe Jaffrelot (New York Chichester, West Sussex: Columbia University Press, 2016), 1, https://doi.org/10.7312/jaff17306-003.

[36] Murad Ali, "US Foreign Aid to Pakistan and Democracy: An Overview," *Pakistan Journal of Social Sciences (PJSS)* 29, no. 2 (December 2009): 247.

[37] Shakeel Ahmad Ramay, "China Pakistan Economic Corridor - A Chinese Dream Being Materialized Through Pakistan," *Sustainable Development Policy Institute*, 2016, 2.

sanctions imposed by the United States.[38] Most recently they found that bilateral relations have further increased between the two countries given Islamabad's participation in Beijing's BRI, as part of the China-Pakistan Economic Corridor (CPEC), which involves a collection of infrastructure projects across Pakistan. Scholarly research finds that the CPEC mutually beneficial for both countries with Pakistan needing it to overcome its economic, development, social, and energy problems.[39] Meanwhile, China was found to need the CPEC deal to further expand its global influence and to secure future supply routes for energy and trade goods.

C.   OUTLINE OF THESIS

Beginning in Chapter II, this thesis takes an in-depth look into China's social credit system, to include its purpose, structure, potential for modeling, and vulnerabilities. Chapter III serves as a quantitative assessment of the impact of government social media monitoring on the civil liberties of citizens. From there, Chapter IV examines China's history of external influence—both political and business—on other countries through the use of physical trade routes, as well as its Digital Silk Road. It then takes a deeper dive to examine China's involvement and influence within the current government and business environments for Mongolia, Thailand, and Pakistan. The chapter further analyzes the potential for China to influence the adoption of the SCS structure in those identified countries and the threat it would pose to the strategic advantage of the current global hegemon, the United States, and its allies. Chapter V then presents the conclusion, which outlines ways the United States can mitigate the impact of China's growing influence and provides recommendations for future research.

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[38] Ramay, 2.

[39] Ramay, 7.

II.   CHINA'S SOCIAL CREDIT SYSTEM

The idea of a "credit system" is not foreign to many, especially within the United States where the Fair Isaac Company Score, better known as the FICO score, has been in use since 1989 to predict the creditworthiness of U.S. consumers.[40] The classic FICO score ranges from 300 to 850 and it is calculated based on various factors including the length of credit history, debt burden, payment history, types of credit used, and recent searches for credit.[41] FICO scores, which can also be impacted by things such as bankruptcies, court judgments, foreclosures, lawsuits, and liens, are then used by auto and mortgage lenders, credit card companies, as well as nearly half of U.S. employers to assess potential risk.[42]

Although the FICO score is calculated from a formula comprised of personal information, it is significantly less intrusive and damaging than China's social credit system, which runs the risk of being adopted by other countries. This chapter presents the structure of the social credit system and examines the internal influence it has on the citizens of China.

A.   PURPOSE

Social credit systems have been tested in China since 2007, when 18 central government departments launched local pilot programs following the State Council's release of the *Guiding Opinions Concerning the Construction of a* Social *Credit System*.[43] A plan to launch a nationwide system was later announced in 2014 when the State Council issued the *Planning Outline for the Construction of an SCS*, which highlighted the original implementation strategy to put the new system in place by 2020.[44] The plan stated that the purpose of the social credit system is to provide an assessment of citizens, businesses, and

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[40] Xin Yu and Lucia F. Dunn, "The Impact of Credit Checks on Employment," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, March 27, 2016), 10, https://doi.org/10.2139/ssrn.2755346.

[41] Yu and Dunn, 10–12.

[42] Yu and Dunn, 9,12.

[43] Kostka, "China's Social Credit Systems and Public Opinion," 1567.

[44] Kostka, 1567.

organizations based on observations of their adherence to laws, creditworthiness, and overall compliance with China's ideological framework.[45] The Chinese Communist Party (CCP) is well-known for its goal of maintaining the party's power monopoly and preventing the opposition from challenging its political dominance, so from a U.S. perspective the SCS looks like a more sophisticated way for the CCP to take advantage of technology advancements, including artificial intelligence, to further strengthen its authority over the public.[46]

B. STRUCTURE

The Chinese government has given permission to ten private companies to take the lead on launching pilot internet-based credit ranking systems, including Alibaba's Sesame Credit, which is reportedly held in high regard.[47] Sesame Credit works similar to the U.S. FICO score system—with citizens receiving a Sesame score range from 350 to 950—however, the company uses an opaque algorithm that captures a broad range of factors, including credit record, financial standing, criminal record, buying habits, social media behavior, and allegedly even the types of books that a person reads, to assign a numerical rating to citizens.[48] Sesame even takes into account the social credit scores within a debtor's social circle, so having associates with a low score within one's social network will negatively affect a consumer's individual score.[49] Other pilot programs reportedly deduct points for being negligent on loans, drunk driving, and even for having more children than legally allowed.[50]

The system pilots use differing methods for evaluating citizens and business—with some calculating a numerical score and others providing a letter grade from AAA to D—

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[45] Kostka, "What Do People in China Think."

[46] Nir Kshetri, "China's Social Credit System: Data, Algorithms and Implications," *IT Professional* 22, no. 2 (2020): 16, https://doi.org/10.1109/MITP.2019.2935662.

[47] Kshetri, 15.

[48] Kshetri, 14–15.

[49] Kshetri, 15.

[50] Cheng and Tay, "China Wants to Track and Grade Each Citizen."

however, they all include the same basic components.[51] Paul Langer presented a visualization of the social credit system for the 21st Annual International Conference on Digital Government Research that took place in June 2020, which provides a helpful breakdown of the general development process and structure of the system, as shown in Figure 1.
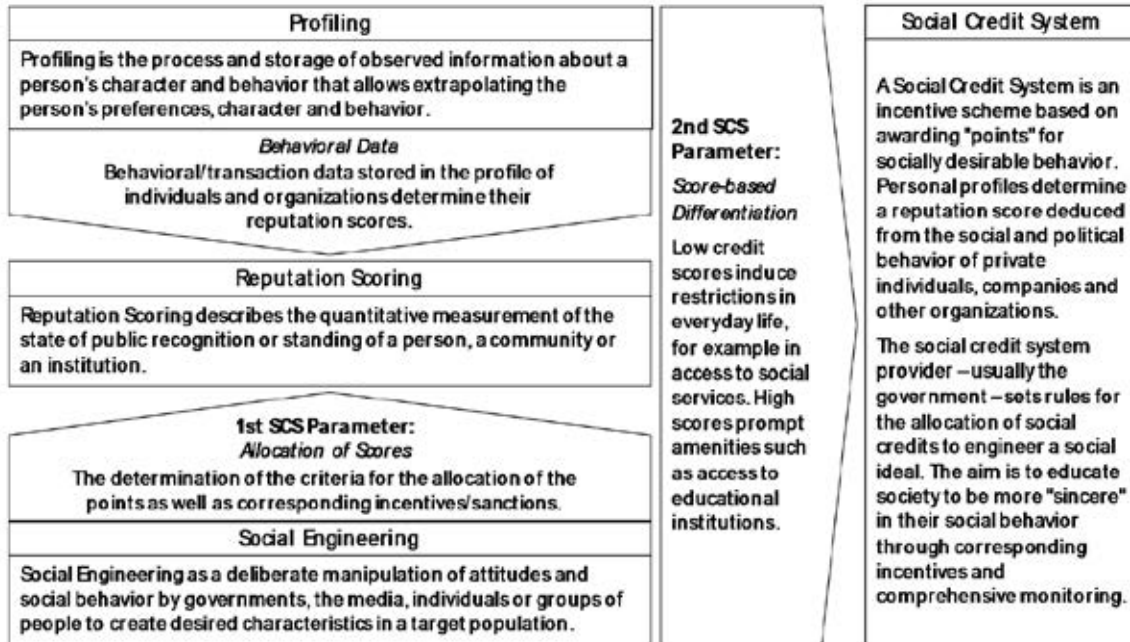

Profiling
Profiling is the process and storage of observed information about a person's character and behavior that allows extrapolating the person's preferences, character and behavior.
Behavioral Data Behavioral/transaction data stored in the profile of individuals and organizations determine their reputation scores.

Reputation Scoring

Reputation Scoring describes the quantitative measurement of the state of public recognition or standing of a person, a community or an institution.

1st SCS Parameter:
Allocation of Scores
The determination of the criteria for the allocation of the points as well as corresponding incentives/sanctions.

Social Engineering

Social Engineering as a deliberate manipulation of attitudes and social behavior by governments, the media, individuals or groups of people to create desired characteristics in a target population.

2nd SCS Parameter:
Score-based Differentiation

Low credit scores induce restrictions in everyday life, for example in access to social services. High scores prompt amenities such as access to educational institutions.

Social Credit System

A Social Credit System is an incentive scheme based on awarding "points" for socially desirable behavior. Personal profiles determine a reputation score deduced from the social and political behavior of private individuals, companies and other organizations.

The social credit system provider – usually the government – sets rules for the allocation of social credits to engineer a social ideal. The aim is to educate society to be more "sincere" in their social behavior through corresponding incentives and comprehensive monitoring.

Figure 1.   Social Credit System Development.[52]

The visual helps to explain the main conceptual elements of the social credit system that are used for the assessment of Chinese citizens and businesses, including profiling, reputation scoring, and the government's overall social engineering of the population—the deliberate manipulation of social behavior to regulate the desired characteristics of a society.

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[51] Creemers, "China's Evolving Practice of Control," 10,19.

[52] Source: Paul F Langer, "Lessons from China - The Formation of a Social Credit System: Profiling, Reputation Scoring, Social Engineering," in *Dg.o '20*, Dg.o '20 (The 21st Annual International Conference on Digital Government Research, Seoul, Republic of Korea: Association for Computing Machinery (ACM), 2020), 166, https://doi.org/10.1145/3396956.3396962.

The planned nationwide social credit system will collect data from various online accounts and social media platforms to build a consolidated user profile, as part of the profiling component of the system, to use as the basis for the reputation scoring process, which designates the numeric social standing of the person or business.[53] From there the profiling and reputation scoring data is placed in a framework that distributes credits based on behavior and action at the discretion of the government.[54] Although there are existing reputation scoring type systems in place within the U.S., such as credit bureaus and commercial loyalty programs that provide incentives for preferred behavior, they do not typically attempt to manipulate the population into assuming a specific societal ideal. It is the intention behind collecting the data and issuing scores to influence the behavior of the population that distinguishes the social credit system from other established credit system models and serves as a fundamental parameter of social engineering.

C.   REWARDS AND PENALTIES

In an effort to further influence the behavior of society, the SCS works as a public incentive system, offering both rewards and penalties to individuals and businesses.[55] The government publishes a "Redlist" of citizens with high scores who exhibit "good" behavior and a "Blacklist" for those with low scores exhibiting "bad" behavior, which is released publicly to be used for both praising and shaming purposes.[56] The system reportedly has records available for approximately 990 million individuals and over 25 million companies in China that are used by authorities to provide benefits for Redlist members and to impose penalties and sanctions on members of the Blacklist.[57] Some benefits for those on the Redlist include things such as tax reductions, easier access to government services, free

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[53] Langer, 166.

[54] Langer, 166.

