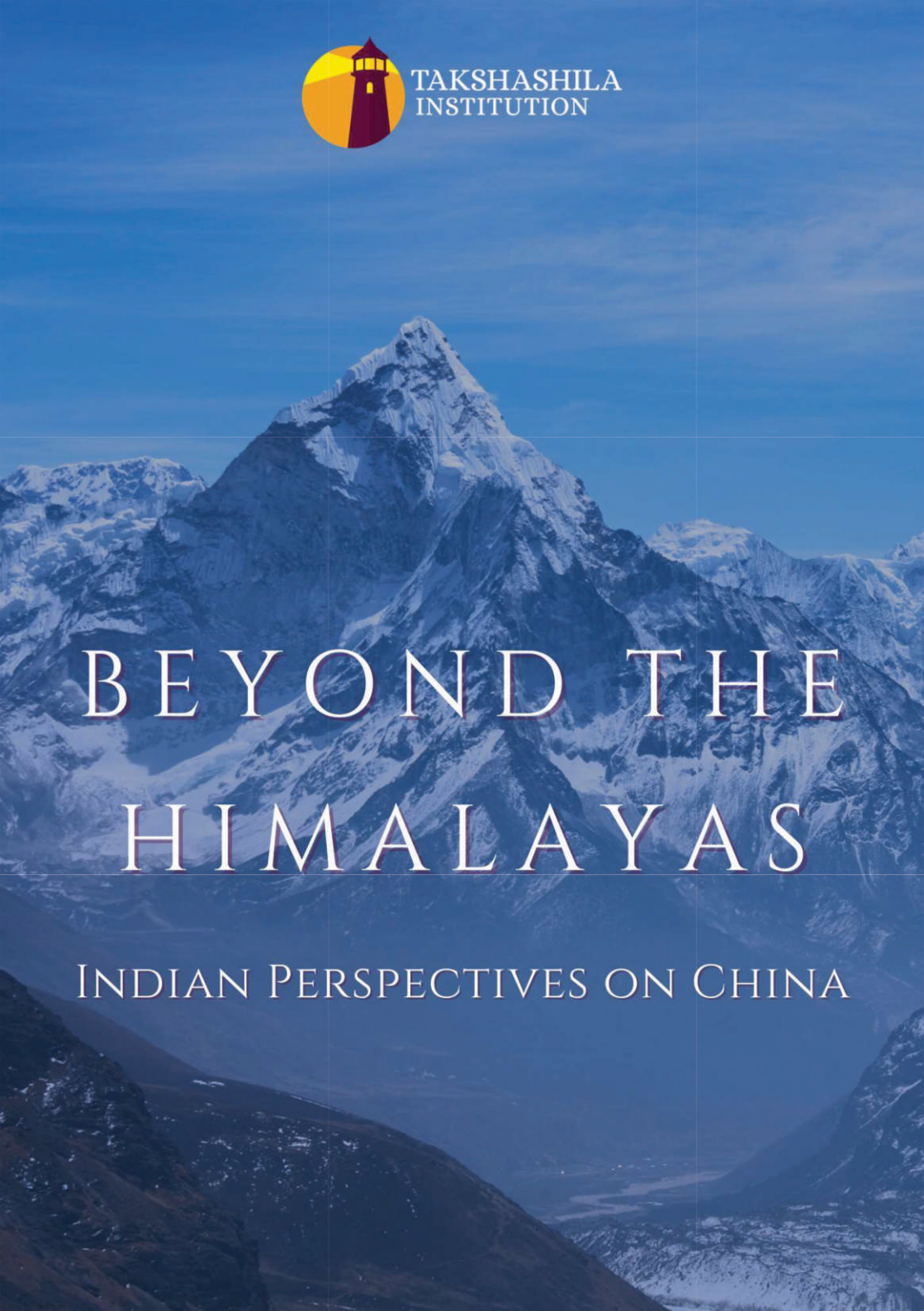
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Preface

It was a warm, sunny afternoon in Bengaluru when the idea for the Network for Advanced Study of China (NASC) Fellowship originated in the intellectual corridors of the Takshashila Institution. The topic under discussion was the need to generate meaningful scholarship to better understand India's biggest neighbour – *China*. In this regard, there was a common thread that bound our deliberations in all domains of studying China, ranging from economy and technology to domestic politics and society – the need for Indian perspectives, and the need for new voices.

Without a flicker of doubt, we embarked on the journey to cultivate such scholarship. We did so with a Fellowship that invited students, young professionals, and mid-career individuals from across the country, and offered them mentorship from the best of the best in the field. Soon, the NASC Fellowship became a unique pathway that offered both – an opportunity for budding scholars to conduct purposeful research on a vast array of themes pertaining to China, and the room to apply an Indian interests lens to their research. Today, NASC is a flagship component of Takshashila's vision for an 'Extraversity' – a universe unique to the Indian policy research ecosystem, and which aims to connect good people to good ideas and good networks.

