
The Winner Takes It All?: Innovations of China's Soft Power Strategies*

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In recent years, the global geopolitical landscape has been significantly influenced by nations asserting dominance in key sectors, including finance, intellectual property, and military industries. This ascendancy allows states to dictate terms and wield substantial impact on the world order. In particular, China has emerged as a pivotal player, strategically utilizing innovation and economic prowess to reshape international relations. This research examines China's role in redefining global power dynamics, particularly within Africa, while evaluating the effectiveness and criticisms of its "soft power" strategies. China's robust presence in critical sectors such as finance, intellectual property, and military industries underscores the correlation between leadership in these domains and global influence. The country's economic and technological prowess has positioned it as a formidable player, enabling it to exert significant control over international rules and norms. The ramifications of such dominance transcend mere economic power, influencing diplomatic relations and shaping the international order.

Keywords

Innovations, China, Soft Power, Tech Race, Health Diplomacy

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I. Introduction

During the pandemic era, human existence has exposed the shortcomings of not only the international and political systems, but also the legal system. The race between high-tech giants and the states they represent has ushered in an official era of technological confrontation on the international political stage. The technological global race and its associated risks shape the foreign and domestic policies of states. Participants in international relations employ all available means to enhance their chances of success and neutralize similar opportunities among their rivals. These means include political, economic, and media levers, as well as selectively applied legal levers, incorporating both formal rules of international organizations and international documents. As early as 2010, the Organization for Economic Co-operation and Development (OECD) asserted in its innovation strategy that innovation encompasses a wide range of issues, from education to sustainable development, requiring governments to consider the interrelationships of different policy areas.¹

In international relations, technology spreads through exports, imports, and competition. Importation is a crucial method for disseminating technology, encompassing foreign direct investment and technology trade. These methods influence the establishment of vertical and horizontal connections between participants in international economic relations and are mediated by the transfer of intangible assets. Researchers identify four main types of innovations crucial for the development of the business sector: product, process, marketing, and organizational innovations. Product innovation involves the introduction of new or significantly improved goods or services. Process innovation encompasses the introduction of new or improved methods of production or delivery. Marketing innovation covers new methods of promoting products, including changes in design, packaging, placement, or pricing. Organizational innovation introduces the new methods of management, organization of work processes, or external relationships.²

The OECD emphasizes the importance of a “whole-of-government” approach to innovation policy, especially considering the central role of innovation in achieving various economic and social goals. As a result, innovation has become a lever of influence in international relations, determining the direction of states’ foreign policies. In this regard, a notable example is China, which, even before joining the

¹ See generally THE OECD INNOVATION STRATEGY: GETTING A HEAD START ON TOMORROW (OECD, 2010).

² Nobuo Kiriyama, *Trade and innovation: synthesis report* (OECD Trade Policy Papers, No. 135, 2012).

WTO, approved the Tenth Five-Year Development Plan in 2001-2005, incorporating the strategy of “entering the international market” and legally ensuring it.³ Chinese enterprises were encouraged to invest in overseas jurisdictions, enhancing competitiveness and establishing an international business presence. Subsequent years witnessed the development of legal instruments to ensure investment and scientific and technological development in various industries, such as pharmaceuticals, the IT sector, aerospace, the financial and banking system, etc.⁴ The following were results from the development plan.

First, global competitiveness has increased dramatically, with active investments by Chinese enterprises contributing to increased competitiveness on the world stage. China emerged as a key participant in the global economy, actively competing with developed countries across various industries.⁵ Second, China's science and technology sector witnessed qualitative and quantitative growth, attributed to active investments in scientific and technological development in various industries, such as pharmaceuticals, information technology, aerospace, finance and banking, and others. This contributed to the creation of innovative products and strengthening of research programs.⁶ Third, China successfully developed and implemented legal instruments to promote investment and technological development, creating a more stable and secure environment for investors and entrepreneurs. This, in turn, stimulated both domestic and foreign investment, fostering accelerated economic growth and development across various sectors of the Chinese economy. Consequently, the standard of living of the population improved, and the country attained the status of a world economic power.⁷ Through its innovation strategy, China strengthened its international presence as a leader in multiple industries, playing a more active and influential role in global economic processes and politics. Thus, the implementation of the innovation policy has allowed China to significantly strengthen its position in the world stage, stimulate economic growth and development, and increase its

³ *Report on the Outline of the Tenth Five-Year Plan for National Economic and Social Development*, The National People's Congress of the People's Republic of China (Mar. 3, 2010), http://www.npc.gov.cn/zgrdw/englishnpc/Special_11_5/2010-03/03/content_1690620.htm.

⁴ Derek Levine, *Made in China 2025: China's Strategy for Becoming a Global High-Tech Superpower and Its Implications for the U.S. Economy, National Security, and Free Trade*, 3(13) J. STRATEGIC SECURITY 1-16 (2020).

⁵ *Sustained policy support and deeper structural reforms to revive China's growth momentum* (World Bank Report, Dec. 14, 2023), <https://www.worldbank.org/en/news/press-release/2023/12/14/sustained-policy-support-and-deeper-structural-reforms-to-revive-china-s-growth-momentum-world-bank-report>.

⁶ Yao Yang, Weixiao Cao & Xiaoyong Shi, *Progress and challenges of research integrity in China*, 5(4) CULTURES OF SCI. 173-7 (2022), <https://doi.org/10.1177/20966083221143545>.