[55] Genia Kostka and Lukas Antoine, "Fostering Model Citizenship: Behavioral Responses to China's Emerging Social Credit Systems," *Policy and Internet* 12, no. 3 (2019): 261, https://doi.org/10.1002/poi3.213.

[56] Mo Chen and Jens Grossklags, "An Analysis of the Current State of the Consumer Credit Reporting System in China," *Proceedings on Privacy Enhancing Technologies* 2020, no. 4 (October 1, 2020): 89, https://doi.org/10.2478/popets-2020-0064.

[57] Cheng and Tay, "China Wants to Track and Grade Each Citizen."

health checks, and less expensive transportation.[58] Other benefits include qualification for personal loans, fast-tracked visa applications, easier access to rental cars and bikes, free health checks, and preferential treatment at hospitals.[59]

Separately, punishments for the Blacklist were reportedly regulated in 2016 by 45 different bodies, including the Supreme People's Court, the National Development and Reform Commission, the People's Bank of China, the Chinese Youth League, and other judicial institutions and government departments, who wrote a memorandum of understanding (MOU) known as the "Joint Punishment System."[60] The MOU outlines seven different categories of punishments for the Blacklist, to include first category restrictions that impact economic opportunities—such as receiving stock options, issuing bonds, limits to establishing companies within the financial sector, participating in government procurement programs, and establishing social organizations.[61] The second category revokes in-kind support and government subsidy privileges.[62] The third bans individuals from assuming senior positions within state-owned enterprises, social organizations, and financial sector companies, while also barring entry into the Communist Party and civil or military service.[63]

The fourth category for Blacklist punishments restricts individuals from specific sectors like fireworks and dangerous chemicals, food, and drugs, in addition to rejecting customs authenticated status.[64] The fifth category removes eligibility for individuals to assume honorary titles and puts new restrictive procedures in place for loan applications, while the sixth bans the purchase of land-use rights, real estate, and the exploitation of natural resources.[65] The seventh and final category for the MOU has become infamous for

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[58] Kostka and Antoine, "Fostering Model Citizenship," 261.

[59] Cheng and Tay, "China Wants to Track and Grade Each Citizen."

[60] Creemers, "China's Evolving Practice of Control," 14.

[61] Creemers, 14–15.

[62] Creemers, 15.

[63] Creemers, 15.

[64] Creemers, 15.

[65] Creemers, 15.

banning citizens from certain luxuries, including purchasing vehicles, buying or renovating homes, the purchase of certain high-value insurance products, first class travel, upscale restaurants, luxury hotels and resorts, golf courses, high-speed train or civil aircraft travel, nightclubs, international vacations, and even sending their children to private schools.[66] Additionally, people with a low score become ineligible to assume certain influential positions, so serving in high-status positions in China like company CEO, news reporter, or government official, may require a minimum social credit score.[67] In 2018 alone, over 11 million people in China were reportedly restricted from buying airline tickets and over 4 million were prevented from buying high-speed train tickets due to their low score, with many unaware that they had been blacklisted and having no easy access to an appeals process.[68]

Many Chinese citizens were actually found to be unaware that they were being monitored and tracked by a government-run social credit system, with a number of the local pilot programs focusing on businesses and targeting specific professionals instead.[69] Businesses are discouraged from receiving low scores, which could result in degradations, cutbacks, increased prices, or an overall denial of services.[70] In 2018, over 3.5 million businesses were added to the Blacklist for various infractions, such as engaging in fraud and generating excessive amounts of pollution, which prohibits them from bidding on projects, participating in land auctions, accessing security markets, and issuing corporate bonds.[71]

Businesses equally receive special Redlist benefits from maintaining a high social credit score, which is linked to financial credit and gives better loan access to companies

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[66] Creemers, 15.

[67] Kshetri, "Data, Algorithms, and Implications," 14.

[68] Xiao Qiang, "The Road to Digital Unfreedom: President Xi's Surveillance State," *Journal of Democracy* 30, no. 1 (2019): 60, https://doi.org/10.1353/jod.2019.0004.

[69] Kostka and Antoine, "Fostering Model Citizenship," 278–79.

[70] LangerLanger, "Lessons from China - The Formation of a Social Credit System," 170.

[71] Kshetri, "Data, Algorithms, and Implications," 17.

regarded as more reliable.[72] Companies with higher social credit scores also receive special access to certain services, products, and better business opportunities.[73]

D.   INTERNAL INFLUENCE

Given the social engineering aspect of the social credit system, the Chinese government uses a "nudging" approach to unconsciously influence the decision-making and behavior of individuals and businesses by providing positive reinforcement through indirect incentives.[74] The use of the system in that manner can be viewed as a form of paternalism, since the government essentially pretends to provide freedom by steering Chinese citizens in a direction that is willing taken, yet decisions are not actually made independently.[75] China is well-known for regulating free speech, civil rights, and organized civil society groups, so the social credit system may potentially be used to further monitor, track, and punish anti-CCP actions.[76]

The Chinese government increased its ability to monitor and track the movements and behavior of citizens in 2016 with the adoption of China's first cybersecurity law, which formally mandates that internet service providers must store user data and communication content within the country and gives the government unfettered access to all personal information and search histories that are regularly captured by global technology companies.[77] As a result of the law's facilitation of government access to nearly all personal information found online in China, the social credit system—which is premised on the colossal invasion of citizen privacy through the use of large-scale monitoring— provides authorities with an array of new mechanisms to exert control over the population.[78]

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[72] Cheng and Tay, "China Wants to Track and Grade Each Citizen."

[73] Paul F. Langer, "Lessons from China - The Formation of a Social Credit System," 170.

[74] Langer, 169.

[75] Langer, 169.

[76] Kshetri, "Data, Algorithms, and Implications," 16.

[77] Qiang, "The Road to Digital Unfreedom," 63.

[78] Qiang, 60.

The use of artificial intelligence has been found to further advance the speed at which the Chinese government can monitor, track and publicly shame citizens and businesses for bad behavior. Facial recognition software, for example, is reportedly in use in a number of intersections in Beijing where the system will identify blacklisted individuals and will project their face and identification information on a giant billboard as a way to instantly shame them in public for their actions.[79] Separately, various pilot systems have established partnerships with local telecommunication companies to privately shame individuals as well. In Dengfeng an automatic phone message is in use that says, "the person you are calling has lost his credit and deemed a defaulter by Dengfeng City People's Court," to alert callers that the person they are attempting to contact has a low credit score.[80] The message then provides an additional level of influence by stressing the need for the caller to urge the defaulter to fulfill their legal obligations.[81]

Technology is also used to influence the population by allowing instant access for all citizens to view anyone's social credit score at any time. Credit China, for instance, provides open access for citizens to view the social credit score of others on its website.[82] Separately, the WeChat messaging application released a mini-app that gives users the ability to check for social credit system delinquents within a 500-meter vicinity and allows them to alert authorities and share the information with other friends through the app.[83]

In the business world, having a positive reputation provides a competitive advantage for companies since less investment is needed to attract and retain customers, particularly in online commerce where reputation serves as a "Social License to Operate" in the midst of heavy competition.[84] As a result, the government aims to use the social credit system as a means to influence and achieve "commercial integrity" by instilling the fear of receiving a negative score and ruining a company's reputation in CEOs, managers,

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[79] Campbell, "How China Is Using 'Social Credit Scores.'"

[80] Cheng and Tay, "China Wants to Track and Grade Each Citizen."

[81] Cheng and Tay.

[82] Kshetri, "Data, Algorithms, and Implications," 17.

[83] Cheng and Tay, "China Wants to Track and Grade Each Citizen."

[84] Langer, "Lessons from China - The Formation of a Social Credit System," 167–68.

and the general staff of Chinese businesses, which would ultimately impact its ability to conduct business not only in China but across the globe.[85]

At its core, the basic concepts of the social credit system, including the use of lists, are well known and not as concerning to Chinese citizens due to past regime practices that included widely publicized personal information via the media.[86] If adopted in other countries, however, the social credit system would greatly reduce civil liberties, which would have a damaging impact on the livelihood and democratic freedoms of local citizens. This is a great concern to the U.S. and its allies, as it threatens ongoing efforts to bolster democracy worldwide. So the next chapter takes a more in-depth look into the significant impact that government social media monitoring can have on citizens across the globe.

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[85] Langer, 170.

[86] Chen and Grossklags, "Current State of Consumer Credit Reporting," 89.

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III. GOVERNMENT SOCIAL MEDIA MONITORING IMPACT

This chapter analyzes the impact that government social media monitoring can have on one's civil liberties, which include rights such as the freedom of expression and belief, rule of law, associational and organizational rights, as well as personal autonomy and individual rights, that are protected by law from unjust governmental interference. The chapter uses quantitative analysis to answer what impact SCS adoption in other countries has on the civil liberties of the individuals in those nations?

A. HYPOTHESES

(1) Hypothesis 1 (H1)

States with governments instituting higher levels of social media monitoring are more likely to have a higher country-year incidence of increased legal restrictions on civil liberties.

(2) Hypothesis 2 (H2)

States that have a greater degree of democracy are more likely to have higher country-year incidence of increased civil liberties.

B. DATA

To test the hypotheses, data was identified to conduct a regression analysis—an examination of the predicted impact of one or more independent variables on a dependent variable.[87] The method provided an analysis of the influence that government social media monitoring has on civil liberties.

For the dependent variable of civil liberties, data was utilized from Freedom House, an annual global report on political rights and civil liberties.[88] The data covered 15

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[87] Amy Gallo, "A Refresher on Regression Analysis," *Harvard Business Review*, November 4, 2015, https://hbr.org/2015/11/a-refresher-on-regression-analysis.

[88] Noah Buyon et al., "Freedom in the World 2020" (Freedom House, March 4, 2020), https://freedomhouse.org/sites/default/files/2020-02/FIW_2020_REPORT_BOOKLET_Final.pdf.

indicators from 195 countries and 15 territories between 2013 and 2020. The primary independent variable of government social media monitoring came from the independent research institute Varieties of Democracy (V-Dem).[89] The dataset covered approximately 202 countries between 2000 and 2019.

In an effort to increase the reliability of the study results, control variables are included in the regressions. Datasets from the World Bank are used to control for Gross Domestic Product per capita (GDPPC) and population, as well as internet and mobile phone usage, which are used as a representation of media.[90] The World Bank's World Development Indicators are a well-known premier compilation of cross-country development data. The information covered 220 countries between 1960 and 2018.

In addition, Democracy was controlled for using the newly released Polity5 data from the Center for Systemic Peace.[91] The Polity data series contains annual coded information on the level of democracy across the world and is widely used in political science research. The Polity5 data covered approximately 167 countries between 1946 and 2018. Violence was also controlled for using Uppsala Conflict Data Program (UCDP)'s Georeferenced Event Dataset (GED).[92] UCDP is the world's main provider of data on organized violence and the oldest ongoing data collection project of civil war. The data covered world event counts from 1989 to 2018.

[89] Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David et al., "V-Dem [Country–Year/Country–Date] Dataset V10" (Varieties of Democracy (V-Dem) Project, 2020), https://doi.org/10.23696/vdemds20; Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg et al., "V-Dem Codebook V10" (Varieties of Democracy (V-Dem) Project, 2020); Pemstein et al., "V-Dem Working Paper Series 2019:21," 2019, https://www.v-dem.net/en/data/data-version-10/; Mechkova et al., "Digital Society Project Working Paper 2019:1," 2019, https://www.v-dem.net/en/data/data-version-10/.