⁷ Wang Min & Xiumei Yu, *Household Consumption in 2049*, in CHINA 2049: ECONOMIC CHALLENGES OF A RISING GLOBAL POWER 15-82 (David Dollar et al. eds., 2020).

competitiveness in various sectors of the economics.⁸

Under Xi Jinping’s leadership, China prioritizes expanding influence in Africa and Latin America, regions rich in resources and multilateral support. This strategic initiative aims to reshape the global order, moving away from US-centric dominance toward a more multipolar framework. China seeks an enhanced presence within existing multilateral systems, while establishing alternative institutions. Central to this strategy is Xi’s concept of a “community of common destiny for mankind,”⁹ [人类命运共同体] emphasizing mutually profitable cooperation. Through targeted investments and engagement in these regions, China aims to diversify global power dynamics and assert its values, striving for a more inclusive and China-aligned international system.¹⁰

Our research aims to examine China’s role in redefining global power dynamics, particularly within Africa, while evaluating the effectiveness and criticisms of its “soft power” strategies. This paper is divided into six parts including Introduction and Conclusion. Part two will introduce the innovation of soft power and its implementation in China. Part three will discuss China’s health diplomacy. Part four will look into China’s soft power strategies in Africa. Part five will evaluate the Chinese soft power strategies.

II. Innovation of Soft Power and Chinese Implementation

The concept of “soft power” is not a new phenomenon but has its roots in ancient Chinese civilization.¹¹ The so-called “founding father” of the concept, Joseph S. Nye, Jr, drew inspiration from Sun Tzu, who believed in winning a fight without resorting to direct military conflict.¹² This philosophy emphasized the need for impact and

⁸ ANDREW CAINEY & CHRISTIANE PRANGE, *XICONOMICS: WHAT CHINA’S DUAL CIRCULATION STRATEGY MEANS FOR GLOBAL BUSINESS* (2023).

⁹ Denghua Zhang, *The Concept of ‘Community of Common Destiny’ in China’s Diplomacy: Meaning, Motives and Implications*, 5(2) ASIA & PAC. POL’Y STUD. 196–207 (2018).

¹⁰ *Toward a new national China strategy*, in THE LONGER TELEGRAM: TOWARD A NEW AMERICAN CHINA STRATEGY 18–67 (Atlantic Council ed., 2021), <https://www.atlanticcouncil.org/wp-content/uploads/2021/01/The-Longer-Telegram-Toward-A-New-American-China-Strategy.pdf>.

¹¹ Dost Muhammad Barrech & Muhammad Khan, *US-China growing competition in soft power*, 3(2) J. SOC. SCI. REV. 490-9 (2023).

¹² Joseph Nye, Jr., *The Changing Nature of World Power*, 105(2) POL. SCI. Q. 177-92 (1990); Joseph Nye, Jr., *Soft Power*, 80 FOREIGN POL’Y 153-171 (1990).

influence, using soft methods instead of hard ones.¹³ The concept of “soft power” was adopted by the US and is reflected in world practice. Even Japan, traditionally considered a belligerent country, has incorporated the principles of “soft power” into its constitution.¹⁴ The evolution of the concept of “soft power” reflects countries’ desire to search for alternative, non-violent methods of influence on the world stage. Soft power may represent a country’s ability to influence other states with the attractiveness of its ideology, culture, and values. It has become an important tool in international relations, allowing countries to achieve their goals through such like persuasion, diplomacy, and cooperation, rather than using military power or economic pressure. Researchers note that the concept of soft power is becoming a key component of modern diplomacy, especially in the context of increasing interdependence and complexity of world relations.¹⁵

In order to strengthen the status and reputation of the state on the world stage, innovation of soft power is very important. First, innovation creates the image of constant progress and improvement of people’s life in a country. The ability to make innovative decisions and implement advanced technologies gives the state the character of an intellectual leadership force. This image magnetically attracts the attention of the international community and becomes a powerful factor in the formation of soft power.¹⁶ Second, innovation creates a positive image in the eyes of the world community. Progressive solutions in healthcare, technology, education, ecology, and other spheres of citizens’ lives not only improve their well-being, but also contribute to the formation of a respectful attitude towards the country.¹⁷ Third, innovation influences the formation of soft power through cultural exchange and technological diplomacy. Exporting innovative products, ideas, and technologies spreads cultural influence, which, in turn, creates the basis for building partnerships. The attractiveness of innovation and modern technology can serve as an incentive

¹³ *Id.*

¹⁴ Article 9 of the Japanese Constitution restricts Japan’s ability to rebuild its military strength, thereby significantly limiting its ‘hard power’ capabilities. This constraint likely explains the increased focus on acquiring ‘soft power’ through small and medium enterprises (SMEs). See Joonoh Jeong & Jonathan Grix, *An Analysis of Japan’s Soft Power Strategies through the Prism of Sports Mega-Events*, 26(10) *SPORT IN SOCIETY* 1756-76 (2023).

¹⁵ Mahesh Senadeera, *The role of soft power in international diplomacy: A comparative study of the United States and China*, RESEARCHGATE (Apr. 2023), https://www.researchgate.net/publication/369799208_The_Role_of_Soft_Power_in_International_Diplomacy_A_Comparative_Study_of_the_United_States_and_China.

¹⁶ Dayton Leigh, *How South Korea made itself a global innovation leader*, NATURE (May 27, 2020), <https://www.nature.com/articles/d41586-020-01466-7>.

¹⁷ Jacques Bughin et al., ‘Tech for Good’: Using technology to smooth disruption and improve well-being, McKinsey & Co. (May 15, 2019), <https://www.mckinsey.com/featured-insights/future-of-work/tech-for-good-using-technology-to-smooth-disruption-and-improve-well-being#>.

for countries to enter into long-term cooperation and knowledge sharing.¹⁸ Fourth, innovation can also serve to solve global problems. For example, innovations in ecology and energy can reduce dependence on energy sources harmful to the environment. Such steps not only help address the problems of the planet, but also form a positive perception of the country in the eyes of the world community, strengthening its position in the soft power system.¹⁹

In China, interest in the soft power discourse began in 1992, shortly after the publication of Joseph Nye's book "Bound to Lead: The Changing Nature of American Power."²⁰ In 1993, the first scientific article in Chinese appeared on the concept of "soft power."²¹ In the 17th Congress of the Communist Party of China (CPC) in 2007, CPC General-Secretary Hu Jintao emphasized the need to strengthen the promotion of Chinese culture, which would be an important factor in the growing interest in soft power discourse in Chinese media.²² Over the past two decades, research on China's soft power has been presented in various academic journals, articles, and policy briefs. These works have greatly advanced our understanding of China's soft power strategy.

China's soft power is largely determined from the top down. In particular, the CCP leadership coordinates systems within the bureaucracy to control the implementation of government policies.²³ With China's economic rise, the theories of the "China Threat"²⁴ and the "Thucydides Trap"²⁵ have become widespread in the international community, suggesting that the rise of China could create destabilization and a dangerous international environment.²⁶ In response to these theories, China

¹⁸ Ana Maria Santacreu & Makenzie Peake, Globalization of Innovation and the Increase of Knowledge Sharing, Federal Reserve Bank of St. Louis (May 14, 2019), <https://www.stlouisfed.org/on-the-economy/2019/may/globalizing-innovation-increasing-knowledge-sharing>. See also UNCTAD, *Why global cooperation on science, technology and innovation is more crucial than ever*, UNCTAD NEWS (Dec. 13, 2021), <https://unctad.org/news/why-global-cooperation-science-technology-and-innovation-more-crucial-ever>.

¹⁹ Derya Karacan & Pierre-Bruno Ruffini, *Science diplomacy in the Global South - an introduction*, 50(4) SCI. & PUB. POL'Y 742-8 (2023).

²⁰ See generally JOSEPH NYE, JR. BOUND TO LEAD: THE CHANGING NATURE OF AMERICAN POWER (1990).

²¹ Wang Huning, *Culture as National Power: Soft Power* [作为国家实力的文化: 软实力], 3 J. FUDAN U. [复旦学报 (社会科学版)] 23-8 (1993).

²² R. Enoch Muas & Reynaldo de Archellie, *Reassessing China's soft power in Indonesia: A critical overview on China's cultural soft power*. 10(1) COGENT ARTS & HUMANITIES, 2178585 (2023).

²³ Diana-Elena Vereş, *The Chinese vision of soft power. General considerations*, 12(1) BULL. CAROL I NATIONAL DEFENCE U. 92-101 (2023).

²⁴ See generally IAN STOREY & HERBERT YEE, THE CHINA THREAT: PERCEPTIONS, MYTHS AND REALITY (2002); Jan-Boje Frauen, *The "China Threat": Not a Theory but a Narrative*, in EAST-WEST DIALOGUE 131-6 (L. Chen & KH. Pohl eds., 2023).

²⁵ See generally GRAHAM ALLISON, DESTINED FOR WAR: CAN AMERICA AND CHINA ESCAPE THUCYDIDES'S TRAP? (2017).

²⁶ See generally SUSAN SHIRK, CHINA: FRAGILE SUPERPOWER (2007); AARON FRIEDBERG, A CONTEST FOR SUPREMACY: CHINA, AMERICA, AND THE STRUGGLE FOR MASTERY IN ASIA (2011); DAVID SHAMBAUGH, CHINA GOES GLOBAL: THE PARTIAL POWER

has embraced the soft power theory as an attempt to shift the world's attention to the "peaceful rise of China"²⁷ with its vast cultural resources and traditional political ideas.

China expresses its soft power through initiatives such as Confucius Institutes and the Belt and Road Initiative (BRI), which aim to widely disseminate Chinese culture, emphasize Chinese values, and demonstrate China's willingness to actively participate in regional and global development and cooperation. China's soft power efforts are particularly impressive mainly in developing countries through economic aid and infrastructure support in the African and Asian regions.²⁸ China's desire for non-interference in the internal affairs of other states is positively reflected, especially among countries that have experienced the negative consequences of Western forms of interventionism.²⁹

In this context, China acts like "an undifferentiated, monolithic entity acting with a single, unitary logic across cultural domains."³⁰ Through its grand BRI plans, China aims to strengthen itself economically and reshape the international balance of power. In fact, this soft power tactic serves as an effective instrument for China to vigorously engage with various Middle Eastern nations. Sharma noted that a significant prerequisite for the utilization of soft power requires expanding economic ties, which eventually leads to the deepening of soft power relationships. However, volatile bilateral and multilateral relations, including various other politico-strategic issues, have so far impeded the progress of the BRI in this region.³¹ Non-state actor diplomacy has not received enough attention, either. This represents a potential oversight, as active civil society participation can be a key factor in building and strengthening soft power, in line with Joseph Nye's theory.³²

(2013); GRAHAM ALLISON, *DESTINED FOR WAR: CAN AMERICA AND CHINA ESCAPE THUCYDIDES' S TRAP?* (2017).

²⁷ Pan Pan, *The Chinese state and soft power*, 20 BCP SOC. SCI. & HUMANITIES 507-16 (2022).