[90] "World Bank Development Indicators | Data" (The World Bank), accessed May 19, 2020, https://datacatalog.worldbank.org/dataset/world-development-indicators.

[91] "INSCRdata," accessed June 2, 2020, https://www.systemicpeace.org/inscrdata.html; Monty G. Marshall and Ted Robert Gurr, "Polity5 Project, Political Regime Characteristics and Transitions, 1800–2018, Dataset Users' Manual" (Manual, Center for Systemic Peace, April 23, 2020), http://www.systemicpeace.org/inscr/p5manualv2018.pdf.

[92] Sundberg, Ralph and Melander, Erik, "Introducing the UCDP Georeferenced Event Dataset," *Journal of Peace Research* vol.50, no. 4 (2013): 523–32; Högbladh, Stina, "UCDP GED Codebook Version 19.1" (Department of Peace and Conflict Research, Uppsala University, 2019), https://ucdp.uu.se/downloads/ged/ged191.pdf.

An initial comparison of the 2013 and 2019 data for the dependent variable highlights a definite decrease in civil liberties over time, as seen in Figure 2. The data is shown using a 7–1 scale, with 1 representing the greatest degree of civil liberties and 7 the smallest degree of civil liberties.
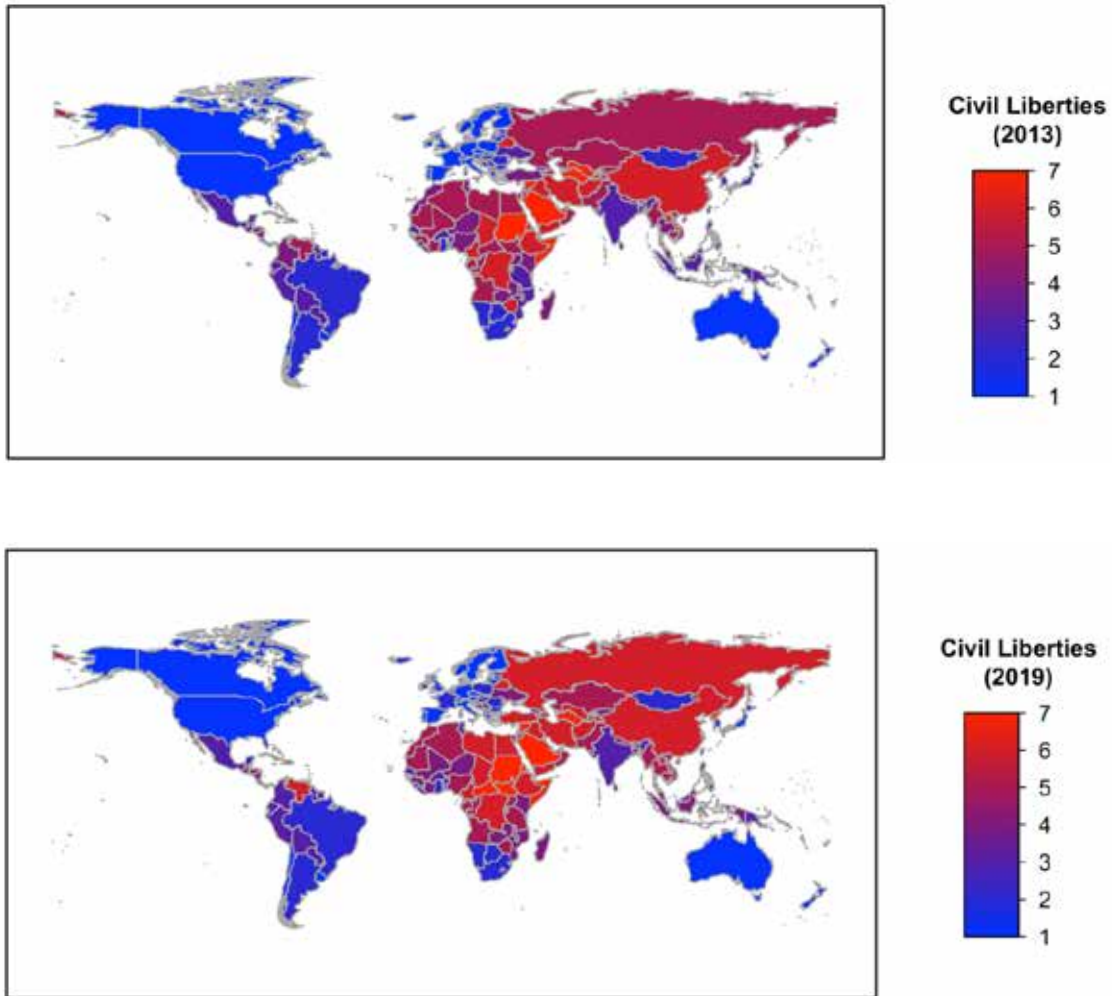

Figure 2.   Civil Liberties Comparison 2013 vs. 2019.[93]

Similarly, in Figure 3, a comparison of the 2013 and 2019 data for the independent variable highlights a definite increase in government social media monitoring in countries

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[93] The map in Figure 1, and all other graphics in this report were created using the RStudio program. "RStudio."; Adapted from Buyon et al., "Freedom in the World 2020," March 4, 2020.

where civil liberties have decreased. The social media monitoring data originally used a 4–0 scale, with 4 representing the smallest degree of social media monitoring by the government and 0 representing the greatest degree of social media monitoring. Figure 3 shows a depiction of the modification to the data using a reversed scale, further detailed below.
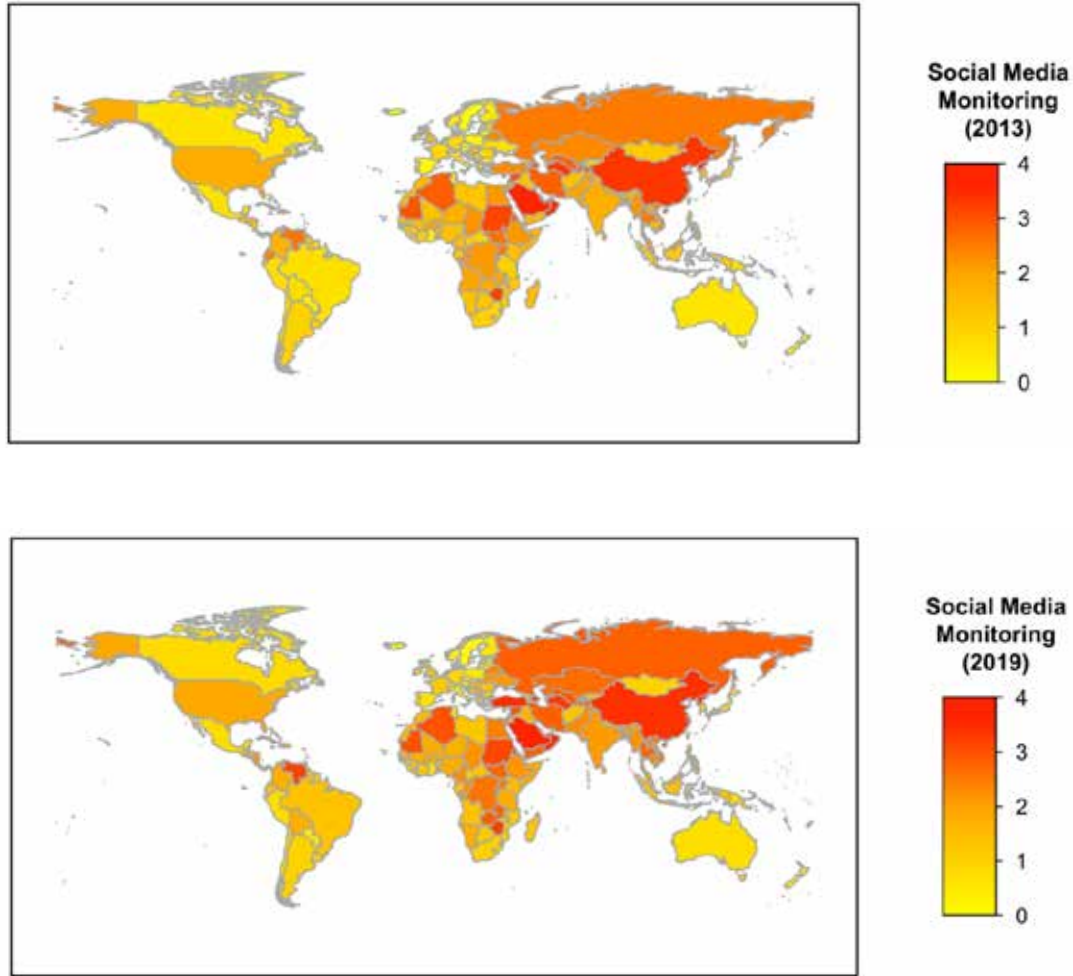

Figure 3.   Social Media Monitoring Comparison 2013 vs. 2019[94]

[94] Adapted from Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David et al., "V-Dem Dataset V10."

To give a more detailed comparison of the initial findings, an overlaid density plot was created to show the relationship between social media monitoring and civil liberties, as shown in Figure 4.
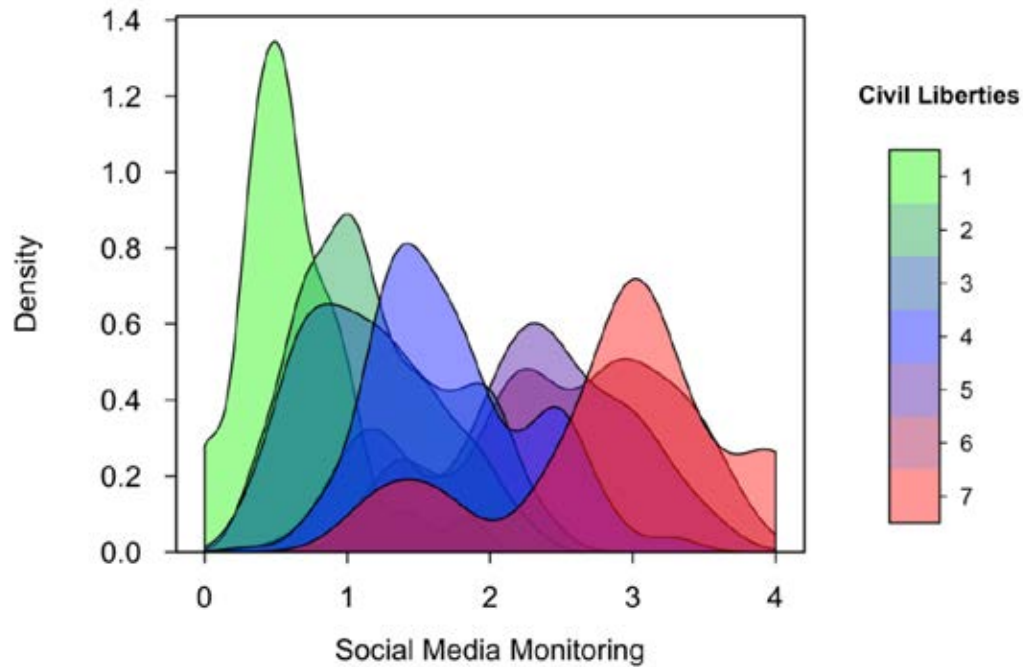

Figure 4.   Overlaid Density Plot[95]

The civil liberties data is using a 7–1 scale with 1, shown in green, representing the greatest degree of civil liberties. As illustrated, the density plot shows that social media monitoring is more prevalent in countries with lower civil liberties. So the correlation between social media monitoring and civil liberties can already been seen at this early stage.