²⁸ Peter Nolan, *China, Innovation, and the Silk Road*, 13 HORIZONS (J. INT'L RELATIONS & SUSTAINABLE DEV.) 66-71 (2019), <https://www.jstor.org/stable/48573770>.

²⁹ Mahesh Senadeera, *The role of soft power in international diplomacy: A comparative study of the United States and China*, RESEARCHGATE (Apr. 2023), https://www.researchgate.net/publication/369799208_The_Role_of_Soft_Power_in_International_Diplomacy_A_Comparative_Study_of_the_United_States_and_China. See also Dost Muhammad Barrech & Muhammad Khan, *US-China growing competition in soft power*, 3(2) J. SOC. SCI. REV. 490-9 (2023).

³⁰ Hartig Falk, *New public diplomacy meets old public diplomacy – the case of China and its Confucius institutes*, 8(3) NEW GLOBAL STUD. 331-52 (2014).

³¹ Anu Sharma, *China's soft power in the Middle East*, in CHINA'S ENGAGEMENT WITH THE ISLAMIC NATIONS 23-40 (Young-Chan Kim ed., 2023).

³² Muas & de Archellie, *supra* note 22.

III. China's Health Diplomacy

The concept of soft power was preceded by the concept of health (medicine) diplomacy. Introduced in 1978 by Peter Bourne, Special Assistant to the President for Health Affairs during the Carter Administration in the US, health diplomacy may be defined as a tool for political change aimed at improving global health and helping to overcome difficulties in diplomacy, especially in conflict zones and in countries with limited resources.³³ China views health (medicine) diplomacy as an integral part of its soft power, initiating and promoting health initiatives at the global level.³⁴ In 2011, for example, China hosted a meeting of health ministers on the topic “Global Health - Access to Health Care.” As a result, an agreement was reached on cooperation in the implementation of health care reforms, as well as on the exchange of experience.

To implement health diplomacy, innovation is indispensable. China provides financial and material support; transfers advanced medical technologies; and send hospital ships and medical teams to regions of Africa and Asia.³⁵ As a result, China is competing with India in the African continent over the provision of healthcare services. Such a situation not only strengthens bilateral relations between China, India and African nations, but also gives the latter a maneuver leverage in international relations.³⁶

Health diplomacy became especially active during the COVID-19 pandemic. Moreover, states possessing the latest technologies and a developed industry for producing medicines and medical equipment initiated a number of official, representative, and practical events. Opportunities for organizing and holding forums and meetings of global and regional nature were utilized, with the world's largest pharmaceutical powers entering the “race” for COVID-19 vaccines to develop them faster, cheaper, and more effectively.

COVID-19 vaccines have become crucial soft power tools used by manufacturing

³³ Shantesh Kumar Singh, *Global health diplomacy: A strategic opportunity for India*, IND. FOUNDATION J. 42-7 (Sept.-Oct. 2017) <https://indiafoundation.in/wp-content/uploads/2019/08/Journal-Sept-Oct-2017-final-06-09-17-without-AdvT.pdf>.

³⁴ Paul Kadetz & Michael Stanley-Baker, *How the People's Republic of China Harnessed Health to Leverage Soft Power on the World Stage*, 3 FRONTIERS IN HUMAN DYNAMICS (2022), <https://www.frontiersin.org/articles/10.3389/fhumd.2021.774765/full>.

³⁵ Kelley Lee & Eduardo Gomez, *Brazil's ascendance: The soft power role of global health diplomacy*, 1 EUR. BUS. REV. 61-4 (2011); Bawa Singh & Vijay Kumar Chattu, *Prioritizing 'equity' in COVID-19 vaccine distribution through Global Health Diplomacy*, 11(3) HEALTH PROMOTION PERSPECTIVES 281-7 (2021).

³⁶ Rajani Mol et al., *India's health diplomacy as a soft power tool towards Africa: Humanitarian and geopolitical analysis*, 57(6) J. ASIAN & AFR. STUD. 1109-25 (2022).

countries to achieve foreign policy goals through public diplomacy. Vaccines have been employed to influence public opinion in other countries for political purposes. Vaccination against COVID-19 has become not only a tool for ensuring health, but also a means of shaping the image of the manufacturing country and strengthening its foreign policy position.³⁷ This strategy of using vaccines to advance national interests has led to the phenomenon of vaccine nationalism.

This situation has resulted in a gap in access to vaccines and medicines between developed and developing countries. As the competitive situation among Western pharmaceutical giants did not change dramatically, a serious struggle has unfolded among the countries of the global south. China did not openly view Russia as a competitor in the COVID-19 vaccine 'race,' but the situation was different with India.³⁸ At the beginning of the pandemic, India supported more than 150 countries by sending medical supplies and vaccines. When Brazil refused the Chinese vaccine, India offered its vaccines, resulting in the gratitude of the Brazilian President and strengthening India's position in the region.³⁹ The Vaccine Maitri initiative has become not only a soft power tool but also a means of positioning India at the global level.

Nonetheless, China aggressively promoted its COVID-19 vaccines in Latin America, providing them to the region's governments and staging huge delivery shows. Initially, this brought a positive reaction from the local population. However, over time, Chinese vaccines has been ill-reputed because they were priced significantly higher than alternatives, while the vaccines' very effectiveness was questioned based on clinical studies and the experiences of people who received the shots.⁴⁰ As a result, China had trouble maintaining positive perceptions and trust, making its future diplomatic strategy in the region difficult for some time.⁴¹

The Health Silk Road initiative is a part of the BRI with significant contribution to China's rise in health authority during the pandemic. According to the official website of the World Health Organization (WHO), China and India have each approved three

³⁷ Isaac Antwi-Boasiako, *Vaccine diplomacy game: The race for soft power*, SSRN (Apr. 4, 2022), <https://ssrn.com/abstract=4092062>.

³⁸ Bawa Singh et al., *COVID-19 and Global Distributive Justice: 'Health Diplomacy' of India and South Africa for the TRIPS waiver*, 58(5) J. ASIAN & AFR. STUD. 747–65 (2022).

³⁹ Hong Quang Trieu, *India's Soft power diplomacy under the COVID-19 era*, RESEARCHGATE (Dec. 2022), https://www.researchgate.net/publication/366702649_India%27s_Soft_power_diplomacy_under_the_COVID-19_era.

⁴⁰ Smriti Mallapaty, *China's COVID vaccines are going global - but questions remain*, NATURE (May 4, 2021), <https://www.nature.com/articles/d41586-021-01146-0>; Álvaro Mendez, *China's vaccine diplomacy - Soft power lessons from Latin America*, The China Global South Project (Sept. 17, 2021), <https://chinaglobalsouth.com/analysis/chinas-vaccine-diplomacy-soft-power-lessons-from-latin-america>.

⁴¹ Mendez, *id.*

COVID-19 vaccines.⁴² China has established the world's largest COVID-19 vaccine production lines with an annual production capacity of more than 7 billion doses, meeting the need to ensure that all eligible people have access to COVID-19 vaccines.⁴³ China is actively distributing its vaccines to various countries around the world. This vaccine diplomacy strengthens its partnerships and has influences on public opinions in host states. It is seeking to rebuild its international image following the outbreak of the pandemic amid allegations about the origins of the virus.⁴⁴ Its partnership with the WHO also strengthen its profile in the international community.

IV. China's Soft Power Strategies in Africa

China has developed a full-scale presence of its assets in the African continent.⁴⁵ For example, it has committed significant funds to building green energy infrastructure, including the Mambila hydroelectric dam in Nigeria (USD 2.5 billion) and the Grand Inga hydroelectric dam in the Democratic Republic of Congo (USD 14 billion combined from Chinese, Spanish, and Congolese lenders). A USD 3 billion project to build railways, mines, and ports is underway in Gabon. In addition, more than 20 thousand African immigrants moved to study and work in the Chinese province of Guangzhou.⁴⁶ As part of an economic and technical cooperation agreement, China provided Burundi with an interest-free loan to rebuild infrastructure such as roads and a power plant.⁴⁷ China has created 25 economic and trade cooperation zones in 16 African countries, hosting over 600 enterprises with a total investment volume exceeding USD 8 billion. China stands as the largest trading partner for the African continent, with trade reaching USD 300 billion in 2022.⁴⁸

⁴² WHO, COVID-19 Vaccines with WHO Emergency Use Listing, <https://extranet.who.int/prequal/vaccines/covid-19-vaccines-who-emergency-use-listing>.

⁴³ Hong Quang Trieu, *supra* note 39.

⁴⁴ Isaac Antwi-Boasiako, *Vaccine diplomacy game: The race for soft power*, SSRN (April 4, 2022) <https://ssrn.com/abstract=4092062>.

⁴⁵ John Magbadelo, *Review: Africa's Development Trajectory: Lessons from China*, 22(3) INSIGHT TURKEY 257-65 (2020), <https://www.insightturkey.com/review-article/africas-development-trajectory-lessons-from-china>.

⁴⁶ Pan Pan, *supra* note 27.

⁴⁷ B.O. Nda Hatwa, *China's soft power policies and Burundi-China relation*, in PROC. 2ND INTERNATIONAL ISTANBUL CONGRESS OF MULTIDISCIPLINARY SCIENTIFIC RESEARCH 209-17 (2022).

⁴⁸ Jevnys Nyabiage, *China-Africa trade hit US\$282 billion in 2023 but Africa's trade deficit widens, with commodity prices a key factor*, S. CHINA MORNING POST (Feb. 1, 2024), <https://www.scmp.com/news/china/diplomacy/article/3250552/china-africa-trade-hit-282-billion-2023-africas-trade-deficit-widens-commodity-prices-key-factor>.

Chinese companies actively participate in infrastructure development in Africa, constructing railways, implementing communication networks (including 5G projects), and contributing technology and skills to modern transport systems.⁴⁹ Investments from Chinese companies extend to innovative sectors of the African economy led by Huawei and China Telecom Global in order to deploy advanced technologies such as 5G and fiber optic networks. Beyond material capital, China Road and Bridge Corp, for instance, provide training to local engineers and technicians through training camps and technology transfer programs.⁵⁰

These initiatives underscore China's commitment to long-term partnerships with African countries, emphasizing economic collaboration, innovation, and technological progress. Chinese investments in diverse sectors of the African economy significantly impact the region's development, providing opportunities for balanced and sustainable growth. Despite these positive efforts, the Chinese government faces criticism. Some accuse China of predatory lending, debt-trap diplomacy, and environmental impacts. However, public opinion of China in many African countries remains positive. For example, the BBC World Opinion Poll (2011) found favorable views of China in the five largest African states: Kenya (73%), Nigeria (85%), Ghana (72%), Egypt (55%), and South Africa (53%).⁵¹