[95]Adapted from Buyon et al., "Freedom in the World 2020," March 4, 2020; Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David et al., "V-Dem Dataset V10."

C.   METHODS

In order to successfully merge all of the datasets to test the hypotheses, modifications are made to the data, as outlined below:

1.   Dependent Variable

Civil Liberties is a measure of rights—including the freedom of expression and belief, rule of law, associational and organizational rights, as well as personal autonomy and individual—that are protected by law from unjust governmental interference in a given target country-year.[96] The data used a 7–1 scale, with 1 representing the greatest degree of civil liberties and 7 the smallest degree of civil liberties. The indicator was decoded to do a dichotomous measure for the regression. The new scale now measures either high or low, as shown for 2013 in Figure 5.

Figure 5.   Civil Liberties Comparison (Dichotomous Scale)[97]

2.   Independent Variable

Government Social Media Monitoring is a measurement of the comprehensiveness of surveillance of political content in social media by the government or its agents in a

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[96] Buyon et al., "Freedom in the World 2020," March 4, 2020.

[97]Adapted from Buyon et al.

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given target country-year.[98] The data used a 4–0 scale, with 4 representing the smallest degree of social media monitoring by the government and 0 representing the greatest degree of social media monitoring, so the data was reverse ordered to use a 0–4 scale for the regression. In addition, a lagged version of the social media monitoring variable was created for use as the main independent variable in the regression. A lagged variable was included to provide evidence that prior social media monitoring levels are impacting subsequent levels of civil liberties.

3.　　Control Variables

Democracy is the measure of the relative democratization of a country in a given target year.[99] The Polity5 data was already in country-year format and was not found to be heavy-tailed, so it did not require additional modification.

GDP per capita is a measure of a country's economic output that accounts for the number of citizens.[100] The data was initially converted into country-year format to match the datasets for the dependent and independent variables. The data was found to be heavy-tailed, as shown in Figure 6, so it was logistically transformed for use in the regression.

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[98] Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David et al., "V-Dem Dataset V10"; Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg et al., "V-Dem Codebook V10"; Mechkova et al., "Digital Society Project Working Paper"; Pemstein et al., "V-Dem Working Paper."

[99] Marshall and Gurr, "Polity5 Project Manual"; "INSCRdata."

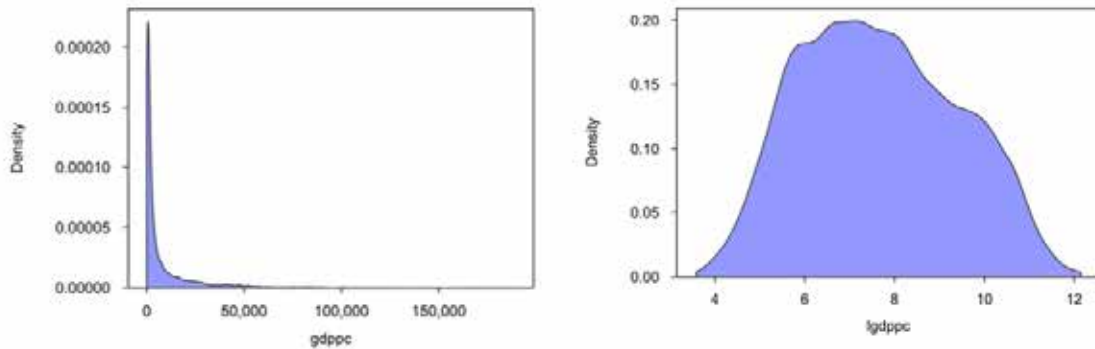[100] "World Bank Development Indicators | Data."

Figure 6.   Logarithmic (log) Transformation Example[101]

Population is the total number of persons in a country in a given year.[102] The data was initially converted into country-year format to match the datasets for the dependent and independent variables. The data was found to be heavy-tailed, similar to Figure 5 (above), so it was logistically transformed for use in the regression.

Internet Usage is a measure of the percentage of the population using the internet in a given target country-year.[103] The data was converted into country-year format to match the datasets for the dependent and independent variables.

Mobile Phones is a measure of the mobile phone subscriptions in a given target country-year.[104] The data regarding mobile phone subscriptions is important since people notably use cell phones to access social media. The data was converted into country-year format to match the datasets for the dependent and independent variables. The data was found to be heavy-tailed, similar to Figure 6 (above), so it was logistically transformed for use in the regression.

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[101] Adapted from "World Bank Development Indicators | Data."

[102] "World Bank Development Indicators | Data."

[103] "World Bank Development Indicators | Data."

[104] "World Bank Development Indicators | Data."

26

Violence is a measure of the number of individual events of organized violence in a given target country-year.[105] The event count figures are extracted from UCDP's GED to focus solely on the phenomena of lethal violence occurring at a given time and place. The data was then converted into country-year format to match the datasets for the dependent and independent variables. The data was found to be heavy-tailed, similar to Figure 6 (above), so it was logistically transformed for use in the regression

Once all of the data modifications are complete, all of the datasets are merged and the resulting data frame included just over 30,000 observations and covered a range from 2013–2018. From there, given the dichotomous dependent variable, the data was merged to run six logistic (logit) regression models.

D. REGRESSION ANALYSIS

The results for the regression models used to test H1 and H2 are displayed in Table 1. The table shows that media was controlled for using the Internet Usage and Mobile Phone variables, and Democracy, GDP, and Violence are controlled for as well. The Population variable was found not to be as statistically significant, so it was removed from models 3 to 5. The resulting Akaike Information Criterion scores (AIC) are reviewed to evaluate the regression models.[106] Model 5 was found to be the strongest model since it has the lowest AIC score.

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[105] Sundberg, Ralph and Melander, Erik, "UCDP GED"; Högbladh, Stina, "UCDP GED Codebook."

[106] Hirotugu Akaike, "A New Look at the Statistical Model Identification," *IEEE Transactions on Automatic Control* 19, no. 6 (December 1974): 716–23, https://doi.org/10.1109/TAC.1974.1100705.

Table 1. Hypotheses 1 and 2[107]

Dependent variable:

Civil Liberties

	(1)	(2)	(3)	(4)	(5)	(6)
Social Media Monitoring (Lagged)	-1.505***	-1.551***	-3.029***	-1.695***	-1.599***	-1.604***
	(0.230)	(0.246)	(0.217)	(0.277)	(0.277)	(0.279)
Democracy	0.609***	0.465***		0.464***	0.459***	0.459***
	(0.058)	(0.056)		(0.062)	(0.061)	(0.061)
Population (log)	-0.076	-0.062				0.074
	(0.069)	(0.073)				(0.463)
GDP per Capita (log)		0.797***	0.557***	0.453**	0.451**	0.461**
		(0.110)	(0.160)	(0.200)	(0.204)	(0.212)
Internet Usage			0.028***	0.023**	0.022**	0.022**
			(0.008)	(0.009)	(0.010)	(0.010)
Mobile Phone (log)			-0.069	-0.100	0.026	-0.043
			(0.069)	(0.078)	(0.097)	(0.441)
Violence (log)					-0.186**	-0.190**
					(0.080)	(0.084)
Constant	-0.397	-5.967***	0.023	-3.156*	-5.023**	-5.186**
	(1.137)	(1.448)	(1.554)	(1.842)	(2.095)	(2.332)
Observations	983	963	926	870	870	870
Log Likelihood	-272.171	-240.669	-269.110	-199.869	-197.084	-197.072
Akaike Inf. Crit.	552.342	491.339	548.220	411.739	408.169	410.143

Note: *p **p ***p<0.01

[107]Adapted from Buyon et al., "Freedom in the World 2020," March 4, 2020; "INSCRdata"; Högbladh, Stina, "UCDP GED Codebook"; Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David et al., "V-Dem Dataset V10"; "World Bank Development Indicators | Data."

E.   FINDINGS

Using Model 5, prediction plots are run for the independent variable of Social Media Monitoring and the control variable of Democracy to assess the accuracy of the hypotheses. In looking at the evidence for social media monitoring in Figure 7, we see that at zero we estimate a predicted probability of more than an 80% chance of civil liberties, which significantly decreases at 4, representing the greatest degree of social media monitoring. This confirms H1, so citizens in countries instituting greater government social media monitoring will more than likely have significantly less civil liberties.
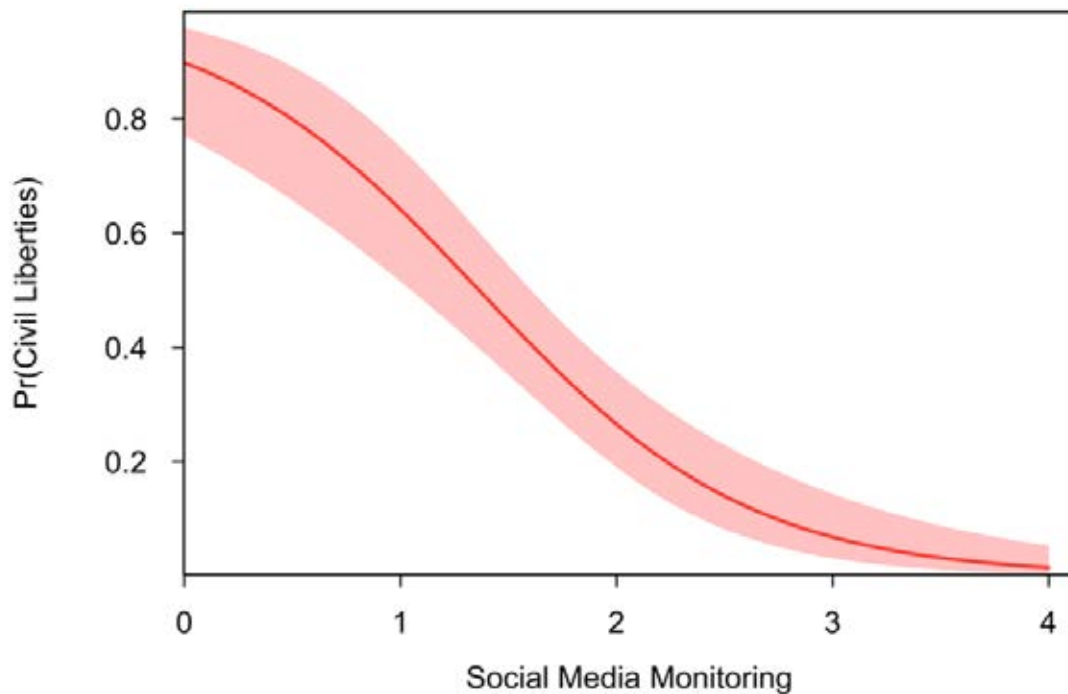

Figure 7.   Social Media Monitoring Prediction Plot[108]

Separately, looking at the evidence for democracy in Figure 8, we see that when there is greater democracy at 10, the highest degree of democracy, we estimate a predicted

[108] Adapted from Buyon et al., "Freedom in the World 2020," March 4, 2020; Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David et al., "V-Dem Dataset V10."