V. Does the Winner Take It All?

In Western countries, particularly in Germany, the perception of Chinese soft power strategy is negative. For example, the German city of Duisburg suspended cooperation with Huawei in the field of smart cities. Duisburg was previously referred to as "China's gateway to Europe" and had a MoU signed in 2018 with Huawei to

⁴⁹ Eric Olander, *The Economist Intelligence Unit Mapped Out Chinese Trade and Investment in Africa*, China Global South Project (Mar. 8, 2021), <https://chinaglobalsouth.com/2021/03/08/the-economist-intelligence-unit-mapped-out-chinese-trade-and-investment-in-africa>. See also Yun Sun, *Picking Up Steam: The Expansion of Chinese Railways in Africa*, BROOKINGS (Sept. 26, 2014), <https://www.brookings.edu/articles/picking-up-steam-the-expansion-of-chinese-railways-in-africa>; Hannah Marais & Jean-Pierre Labuschagne, *If you want to prosper, consider building roads: China's role in African infrastructure and capital projects*, DELOITTE INSIGHTS (Mar. 22, 2019), <https://www2.deloitte.com/us/en/insights/industry/public-sector/china-investment-africa-infrastructure-development.html>; Jevans Nyabiage, *China 'winning lion's share' of construction projects in Africa, study finds*, S. CHINA MORNING POST (Aug. 13, 2023), <https://www.scmp.com/news/china/diplomacy/article/3230790/china-winning-lions-share-construction-projects-africa-study-finds>.

⁵⁰ See *Chinese innovation driving Africa's growth*, CHINA DAILY (Apr. 18, 2019), <https://www.chinadaily.com.cn/a/201904/18/WS5cb7cf21a3104842260b6d7b.html>.

⁵¹ Pan Pan, *supra* note 27.

transform the city into a service-oriented smart city using advanced 5G technology. However, the agreement expired in October 2022 and was removed from the city's website. Authorities cited the strained relationship between Russia and China and concerns in Germany about the Chinese authorities' access to critical data as reasons for not renewing the agreement.⁵²

Various data, including personal data, are crucial for the development of artificial intelligence technologies, leading states to establish strict legal regimes regarding their protection. Western countries accused China, Russia, and India of imposing strict restrictions on data localization and cross-border data transfer, as well as the heightening requirements for personal data processing and consent.⁵³ They blame China, Russia and India for data nationalism.⁵⁴ However, the US has established no less stringent rules to achieve government control over technology. Therefore, both Western and Chinese companies act in the interests of their states, collecting and providing the required information and offering tools for the implementation of government policy. This is why the use of Tesla electric vehicles (equipped with artificial intelligence systems and collecting information 24/7, transmitting it to American developers) was banned in the summer of 2022 in the province where a politically important meeting of the CCP establishment was held.⁵⁵ China reaffirmed its international leadership during the G20 summit by monopolizing the summit vehicles with electric cars of its own brand.⁵⁶

Craig Allen emphasize that the excessive techno-nationalism exhibited by China has notably resulted in multifaceted repercussions, extending beyond its strides in technological innovation.⁵⁷ It is also alleged that this approach has engendered a

⁵² Finbarr Bermingham, *Germany's 'China City' Duisburg cuts ties with Huawei, citing Beijing's relations with Russia*, S. CHINA MORNING POST (Nov. 9, 2022), <https://www.scmp.com/news/china/diplomacy/article/3199049/germanys-china-city-duisburg-cuts-ties-huawei-citing-beijings-relations-russia>.

⁵³ Jennifer Daskal & Justin Sherman, *Data nationalism on the rise: The global push for state control of data*, DATA CATALYST (June 2020), <https://datacatalyst.org/wp-content/uploads/2020/06/Data-Nationalism-on-the-Rise.pdf>; Nigel Cory & Samm Sacks, *China Gains as U.S. Abandons Digital Policy Negotiations*, LAWFARE (Nov. 2023), <https://www.lawfaremedia.org/article/china-gains-as-u.s.-abandons-digital-policy-negotiations>.

⁵⁴ Ella Gorian, *Genesis of data security mechanism in China: The next step to data nationalism*, 2 CHINA & WTO REV. 255-76 (2022).

⁵⁵ Eamon Barret, *China is banning Tesla owners from driving near the government's summer retreat, another sign Beijing considers the vehicles U.S. spies*, FORTUNE (June 21, 2022), <https://fortune.com/2022/06/21/china-ban-tesla-beidaihe-government-retreat-data-security-spy>. See also *Tesla cars barred from World University Games ahead of Xi visit*, BLOOMBERG NEWS (July 26, 2023), <https://www.bloomberg.com/news/articles/2023-07-26/tesla-cars-barred-from-world-university-games-ahead-of-xi-visit>.

⁵⁶ See *G20 summit designates China's new energy vehicles as official vehicles*, CGTN (Nov. 15, 2022), <https://news.cgtn.com/news/2022-11-15/G20-summit-designates-China-s-new-energy-vehicles-as-official-vehicles-1eYuaabmEH4s/index.html>.

⁵⁷ Craig Allen, *For Cooperative Innovation, China Must Lead the Way*, in CHINA'S UNEVEN HIGH-TECH DRIVE: IMPLICATIONS

landscape characterized by forced technology transfer, intellectual property theft, and state-affiliated cyber espionage endeavors.⁵⁸ China's pursuit of proprietary technologies through coercive means challenges conventional norms, raising concerns about fair practices in the global technological ecosystem.⁵⁹ Furthermore, China's divergent interpretations of the Internet sovereignty have led to disruptive measures such as data flow restrictions and unconventional e-commerce protocols. These actions, deviating from international norms, will pose significant disruptions to global business operations and supply chains, exacerbating concerns regarding market access and fair competition.⁶⁰

Rapid evolution of China from a developing state to a global leader in technological innovation significantly impacts various cutting-edge industries and reshapes the global economic landscape. China's remarkable strides in innovation across numerous sectors - such as defense, space, robotics, energy, artificial intelligence (AI), advanced materials, and quantum technology - underscore its growing dominance and influence in the realm of technology.⁶¹ Its ascent in technological prowess is strikingly evident in its achievements across 37 out of 44 critical technologies, positioning the country at the forefront of innovation worldwide.⁶² Top-tier research institutions in China are consistently producing high-impact research papers, showcasing the nation's commitment to driving scientific advancement and technological innovation.⁶³ The country's relentless pursuit of innovation is mirrored in its transformative contributions to various sectors. In defense and aerospace technology, China's advancements have seen remarkable strides in missile systems, space exploration, and satellite technology.⁶⁴ Additionally, its developments in AI and robotics have

FOR THE UNITED STATES (CSIS, 2020).

- ⁵⁸ Efehan Bilgin & Alphonse Loh, *Techno-nationalism: China's bid for global technological leadership*, China Dialogues: The London School of Economics and Political Science Blog (Sept. 28, 2021), <https://blogs.lse.ac.uk/cdf/2021/09/28/techno-nationalism-chinas-bid-for-global-technological-leadership>; Katherine Koleski & Nargiza Salidjanova, *China's Technonationalism Toolbox: A Primer*, U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION (Mar. 28, 2018), <https://www.uscc.gov/sites/default/files/Research/China%27s%20Technonationalism.pdf>.
- ⁵⁹ Jeffrey Ding, *China's Growing Influence over the Rules of the Digital Road*, 2(16) ASIA POL'Y 33-42 (2021).
- ⁶⁰ Robert Atkinson, *Time for a New National Innovation System for Security and Prosperity*, 9(2) PRISM 58-75 (2021), https://ndupress.ndu.edu/Portals/68/Documents/prism/prism_9-2/prism_9-2_59-75_Atkinson.pdf?ver=2y1qgka-CO44xgXu0zauQw%3d%3d.
- ⁶¹ Michael Raska, *Strategic competition for emerging military technologies: comparative paths and patterns*, 8(3) PRISM 64-81 (2019), https://ndupress.ndu.edu/Portals/68/Documents/prism/prism_8-3/prism_8-3_Raska_64-81.pdf.
- ⁶² Simon Baker, *China overtakes United States on contribution to research in Nature Index*, NATURE (May 19, 2023), <https://www.nature.com/articles/d41586-023-01705-7>.
- ⁶³ Jeffrey Brainard & Dennis Normile, *China rises to first place in most cited papers*, SCI. (Aug. 17, 2022), <https://www.science.org/content/article/china-rises-first-place-most-cited-papers>.
- ⁶⁴ Michael Raska & Richard Bitzinger, *Strategic Contours of China's Arms Transfers*, 14(1) STRATEGIC STUD. Q. 91-116 (2020).

revolutionized industries,⁶⁵ driving automation and efficiency across various sectors, from manufacturing to healthcare.⁶⁶

China's investments in renewable energy and advancements in quantum technology highlight the country's commitment to shaping the future of sustainable energy solutions and next-generation computing. Furthermore, its breakthroughs in advanced materials have propelled developments in such fields as electronics, telecommunications, and infrastructure, fostering global innovation and economic growth. Moreover, the emphasis on innovation is deeply embedded in China's economic strategy, driving its global competitiveness and fostering a robust ecosystem for research and development.⁶⁷ The technological advancements serve as a catalyst for its geoeconomic influence, attracting international collaborations and partnerships, thereby bolstering its position as a global technological powerhouse.⁶⁸ People are finally worried if "the winner takes it all"⁶⁹ in a mono-polar world.

However, amidst its impressive technological achievements, China's stance on global values and governance remains debatable.⁷⁰ Chinese approach raises concerns about the global implications of its technological dominance.⁷¹ Chinese scholars argue that Chinese policies for fostering innovation have played a pivotal role in the nation's remarkable strides towards a global technological powerhouse.⁷² Recently in China, incentivizing research and development (R&D) has fueled innovation across various sectors. An ecosystem has been created to promote technological advancements with resources and funding. Policy has been shifted to ensure fair opportunities for private sector firms and foreign-invested enterprises. IP protections are attracting both domestic and foreign investment without the fear of IP theft. A skilled workforce adept at driving innovation is educated across various sectors.⁷³

China's economic dominance serves as a double-edged sword in its pursuit of

⁶⁵ Richard Bitzinger, *China's Shift from Civil-Military Integration to Military-Civil Fusion*, 1(16) ASIA POL'Y 5-24 (2021).

⁶⁶ FRANCESCA GHIRETTI, TECHNOLOGICAL COMPETITION: CAN THE EU COMPETE WITH CHINA? (Istituto Affari Internazionali, 2021).

⁶⁷ Carolyn Bartholomew, *China and 5G*, 2(36) ISSUES IN SCI. & TECH. 50-7 (2020).

⁶⁸ François Godement et al., THE CHINA DREAM GOES DIGITAL: TECHNOLOGY IN THE AGE OF XI, (European Council on Foreign Relations, 2018), https://ecfr.eu/wp-content/uploads/China_Analysis_China_and_Technology_pages.pdf.