probability of over 90% chance of civil liberties. In turn, Democracy is shown to negatively decrease as civil liberties are reduced. This confirms H2, so citizens in countries with greater democracy will more than likely have greater access to civil liberties.
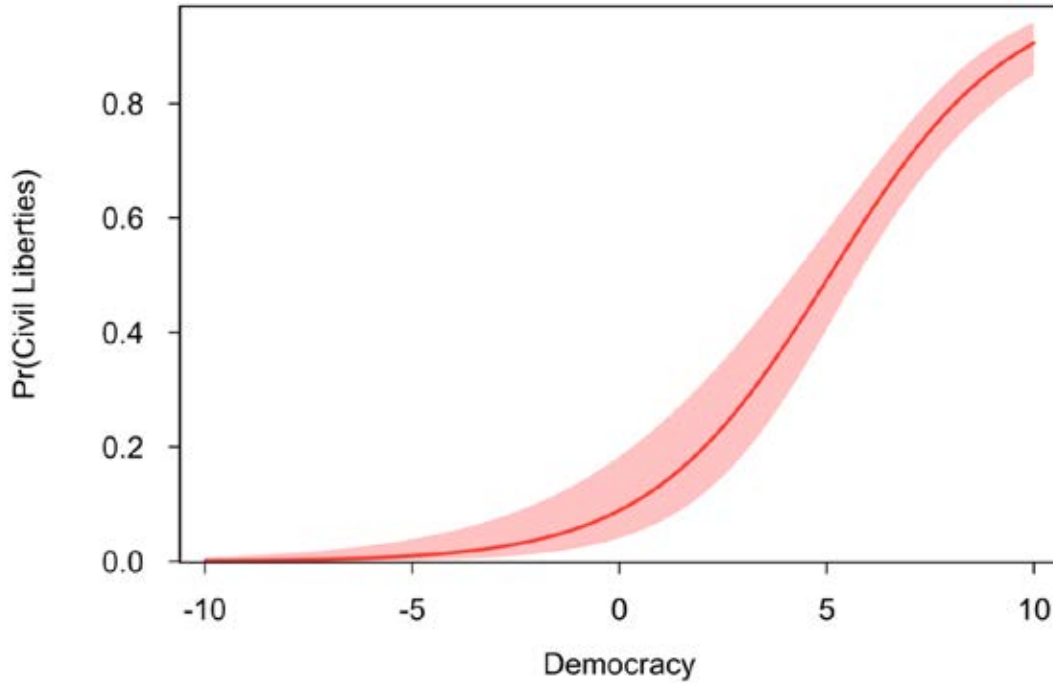

Figure 8.   Democracy Prediction Plot[109]

F.   CONCLUSION

Given these results, and the potential for China to further exert its influence both internally and externally by modeling its social credit system to other countries, the impact that government social media monitoring can have on civil liberties should be concerning to the United States and its allies. China's success in using the monitoring system could potentially incentivize countries to implement a similar governing structure in an attempt to increase political power, particularly countries who currently rely on China as part of

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[109] Adapted from Buyon et al., "Freedom in the World 2020," March 4, 2020; "INSCRdata."

the Digital Silk Road. The citizens and businesses in those countries would ultimately become suppressed as civil liberties are restricted through government monitoring.

From there, those countries who have strong ties with China may begin to lessen their engagement with the U.S., both politically and economically, as they work to build strength and show allegiance to China. Chinese companies, which will be equally monitored and rated by the government, may begin restricting business to companies who carry a score of equal or greater value to increase the odds of them receiving a favorable score. This in turn could carry over and begin impacting the decision-making process for business transactions with and within countries that model the SCS structure.

Such a move could ultimately threaten U.S. national security given the ongoing Great Power Competition with China.[110] Not only could future business and trade be at risk with China, but also with countries that may be influenced to take on the SCS structure.

The next chapter reviews China's extensive history of leading efforts to expand power and exert influence over partner countries, which could lead to the future spread and adoption of the social credit system.

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[110] Mattis, "National Defense Strategy."

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IV. CHINESE EXPANSION AND PATTERNS OF INFLUENCE: MONGOLIA, THAILAND, AND PAKISTAN

For centuries, countries have sought to consolidate wealth, strength, and power through various means, to include violent methods like waging war with neighboring countries or alternatively by forging trade networks. This chapter will provide a brief history of China's past use of physical trade routes to expand the country's power and influence across the globe, leading up to current growth and influence measures through the use of digital technology. It then takes an in-depth look at three different countries, Mongolia, Thailand, and Pakistan, which have built partnerships with Beijing through both the BRI and Digital Silk Road to further assess the potential for China to serve as a model for the adoption of the social credit system. The chapter examines each country for its current financial standing, technological capabilities, and overall dependencies on foreign aid. The chapter does not evaluate domestic political factors within each country to determine vulnerability.

A. SILK ROAD

The concept of globalization has long been in practice and notably flourished along what is known as the Silk Road—a trade route system named for the lucrative trade of Chinese silk across the network—which surfaced during the Han Dynasty's westward expansion from 206 BCE–220 CE.[111] Some scholars note though that the actual system dates back even further to regional trade routes, like the Persian Royal Road that was established during the Achaemenid Empire between 550–330 BCE, as well maritime connections between China and the West that were present during that time.[112]

The trade routes for the original Silk Road reportedly extended for over 4,000 miles to Europe, traveling through the present day South Asian countries of Afghanistan, India, and Pakistan, as well as the Central Asian countries of Kazakhstan, Kyrgyzstan, Tajikistan,

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[111] Chatzky and McBride, "China's Massive Belt and Road Initiative," 2; Liang Emlyn Yang et al., *Socio-Environmental Dynamics along the Historical Silk Road*, 1st ed. 2019 (Cham: Springer International Publishing, 2019), 4, https://doi.org/10.1007/978-3-030-00728-7.

[112] Yang et al., 4.

Turkmenistan, and Uzbekistan.[113] In addition to the major commodity of Chinese silk, many other goods, technologies, syncretic philosophies, cultural influences, and even religions were notably exchanged across the network as well.[114] Scholarly research finds that trade and contact made along the Silk Road played a significant role in influencing the societies and cultures of ancient China, as well as those of the Arabs, Greeks, Iranians, Mesopotamians, Mongols, Romans, and Syro-Anatolians, greatly impacting political and economic relations across the network of trade routes and border areas.[115]

Use of the Silk Road gained momentum around 139 BC when the Han Dynasty explored Central Asia and it continued to prosper throughout antiquity and well into the Middles Ages under the Islamic and Mongol Empires.[116] Trade activity along the route reached its peak under the Roman and Byzantine Empires, and the Tang Dynasty in China between 618–907 CE, but it ultimately dwindled as a result of the Crusades and advances by the Mongols in Central Asia.[117]

B.   BELT AND ROAD INITIATIVE

In 2013, the Belt and Road Initiative (BRI)—also known as "One Belt, One Road" or the New Silk Road—evolved from plans announced by President Xi Jinping to build a Silk Road Economic Belt and a 21st Century Maritime Silk Road.[118] President Xi reportedly coined BRI as the "project of the century" with infrastructure investment plans set to link countries and regions that account for approximately 60 percent of the world's population and 30 percent of global trade.[119] Similar to the ancient trade network, the initiative connects China to Africa, Asia, Europe and the Middle East through

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[113] Chatzky and McBride, "China's Massive Belt and Road Initiative," 2.

[114] Yang et al., *Socio-Environmental Dynamics along the Historical Silk Road*, 4.

[115] Yang et al., 4.

[116] Yang et al., 4.

[117] Chatzky and McBride, "China's Massive Belt and Road Initiative," 2.

[118] Hui Lu et al., *China Belt and Road Initiative: Measuring the Impact of Improving Transportation Connectivity on Trade in the Region* (RAND Corporation, 2018), 2, https://doi.org/10.7249/RR2625.

[119] Chan, "The Belt and Road Initiative," 53.

approximately 900 projects valued at $850 billion.[120] China's primary reported intention for this renewed effort is to increase trade and achieve greater economic and cultural cohesion with the nearly 70 participating countries.[121]

The new initiative, which includes the development of a vast network of railways and roads, goes beyond the boundaries of the ancient land based system by including additional infrastructural assets like airports, ports, and telecommunication and electricity grids that are critical to the economic and social development of the participating countries.[122] In addition, President Xi reportedly expressed his vision for BRI to help break the "bottleneck" in Asian connectivity and to influence the international acceptance and use of Chinese currency.[123]

Since the BRI announcement, some scholars and business leaders have stressed the fact that the initiative can potentially be used by China to strategically expand power and increase influence. David Shambaugh, a professor of political science and international affairs at George Washington University, noted that culture has long been an important pillar in China's strategy to secure influence internationally, as outlined during the 2011 plenary session of the 17th Central Committee of the Chinese Communist Party.[124] Scholarly research finds that China equally seeks to use the BRI to gain political influence as well.[125] A 2018 Modern Economy study explained that the BRI has six economic corridors that help to geopolitically connect China to Central Asia, Europe, South Asia,

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[120] Md Nazirul Islam Sarker et al., "One Belt One Road Initiative of China: Implication for Future of Global Development," *Modern Economy* 9, no. 4 (April 8, 2018): 624, https://doi.org/10.4236/me.2018.94040.

[121] Thokozani Simelane and R Managa, *Belt and Road Initiative: Alternative Development Path for Africa* (Oxford: Africa Institute of South Africa, African Books Collective, 2018), 2.

[122] Peter J. Buckley, "China's Belt and Road Initiative and the COVID-19 Crisis," *Journal of International Business Policy* 3, no. 3 (September 1, 2020): 311, https://doi.org/10.1057/s42214-020-00063-9.

[123] Chatzky and McBride, "China's Massive Belt and Road Initiative," 3.

[124] Tim Winter, "One Belt, One Road, One Heritage: Cultural Diplomacy and the Silk Road," *The Diplomat*, March 29, 2016, 1, https://thediplomat.com/2016/03/one-belt-one-road-one-heritage-cultural-diplomacy-and-the-silk-road/.

[125] Jonathan Holslag, "How China's New Silk Road Threatens European Trade," *The International Spectator* 52, no. 1 (January 2, 2017): 58, https://doi.org/10.1080/03932729.2017.1261517.

and Southeast Asia, which in turn allows for greater promotion of Chinese business, economics, and overall influence in the participating countries.[126]

C.   DIGITAL SILK ROAD

To further build upon the success of the BRI, China now operates a borderless digital network to extend its influence at an accelerated pace. The vision for this new "Digital Silk Road" was first mentioned in a white paper that was published in 2015 by the National Development and Reform Commission (NDRC), the lead agency and driving force behind the BRI, along with the Ministry of Commerce, and the Ministry of Foreign Affairs, in which they called for the development of an "information silk road."[127]

The following year, the State Council published the "13th Five-Year Plan for National Informatization," in which they spoke to the construction of an "online Silk Road" and the need for full participation from Chinese internet companies.[128] President Xi later stressed the critical role of the Digital Silk Road in May 2017 during the first BRI forum in Beijing and called for next-generation network technologies—including artificial intelligence, big data, cloud computing, nanotechnology, smart cities, and quantum computing—to be further integrated into BRI to enable "innovation-driven" development.[129]

China's push into the global digital economy has been found to be primarily driven by its national technology companies, including Alibaba, Huawei, Tencent, and ZTE, who are able to produce high-quality products at a low cost through support from government subsidies.[130] The Chinese firms then use these subsidized products to create technology stacks for telecommunications infrastructure and security for smart cities that are offered

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[126] Sarker et al., "One Belt One Road Initiative of China," 632.

[127] Triolo, Brown, and Allison, "The Digital Silk Road," 4.

[128] Hong Shen, "Building a Digital Silk Road? Situating the Internet in China's Belt and Road Initiative," *International Journal of Communication* 12, no. 0 (June 29, 2018): 2684.

[129] Shen, 2684.

[130] Brian Harding, "China's Digital Silk Road and Southeast Asia," *Center for Strategic & International Studies*, February 15, 2019, 1, https://www.csis.org/analysis/chinas-digital-silk-road-and-southeast-asia.

as package deals to help encourage BRI countries to rely on Chinese technology, making it more difficult for other companies to conduct business within those countries.[131]

As of March 2019, the Standardization Administration of China (SAC) published its annual policy objectives that included the enhancement of standards cooperation and integration across participating BRI countries, marking the expansion of China's influence and shift from being a standards-taker to a standards-maker.[132] In addition, SAC announced that China has signed to date approximately 85 standardization agreements with 49 countries and regions among the BRI partner countries.[133] A recent U.S. Department of Defense (DOD) report found that this shift is by design, highlighting the fact that China actively uses the BRI to form a "more balanced" global governance system built upon the Party's principles, which serves to strengthen and grow the country's strategic partnerships and advance reforms to the international order in support of Chinese strategy.[134]

The report further stressed that the Chinese government uses the economic influence that it accumulates through the BRI to encourage participating countries to support China's priorities and objectives on a wide range of matters, which could include the social credit system.[135] An earlier 2017 report from PricewaterhouseCoopers stressed the importance of establishing strong and respected relationships with foreign authorities, finding that government influence is amplified in many of the participating BRI countries, like Mongolia, Thailand, and Pakistan.[136] This was especially seen in countries where there is a critical need for infrastructure development and regulatory systems are still evolving.

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[131] Triolo, Brown, and Allison, "The Digital Silk Road," 2.

[132] Triolo, Brown, and Allison, 12.

[133] Triolo, Brown, and Allison, 12.

[134] "2020 DOD Report on Chinese Military and Security," 6.

[135] "2020 DOD Report on Chinese Military and Security," 123.

[136] David Wijeratne et al., "Repaving the Ancient Silk Routes," PricewaterhouseCoopers, May 2017, 6, https://www.pwc.com/gx/en/news-room/press-releases/2017/repaving-the-ancient-silk-routes-pwc-growth-markets-centre-launches-new-report.html.

D.   MONGOLIA

Mongolia is a young democracy, adopted in 1990, that is landlocked in East Asia, bordered by China and Russia.[137] The country's political system is considered to be "semi-presidential," having a parliament and prime minister—who heads the government and has primary responsibility for executive ministries—as well as a popularly elected president—who chairs the National Security Council, serves as commander in chief, and plays a primary role in foreign policy.[138] Mongolia's small population of 3.23 million citizens, of which nearly 60 percent are under 30 years of age, is geographically dispersed across the vast territory.[139]   Freedom House rates Mongolia's status as "Free," having an overall *Freedom in the World* score of 84 out of 100, as part of the annual comparative assessment of global political rights and civil liberties.[140]

With a GDP of US$13.85 billion, Mongolia has been found to be highly dependent on international support and at risk of succumbing to donor-dependency pitfalls, having a significant portion of its domestic capacity focused on attracting outside assistance instead of working to independently resolve problems.[141] The Mongolian economy has been reportedly recovering from a 2013 slump that began due to unsustainable expansionary policies, government mismanagement, falling commodities, and a decrease in foreign investment.[142] In 2017, the International Monetary Fund sponsored a three-year fiscal reform program for Mongolia and provided a US$5.5 billion bailout package that included support from IMF, along with the Asian Development Bank, China, Japan, and Korea,

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[137] "U.S. Relations With Mongolia," Bilateral Relations Fact Sheet (United States Department of State, November 14, 2017), https://www.state.gov/u-s-relations-with-mongolia/.

[138] Thomas G. Lum, "Mongolia," In Focus, [Library of Congress public edition]., IF 10926 (Washington, D.C.: Congressional Research Service, July 9, 2020), 1, https://crsreports.congress.gov/product/pdf/IF/IF10926/9.

[139] "Mongolia | Data" (The World Bank), accessed November 24, 2020, https://data.worldbank.org/country/mongolia; "USAID Mongolia Country Profile" (U.S. Agency for International Development, December 14, 2016), 1, https://www.usaid.gov/mongolia/documents/country-profile.

[140] Noah Buyon et al., "Freedom in the World 2020" (Freedom House, March 4, 2020), https://freedomhouse.org/countries/freedom-world/scores.

[141] "Mongolia | Data"; Fritz, "Mongolia," 96.

[142] Lum, "CRC – Mongolia," 2.

among other donors.[143] Mongolia's foreign affairs are reportedly driven by a desire to preserve autonomy by balancing relations with key partners, including the U.S., China, and Russia, as well as South Korea and Japan.[144]

1.   China in Mongolia

Mongolia is a developing country that has been found to have become relatively dependent on China for its economic growth, particularly from BRI projects.[145] In July 2015, Mongolia solidified its connection to the BRI by jointly signing "The Outline of the Construction of China, Mongolia and Russia Economic Corridor," which was established to help build and develop transport routes to ensure the accessibility of goods, vehicles, and passengers through the region.[146] Mongolia's Prairie Road Program has served as a bridge between China's BRI and Russia's Eurasian Economic Union Plan, which supports the Eurasian Development Strategy.[147] The Center for Global Development released a report in March 2018 to warn that 23 of the 68 countries participating in the BRI were "significantly or highly vulnerable to debt distress," and said that eight of them, including Mongolia, were particularly at risk of having "an unfavorable degree of dependency on China as a creditor."[148]

China reportedly has concerns about U.S. efforts to build up the capacity of the Mongolian Armed Forces to participate in global peacekeeping efforts, suggesting it is a coverup for devious plans.[149] Separately, Russia reportedly is concerned about U.S. ties to Mongolia as well, allegedly claiming that Washington is engaged in a "color revolution"

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[143] Lum, 2.

[144] Lum, 1.

[145] Wei Liu et al., "Opportunities of Tourism Development of Mongolia Under the Belt and Road Initiative" (IGI Global, 2019), 209, https://doi.org/10.4018/978-1-5225-8440-7.ch012.

[146] Liu et al., 210, 212.

[147] Liu et al., 210.

[148] Nadège Rolland, "A Concise Guide to the Belt and Road Initiative," *The National Bureau of Asian Research (NBR)* (blog), April 11, 2019, 8, https://www.nbr.org/publication/a-guide-to-the-belt-and-road-initiative/.

[149] Alan M. Wachman, "Don't Forsake Mongolia," *Asia Policy* 7, no. 1 (2009): 58–59, https://doi.org/10.1353/asp.2009.0054.

in Ulaanbaatar.[150] Meanwhile, Mongolia has reportedly remained committed to balancing relations between China and Russia, while remaining autonomous.[151]

2.   U.S.-Mongolia Relations

Over the years, the United States has supported Mongolia's efforts to declare its independence and to preserve its sovereignty. Mongolia formally established diplomatic relations with the U.S. in 1987, which the country—bordered by China and Russia—reportedly describes as its most important "third neighbor."[152] The United States has provided targeted government assistance to Mongolia in an effort to support economic diversification and private sector-led growth, in addition to fostering the next generation of leaders for the country's young democracy.[153] In 2004, the United States stood up the Millennium Challenge Corporation, a new international development assistance mechanism, and Mongolia was one of the first countries deemed eligible for an MCC Compact program, which almost doubled the country's assistance levels and further strengthened U.S.-Mongolian ties.[154] The U.S. Agency for International Development maintains a partnership with Mongolia to support the country's continued democratic growth and to solidify a path towards self-reliance and greater independence.[155]

The U.S. State Department's Bureau of East Asian and Pacific Affairs explained that the United States' vision for the Indo-Pacific region, including Mongolia and Thailand, is for it to be comprised of strong, prosperous and independent nation's that support good governance, participate in fair and reciprocal trade, and respect the individual rights of citizens.[156] The U.S.-Mongolia trade relationship experienced impressive growth up until

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[150] Wachman, 59.

[151] Wachman, 57–58.

[152] "U.S. Relations With Mongolia."

[153] "U.S. Relations With Mongolia."

[154] Addleton, *Mongolia and the United States*, 62, 80.

[155] "Mongolia Country Profile," 1.

[156] "Key Topics - Bureau of East Asian and Pacific Affairs" (United States Department of State, 2018), https://www.state.gov/key-topics-bureau-of-east-asian-and-pacific-affairs/.

about 2012, when U.S. exports peaked at over $665 million—to largely support the development of Mongolia's mining sector—and U.S. imports of goods reached a peak of $42 million, but both declined after that time following Mongolia's economic downturn.[157] Business has reportedly long served as a key part of Mongolia's economic expansion as well; however, U.S. exports have greatly fluctuated over the years, growing from just over $40 million in 2009 to a significant high of $650 million by 2012 and then dramatically decreasing to $69 million by 2015 due to Mongolia's economy.[158] In recent years, this was also observed in regard to U.S. foreign direct investment, which fell by 35.6% to $132 million in 2019.[159] In recent years, Mongolia has reportedly become one of five "priority recipients" for the United States' International Military Education and Training (IMET) assistance in the East Asia-Pacific region, which includes programs that focus on increasing transparency, promoting citizen participation in government, reducing corruption, and supporting citizen monitoring and oversight of government by strengthening civil society.[160]

3.   Assessment

Given Mongolia's strong economic ties with China and high risk of becoming unfavorably dependent on Chinese support, there is a high probability that the country could eventually adopt the social credit system due to the external influences. As Mongolia continues to recover from its economic slump, the country may choose to mimic China's structure in an effort to achieve economic success. Mongolia would likely rely on China to subsidize the necessary infrastructure for the system, as part of a debt repayment plan, placing the country further in debt.

This move has the potential to directly threaten the U.S. vision for the Indo-Pacific region to be comprised of independent nation's that respect the individual rights of its

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[157] "Mongolia | United States Trade Representative" (Office of the United States Trade Representative - Executive Office of the President, 2019), 1, https://ustr.gov/countries-regions/china-mongolia-taiwan/mongolia.

[158] "U.S. Relations With Mongolia."

[159] "U.S.-Mongolia Trade Facts."

[160] Lum, "CRC - Mongolia," 2.

citizens. SCS use in Mongolia could also directly impact IMET programs within the country, which would threaten U.S. efforts to help the country reduce corruption and promote democracy. This assessment does not consider domestic political factors that could potentially sway Mongolia's decision to implement the social credit system, so further research is required to examine the country's overall risk.