⁶⁹ JAN BALKENENDE & BUIJS GOVERT, CAPITALISM RECONNECTED: TOWARD A SUSTAINABLE, INCLUSIVE AND INNOVATIVE MARKET ECONOMY IN EUROPE 249-68 (2024).

⁷⁰ *Id.*

⁷¹ Owen Tench, *Has the Threat Posed by China to International Security Been Overstated*, 10(2) J. GLOBAL FAULTLINES 149-64 (2023).

⁷² Shang-Jin Wei, Xie Zhuan & Zhang Xiaobo, *From 'Made in China' to 'Innovated in China': Necessity, Prospect, and Challenges*, 1(31) J. ECON. PERSPECTIVES 49-70 (2017).

⁷³ Yongjae Lee, *The US-China Digital Innovation Competition and Power Transition*, 29(1) J. INT'L & AREA STUD. 39-60 (2022).

soft power. While the nation's economic strength enhances its attractiveness and influence, critiques suggest that its soft power is heavily dependent on economic prowess, hence not as 'soft' as claimed.⁷⁴ They argue that the most successful 'soft' power is among countries where China is not burdened with accusations of human rights violations. It is noted that one of the main problems in China's implementation of 'soft' power strategy is the dissonance between the image that China seeks to project and the country's reality.⁷⁵ Moreover, China appears to have embraced a riskier "all-out" approach that builds upon its growing soft power assets. Beijing's stances may be paying off in terms of overall influence. However, as the attractive side is still heavily dependent on its economic prowess, it is potentially unstable and prone to arousing skepticism.⁷⁶

VI. Conclusion

In recent, Chinese leadership in key sectors of the economy - finance/banking, IP, and military industry - allows a state to dictate its terms and influence the world order. China strategically uses innovation to strengthen its position in the international arena, employing it as a tool of "soft power" to showcase the benefits of cooperation and genuine economic prosperity to the population of other states.⁷⁷ Alongside preferential investment regimes, the dissemination of innovative technologies through a few specific examples demonstrates the effectiveness of China's doctrine of the five principles of international law.

The innovation will enable China to gain not only economic benefits but also political advantages. In 2019, for instance, the UN ambassadors of 37 African countries signed a joint letter to the UN Human Rights Council defending China's domestic policies towards minorities (Uyghurs), and in 2020, 53 countries, mostly African, supported Hong Kong's national security law.⁷⁸ China's Africa policy will

⁷⁴ Lesia Dorosh & Myroslava Yablonska, "Soft" power of China: efficiency and response to the current challenges, RESEARCHGATE (Dec., 2021), https://www.researchgate.net/publication/356352879_Soft_Power_of_China_Efficiency_and_Response_to_the_Current_Challenges.

⁷⁵ *Id.*

⁷⁶ Daniele Carminati, *Soft power battlegrounds: China and Japan's strategies of attraction and influence in Southeast Asia*, RESEARCHGATE (Feb. 2020), https://www.researchgate.net/publication/339874499_Soft_Power_Battlegrounds_China_and_Japan%27s_Competing_Strategies_of_Influence_and_Attraction_in_Southeast_Asia.

⁷⁷ Maximilian Ernst, *Control Through Cooperation? Assessing China's Economic and Military-Strategic Interests in the South China Sea*, 9(2) J. TERRITORIAL & MAR. STUD. 7-30 (2022).

⁷⁸ Pan Pan, *supra* note 27.

be successful with the following factors. First, Chinese foreign investment involves far fewer obligations than Western investment.⁷⁹ Second, Chinese investors create infrastructure and improve the overall standard of living of African states.⁸⁰ Third, the areas attracting investment include the exploration, production, and primary processing of natural resources, agriculture, industry, trade, and logistics.⁸¹

Innovation is an important tool for creating soft power in international law and relations. The ability to innovate creates the image of an advanced, progressive country, attracting attention and respect from other nations. Innovation can also improve the quality of life by expanding the soft power. Cultural exchange and diplomacy through innovation strengthen international partnerships. Thus, innovation plays an integral role in modern politics and diplomacy, being an important component of the soft power of a state.

China's rapid ascent as a leader in technological innovation is undeniable. It made groundbreaking contributions across various cutting-edge fields in shaping the future of technology. However, the confluence of its technological prowess with divergent values and governance policies presents a complex challenge for global stakeholders navigating the impact of China's technological dominance on the global stage. Only when China accepts the multipolar international law and relations, true innovations will be realized not selectively but by all countries in need. In this stage, China's soft power strategy can be more constructive, promoting the sustainable development of mankind.

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⁷⁹ See generally XIANGMING SHEN, PRIVATE CHINESE INVESTMENT IN AFRICA: MYTHS AND REALITIES (Wiley Online Library, 2015) <https://onlinelibrary.wiley.com/doi/abs/10.1111/dpr.12093>; MUTHUCUMARASWAMY SORNARAJAH, THE INTERNATIONAL LAW ON FOREIGN INVESTMENT (2021).

⁸⁰ Fodé Donou-Adonsou and Simon Lim, *On the importance of Chinese investment in Africa*, REV. DEV. FINANCE (June 1, 2018), <https://journals.co.za/doi/abs/10.1016/j.rdf.2018.05.003>; Richard Bluhm et al., *Connective financing: Chinese infrastructure projects and the diffusion of economic activity in developing countries*, SSRN (Oct. 30, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3262101.

⁸¹ Wenjie Chen, David Dollar & Heiwai Tang, *Why is China investing in Africa? Evidence from the firm level*, 32(3) WORLD BANK ECON. REV. 610-32 (2018).