E.   THAILAND

Thailand, a middle-income country with a population of 69.63 million, is the only nation in Southeast Asia to successfully avoid direct European colonization, having a monarchy in place since 1782 that later converted to a constitutional monarchy in 1932.[161] Freedom House rates Thailand's status as "Partly Free," with an overall *Freedom in the World* score of 32 out of 100, as part of the annual comparative assessment of global political rights and civil liberties.[162] Thailand's status actually improved from "Not Free" back to "Partly Free" because the country, which has experienced periods of coups and military dictatorships, held its first elections last year since a military junta seized control in 2014.[163] Thailand's economy, which was ranked in 2018 as the second largest in Southeast Asia and the largest within the Mainland at US$487.2 billion, has since risen to US$543.65 billion.[164]

1.   China in Thailand

Thailand, an active BRI participant, and China have maintained friendly relations, working jointly on several development projects. Bangkok notably was an early adopter of Beijing's Digital Silk Road initiative, agreeing to cooperate on efforts to promote digital technologies, develop e-commerce capabilities, and improve broadband access, as well as

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[161] Ali, "US Foreign Aid to Pakistan and Democracy," 22.

[162] Buyon et al., "Freedom in the World 2020," March 4, 2020.

[163] Noah Buyon et al., "Freedom in the World 2020" (Freedom House, March 4, 2020), https://freedomhouse.org/sites/default/files/2020-02/FIW_2020_REPORT_BOOKLET_Final.pdf; United States Air Force Culture and Language Center, U.S. *Forces Pacific Culture Guide - Thailand* (Maxwell Air Force Base, Alabama: AFCLC, 2017), 22.

[164] "U.S. Relations With Thailand," Bilateral Relations Fact Sheet (United States Department of State, May 7, 2020), https://www.state.gov/u-s-relations-with-thailand/; "Thailand | Data" (The World Bank), accessed November 24, 2020, https://data.worldbank.org/country/thailand.

establish new international standards.[165] In February 2020, Thailand became the first country in Southeast Asia to launch Huawei's 5G testbed.[166] Thailand had previously setup a cloud data center for $22.5 million in its Eastern Economic Corridor, which other Chinese tech companies, including Tencent, Alibaba, and JD.com, have expressed an interest in investing.[167]

Over the years, Thailand, among other countries, has become cautious regarding the potential financial burden that certain BRI contracts could impose, expressing a willingness to either renegotiate or cancel deals.[168] This was the case in 2015 when Thailand put a stop to a number of high-speed rail projects until China ultimately renegotiated the financial terms.[169] In addition to development projects, the DOD noted in a recent report that China has likely identified Thailand as a potential location for a Chinese military logistics facility, so the bilateral relationship between the two nations is of U.S. interest.[170]

2. U.S.-Thailand Relations

For over 200 years, Thailand has maintained a friendship with the United States and become a key security ally in Asia.[171] The two countries, whose first documented contract was in 1818, have significantly expanded diplomatic, commercial, and security relations since that time.[172] In 2003, the United States officially designated Thailand as a Major Non-NATO Ally, a status that provides certain benefits to foreign partners in the areas of security cooperation and defense trade that serves as a powerful symbol of the

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[165] Triolo, Brown, and Allison, "The Digital Silk Road," 4.

[166] Triolo, Brown, and Allison, 5.

[167] Triolo, Brown, and Allison, 5.

[168] Rolland, "Concise Guide," 8.

[169] Rolland, 8.

[170] "2020 DOD Report on Chinese Military and Security," 128.

[171] "U.S. Relations With Thailand."

[172] "U.S. Relations With Thailand."

close relationship between the two nations.[173] In a 2019 report, State Department reaffirmed Washington's commitment to investing in Southeast Asia, to include Thailand, one of the six fastest growing foreign direct investment sources in the United States.[174]

The U.S. State Department's Bureau of East Asian and Pacific Affairs explained that the United States' vision for the Indo-Pacific region, including Mongolia and Thailand, is for it to be comprised of strong, prosperous and independent nation's that support good governance, participate in fair and reciprocal trade, and respect the individual rights of citizens.[175] The Department stressed though that the Mekong region of Burma, Cambodia, Laos, Thailand, and Vietnam, is facing new challenges that threaten economic independence and autonomy, including extraterritorial river patrols, increased organized crime and trafficking, as well as debt dependency.[176] Despite the risk, leaders from both countries recently met, during the inaugural United States-Thailand Energy Policy Dialogue that virtually took place in October 2020, and reconfirmed the importance of ongoing bilateral cooperation and emphasized the need to promote commercial engagement.[177]

3.   Assessment

Based on Thailand's strong bilateral relationship with China, early participation in the Digital Silk Road, and fractured governance, there is potential for the country to have interest in modeling China's social credit system. In the event of another coup, Thailand's military could potentially seek to control the population through SCS use to help monitor and track all citizens while enforcing certain behaviors. As a result, the use of the social

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[173] "U.S. Relations With Thailand"; "Major Non-NATO Ally Status," Fact Sheet (United States Department of State, January 30, 2020), https://www.state.gov/major-non-nato-ally-status/.

[174] "A Free and Open Indo-Pacific: Advancing a Shared Vision" (United States Department of State, November 3, 2019), 10, https://www.state.gov/a-free-and-open-indo-pacific-advancing-a-shared-vision/.

[175] "East Asia and Pacific Key Topics."

[176] "A Free and Open Indo-Pacific," 10.

[177] "Inaugural United States-Thailand Energy Policy Dialogue Joint Press Statement" (United States Department of State, October 28, 2020), https://www.state.gov/inaugural-united-states-thailand-energy-policy-dialogue-joint-press-statement/.

credit system by the "partly free" country could have a significant impact on Thailand's long-term friendly relations with the U.S.

Similar to Mongolia, the system would directly impact the U.S. State Department's vision for the country to support good governance and protect the rights of individual citizens. This assessment does not explore internal influences that could potentially impact Thailand's decision to adopt the social credit system, such as the country's concerns of becoming financially dependent on China. So further research is required to assess the country's overall risk.

F.   PAKISTAN

Pakistan, with a population of 216.56 million, is the fifth populous country in the world, which has the 42nd largest economy, with a GDP of US$278.22 billion.[178] The country is a parliamentary democracy, in which the president serves as the head of state, while the prime minister serves as the head of government.[179] Pakistan has experienced direct military rule—most recently between 1999 and 2008—for almost half of its 72 years of independence, outside of time periods of normally weak civilian governance.[180] Freedom House rates Pakistan's status as "Partly Free," having an overall *Freedom in the World* score of 38 out of 100, as part of the annual comparative assessment of global political rights and civil liberties.[181]

Pakistan's economic growth has reportedly been very robust since 2012, peaking at 5.7% in 2017; however, growth rates are under the necessary level to keep pace with the country's rapidly growing population and import needs.[182] China currently serves as

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[178] "Pakistan | Data" (The World Bank), accessed November 24, 2020, https://data.worldbank.org/country/pakistan; "U.S. Relations With Pakistan," Bilateral Relations Fact Sheet (United States Department of State, July 29, 2020), https://www.state.gov/u-s-relations-with-pakistan/.

[179] K. Alan Kronstadt, "Pakistan's Domestic Political Setting," [Library of Congress public edition]., IF 10359 (Washington, D.C.: Congressional Research Service, March 5, 2020), 1, https://crsreports.congress.gov/product/pdf/IF/IF10359/23.

[180] Kronstadt, 1.

[181] Buyon et al., "Freedom in the World 2020," March 4, 2020.

[182] K Alan Kronstadt and Martin A Weiss, "Pakistan's Economic Crisis," In Focus (Congressional Research Service, October 9, 2018), 1, https://crsreports.congress.gov/product/pdf/IF/IF11000/2.

Pakistan's largest import partner, while the United States serves as the country's largest export destination.[183] The country remains poor despite decades of International Monetary Fund-supported reforms and U.S. support, due in part to corruption, which has been severe enough to harm foreign and domestic investment, public confidence, and to generate uncertainty among international aid donors.[184] Over time, Pakistan's increasing debt will eventually lead to a rapid increase in external financing needs in the future.[185]

1.   China in Pakistan

Pakistan and China have notably built a strong partnership through the Belt and Road Initiative, having plans for US\$57 billion worth of projects, to include roads, railways, port facilities, and power plants.[186] Chinese Foreign Ministry Spokeswoman Hua Chunhying reportedly remarked that the BRI projects in Pakistan are "open and transparent" and that they would help to bolster both bilateral relations and prosperity within the region.[187] In 2015, President Xi reportedly visited Pakistan to sign over 30 BRI-related deals that not only included high-speed railways and energy, but also involved new digital networks—like ZTE's digital TV system and Huawei's fiber-optic cable.[188] The China-Pakistan Economic Corridor has been described as an exemplar BRI project, connecting the Port of Gwadar in Pakistan with Kashgar in west China to help secure an alternate route for China's energy supply that circumvents the unsecure Strait of Malacca.[189] By traveling through Pakistan and Myanmar by land and sea pipelines, China's energy imports could notably bypass the South China Sea, which would notably

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[183] "U.S. Relations With Pakistan."

[184] Kronstadt and Weiss, "Pakistan's Economic Crisis," 1.

[185] Kronstadt and Weiss, 1.

[186] Drazen Jorgic, "In Pakistan, China Presses Built-In Advantage for 'Silk Road' Contracts," *Reuters*, June 14, 2017, https://www.reuters.com/article/us-china-silkroad-pakistan-insight-idUSKBN19503Y.

[187] Jorgic.

[188] Shen, "Building a Digital Silk Road?," 2687–88.

[189] Shen, 2687.

reduce the country's risk of encountering a U.S. naval blockage in the event of a military conflict.[190]

The Center for Global Development released a report in March 2018 to warn that 23 of the 68 countries participating in the BRI were "significantly or highly vulnerable to debt distress," and said that eight of them, including Pakistan, were particularly at risk of having "an unfavorable degree of dependency on China as a creditor."[191] Pakistan has reportedly raised concerns about the potential financial burden that certain BRI contracts could impose though, even cancelling the US$14 billion deal for the Diamer-Bhasha Dam project due to "unacceptable" financial conditions.[192] Separately, the DOD noted in a recent report that China has likely identified Pakistan as a potential location for a Chinese military logistics facility, so the bilateral relationship between the two nations is of U.S. interest.[193]

2. U.S.-Pakistan Relations

For over 70 years, the U.S. and Pakistan have strengthened bilateral relations, working together on issues of joint concern, including economic growth, energy, peace and inclusion, health, and education.[194] Within the past two decades, the United States has come to view Pakistan as a key ally and has served as a top investor in the country, with major investments in agriculture, communications, energy, consumer goods, and transportation, among others.[195] The United States Agency for International Development's current country development strategy for Pakistan directly supports

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[190] Rolland, "Concise Guide," 6–7.

[191] Rolland, 8.

[192] Rolland, 8.

[193] "2020 DOD Report on Chinese Military and Security," 128.

[194] "Pakistan | U.S. Agency for International Development," U.S. Agency for International Development, September 28, 2020, https://www.usaid.gov/pakistan.

[195] Susan B. Epstein, "Pakistan: U.S. Foreign Assistance," [Library of Congress public edition]., Report / Congressional Research Service ; R41856 (Washington, D.C.: Congressional Research Service, July 1, 2013), https://crsreports.congress.gov/product/pdf/R/R41856/29; "U.S. Relations With Pakistan."

Pakistan Vision 2025—a development plan for Pakistan to become one of the top 25 economies in the world, with Upper Middle Income status by 2025.[196]

In 2019, U.S.-Pakistan trade reportedly reached $6.5 billion, with Pakistan receiving a surplus of $1.3 billion.[197] The U.S. Commerce Secretary met with senior Pakistani officials in July 2020 to discuss strengthening trade and investment ties; however, significant issues with Pakistan's business climate, including discriminatory taxation, regulatory barriers, and weak intellectual property protections, which have impeded U.S. businesses from operating in the country.[198] Additionally, according to a 2018 report from the Congressional Research Service, Pakistan's central involvement in the BRI and China's role as a major creditor have complicated the ability for the U.S. to respond to a potential impending crisis and it raises foreign policy and economic issues for Congress.[199]

Pakistan has reportedly made some progressive economic reforms to address some of the issues, which helped to raise the country's standing on the World Bank's 2019 "Ease of Doing Business" list to 108—an improvement by 28 ranks since 2018.[200] The U.S. Department of State noted in 2019 that there is great potential to forge new linkages between the businesses, civil society organizations, and educational institutions of the United States and Pakistan, noting that the U.S. government supports the expansion of the joint trade and investment relationship, which would benefit commerce in both countries.[201]

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[196] "USAID - Pakistan"; Planning Commission Ministry of Planning Development & Reform, "Pakistan Vision 2025: One Nation - One Vision," Executive Summary (Government of Pakistan, 2014), https://www.pc.gov.pk/uploads/vision2025/Vision-2025-Executive-Summary.pdf.

[197] "U.S. Relations With Pakistan."

[198] "U.S. Relations With Pakistan."

[199] Kronstadt and Weiss, "Pakistan's Economic Crisis," 1.

[200] "U.S. Relations With Pakistan."

[201] "Key Topics – Bureau of South and Central Asian Affairs" (United States Department of State, 2019), https://www.state.gov/key-topics-bureau-of-south-and-central-asian-affairs/.

3. Assessment

As a result of Pakistan's weak governance, poor economy, and strong partnership with China, the country has a high potential to adopt the social credit system. The "partly free" country has also notably had long periods of military rule, similar to Thailand. Given the corruption, the social credit system could be used to help the ruling authority control and monitor the behavior of local citizens. The system could also be used as a means to help address the Islamabad's desire to increase the country's global standing.

This move could greatly restrict individual rights within Pakistan and could impact U.S. trade relations with the longstanding ally. The use of the system could also potentially cause Pakistan to become further in debt to China, which would escalate ongoing foreign policy and economic issues for Congress. This assessment does not evaluate domestic political factors that could impact Pakistan's decision to implement the system, such as tribal relations or internal social climate. Therefore, additional research would be required to fully investigate the country's overall risk.

G. CONCLUSION

China has successfully used the Belt and Road Initiative and Digital Silk Road to build trust and become a strategic ally for partner nations. The BRI has been found to be viewed by participating countries as an expedient platform to secure international recognition, while helping to build economic and political power.[202] The countries observed in the case studies exhibited this line of thought, strengthening bilateral relations with China and increasing involvement in BRI projects and Digital Silk Road deals, as an attempt for political advancement. Many of the countries though are ultimately working against national interests by assuming an exorbitant amount of debt in return for these Chinese investments that has caused them to become heavily reliant on China and others for financial support.

Given the strong ties identified between each country and China—including infrastructure development, digital technology, and financial aid dependencies—it is clear

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[202] Winter, "One Belt, One Road, One Heritage."

that the potential for the social credit system to be adopted exists. However, this chapter does not evaluate the domestic political situation within each country to assess to what extent the countries would be internally incentivized or disincentivized to utilize such a system. Knowing to what degree the social credit system would be socially acceptable and logistically feasible within each country is critical to determining which countries are most vulnerable for implementing such a system. Therefore, further research is warranted on this topic to identify specific countries that will likely model and adopt China's social credit system.

V.   CONCLUSION

China's strategic efforts to expand its power and influence on countries across the Belt and Road Initiative and Digital Silk Road have proven to be highly successful to date and the future launch of its nationwide social credit system poses a threat for being used as a way to further infiltrate and manipulate the countries based on those strong ties. This study observes that many countries already view Chinese development and technology investments as a vital component for economic success. The value that countries, including U.S. allies, place on the ability to increase visibility on the global stage was found to supersede concerns that dependencies on China may evolve over time. The resulting paradigm shift from the use of the social credit system could not only strengthen national allegiance within China but could also help to secure Beijing's advancement as a leading global superpower.

This study reveals that the implementation of government social media monitoring by countries has a significant negative impact on the civil liberties of its citizens. China's social credit system serves as an advanced tool for the government to monitor and track Chinese citizens and businesses through social media, so the findings for the damaging effect on civil liberties can be expected from use of the system. The study also found that when civil liberties are reduced that democracy is negatively decreased as well. This significant finding proves that using the social credit system could also result in the oppression of democratic values. If used as a model by other countries, China's social credit system could have a detrimental ripple effect on global citizens that would likely threaten ongoing U.S. efforts to protect and preserve democratic freedoms around the world.

A.   RECOMMENDED MITIGATION MEASURES

To assuage the interpretation of this analysis, this study proposes for the United States to implement a new system that recognizes governments and businesses for inclusive behaviors as a countermeasure. The alternate system could provide incentives—such as tax breaks, exclusive trade opportunities, and sanctions removal—which could preserve

loyalties with current U.S. allies and other countries, while serving as a deterrent from dependency on Chinese support. The upcoming change of U.S. administration provides a great opportunity for Washington to implement such a system, as the government works to strengthen allegiances and renew efforts to serve as a global beacon of democracy. It will be imperative for the administration to take full advantage of its first 100 days by strengthening relationships with partner nations to effectively mitigate the potential spread of Chinese power and influence.

One way that the United States can potentially build stronger alliances in the immediate future will be to take the lead in addressing the ongoing COVD-19 pandemic. The crisis has essentially brought the world as we know it to a standstill, having a devastating impact on government and business operations and leaving many concerned about the way ahead. As a result, the world is desperately seeking a leader during these unprecedented times to help restore balance and provide a sense of normalcy. As the U.S. and western allies lead the way in the production of a vaccine to combat the virus, the United States will ultimately serve as a leader for the international community, gaining the trust and support of other nations during this time.[203]

The new administration also has an opportunity to build stronger ties by focusing on taking the lead in world trade partnerships, particularly in an effort to curtail Chinese control. U.S. President-elect Biden reportedly stressed that either China will "write the rules of the road for the 21st century on trade" or that it will be the U.S.[204] So with the recent signing of the Regional Comprehensive Economic Partnership (RCEP) agreement— the world's largest tariff-free trading bloc that accounts for 30% of the world's GDP and population—between China and 14 other Asia-Pacific countries, the U.S. may need to revisit negotiations for the Trans-Pacific Partnership (TPP)—a proposed free trade agreement that does not include China.[205] By taking the lead on renegotiating the stronger

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[203] "Which Countries Have Rolled Out COVID Vaccine?," Aljazeera.com, December 24, 2020, https://www.aljazeera.com/news/2020/12/24/vaccine-rollout-which-countries-have-started.

[204] Nikkei Staff Writers, "Eyes on Biden's TPP Move as China Joins Mega Trade Deal RCEP," *Nikkei Asia*, November 16, 2020, https://asia.nikkei.com/Politics/US-elections-2020/Eyes-on-Biden-s-TPP-move-as-China-joins-mega-trade-deal-RCEP.

[205] Nikkei Staff Writers.

TPP agreement, the U.S. may be able to successfully counter the impact of the RCEP by strengthening bilateral relations with Asia-Pacific nations and weakening Chinese control within the region.

Additionally, the U.S. should counter the proposed investment pact between China and the European Union, which has been under negotiation since 2014 to reduce restrictions on companies within the two economies.[206] China has been working to overcome global controversy surrounding the country's alleged role as the origin of the COVID-19 virus, as well as from its actions in Hong Kong and the South China Sea, so signing a successful pact with the E.U. would be seen as a great diplomatic victory. As such, the U.S. should capitalize on China's weakened political state by signing a separate deal with the European Union to counter the proposed pact with China and to reduce Beijing's influence within the E.U. The deal should be discussed within the "early consultations" that President-elect Biden's National Security Advisor-designate Jake Sullivan recently announced would be welcomed with European partners regarding "common concerns about China's economic practices."[207]

In addition, the new administration should also take advantage of the first 100 days by taking decisive action to counter China's maritime and territorial claims that have caused a dispute within the South China Sea.[208] The U.S. can build relationships with countries directly involved in the regional dispute, as well as other ASEAN countries, by working to prevent the continued militarization of the artificial islands that have been created by China in the area.[209] This is of particular U.S. interest as well, as the islands help to extend China's reach into the Pacific, placing the country in target range of U.S. bases and territories.

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[206] Jack Ewing, Steven Lee Myers, and Ana Swanson, "China-E.U. Talks Hit Another Snag as Biden Camp Objects," *The New York Times*, December 23, 2020, sec. Business, https://www.nytimes.com/2020/12/23/business/china-european-union-united-states.html.

[207] Ewing, Myers, and Swanson.

[208] Krista Wiegand, "How Biden Should Handle the South China Sea Disputes," *War on the Rocks*, November 24, 2020, http://warontherocks.com/2020/11/how-biden-should-handle-the-south-china-sea-disputes/.

[209] Wiegand.

By taking these actions within the first 100 days of U.S. President-elect Biden's administration, China watchers agree that the United States can repair relationships with key allies and partners and restore the overall confidence and trust in Washington's ability to tackle global challenges.[210] The resulting bolstered relationships will allow the United States to be better positioned to implement an alternative system that could potentially counter China's social credit system.

B.   FUTURE RESEARCH RECOMMENDATIONS

As this thesis does not evaluate the domestic political environments of the countries within the case studies, further research is required to determine which specific countries are most at risk of adopting China's social credit system. To best make this assessment, a decision support technique, such as a 2x2 matrix, could be used to plot various factors that would need to exist within a country to make it more inclined to implement a social credit system.[211]

Some factors for the framework could include: 1) The existence of tribal power, as in countries like Pakistan or Afghanistan, where birthright is an extremely influential factor in local decision-making. 2) Identifying a country's internal climate to know if the system would be socially acceptable, especially by the political elite, will be important to know as well. There could be significant internal political resistance present that would deter a country from developing an SCS. 3) Future research to identify countries that do not have a direct relationship with China that could be at risk as well. In particular, countries that are governed under a dictatorship or single-party system, like Hungary or Turkey, could have great interest in utilizing such a system to further exert control of the population—by notably   enfranchising   certain   segments   and   disenfranchising   the   others. 4) In addition to identifying which countries have the will to adopt SCS, the framework should also be used to identify which countries have the financial means to independently establish such a system. Notwithstanding, China would likely assist with funding SCS

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[210] David Wertime, "First 100 Days of Biden's China Policy and the Last Days of Trump's," *Politico*, November 12, 2020, https://politi.co/35mLOKk.

[211] Alex Lowy and Phil Hood, *The Power of the 2 x 2 Matrix: Using 2 x 2 Thinking to Solve Business Problems and Make Better Decisions* (John Wiley & Sons, 2011).

infrastructure requirements through debt as it has for countries through its BRI and Digital Silk Road projects.

The framework will help to identify the relative advantage of SCS adoption against alternative measures or the status quo, which will ultimately provide key criteria to assess the vulnerability of countries at risk of implementing the social credit system around the world. By knowing the internal impetus for a country to use the system, the U.S. and its allies will be best positioned to protect the international community from future oppressive measures that will significantly restrict democracy.

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