Through this compendium, we hope to present some of these good ideas, worked on by brilliant young scholars and

sandpapered by a distinguished network of mentors. We feel especially proud presenting this compendium also because it is a product of the proceedings of the very first year of the NASC Fellowship (2023-24). The papers included herein, thoroughly unriddle the Middle Kingdom across a range of issues, and have gone through many rigorous rounds of mentor and peer review over the course of a year.

The first step to understanding the drivers of a country's policy, is to unravel the mysteries behind its policymaking and policy-implementing ecosystem. Swayamsiddha Samal's paper does just that, while attempting to effectively disprove the argument that China's policymaking ecosystem is akin to a black box. Her paper, *'Recentralisation of Power under Xi Jinping: The Cadre Management System in China'*, gives a crisp account of the virtues Xi Jinping extolls, particularly when it comes to his team of political elites and bureaucrats. She draws meaningful parallels between the management system for cadres of the Chinese Communist Party under Xi and Mao Zedong, while also explaining the evolution of the system with changes in leaders and leadership styles. The paper's understanding of Xi's disciplinary campaigns, and the unique evaluation and promotion model for cadres, is illuminating.

The next paper in the collection examines the manifestations of China's internal setup on its external behaviour vis-à-vis trade, geoeconomics, influence, and soft power. In *'Unlocking the Middle Corridor to Leverage Trade Potential between the People's Republic of China and Eurasian Countries: Opportunities,*

Challenges and Policy Implications', Falendra Kumar provides a unique solution to China's excess export capacity vis-à-vis Europe – the creation of a new economic corridor with the potential to transform the Eurasian geoeconomic ecosystem amidst the Russia-Ukraine war. This 'Middle Corridor', as Falendra describes it, has the potential to facilitate trade by making cargo transit highly cost-efficient, and reducing transit time.

The next set of papers, by Neha Mishra, and co-authors Abhishek Sharma and Raja Babu, provide a deep-dive into China's crucial role in global critical mineral value chains, and the domestic policy imperatives which drive its dreaded dominance. In their paper, titled *'Making Sense of China's Political Strategy Behind Dominating Critical Mineral Supply Chain: A Case Study of China's EV Sector',* Abhishek and Raja explain the dual motivations behind China's quest for supremacy in the critical minerals domain – the need to create immense geopolitical and geoeconomic power, and the desire to cultivate political influence. The very relevant lens they adopt to explain said motivations is Xi's idea of balancing development and security, which makes for a solid theoretical framework when one studies China's dominance in the electric vehicle industry.

Neha's essay, titled *'Prospects of China's Dominance in Critical Minerals Supply Chain',* is perhaps one of the most comprehensive studies in India on disentangling the complex web of policy measures that have transformed China into the behemoth that it is today, when it comes to global critical

mineral and rare earth value chains. We believe her paper has the potential to act as a springboard for all future research on studying the 'China model' in this literally "critical" domain.

Apart from critical minerals, the information space is another domain where Chinese actions have led to global consternation. In her paper, *'Understanding the PRC's Information Operations Against India,'* Dhara Shah deciphers the tools of influence Beijing deploys to occupy and shape the mindspaces of governments and people abroad. Dhara's research not only defines 'information warfare', as China deploys it, but also engages with the intricacies of United Front work and 'wolf-warrior diplomacy'. Her research effectively proves that China's influence campaigns in India are rehearsed tactics of information manipulation and dissemination. These, she argues, must be dealt with a multifaceted deterrence and counterresponse toolkit.

And finally, yet importantly, Saurav Sarmah's paper, titled *'Soft Power and Great Power Ambitions: China's Global Influence in the Xi Jinping Era'*, offers a detailed study of the subject. Not only is the paper an assiduous exercise in expounding the pillars of China's 'soft power' and global influence, but it is also a visual journey – rife with representations of key data points and comparative analyses that add gravitas to an otherwise abstract discussion on Chinese soft power. Saurav's research is also the right piece of evidence for anyone, willing or unwilling, to acknowledge the changing nature of diplomacy and power in Xi's China. These tools of state power,

as Saurav discusses, have taken a more assertive turn in the past decade, marking a stark shift from previously upheld notions of China's peaceful rise and harmonious development.

As part of a research institution committed to producing scholarship that has the power to inform policy for the better, we believe that the research presented in this compendium is a testament to the values Takshashila upholds. We applaud the hard work and effort of this pioneering cohort, and express our sincere gratitude to the mentor panel, the internal review committee, and the supporters and well-wishers of this Fellowship. We also hope you enjoy browsing this compendium as much as we enjoyed editing and compiling it. Without further ado, we wish you, happy reading!

Manoj Kewalramani, Anushka Saxena, Amit Kumar

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Recentralisation of Power under Xi Jinping: The Cadre Management System in China

Swayamsiddha Samal*

Executive Summary

The cadre management system in China has evolved from under Mao to Xi. Under Mao Zedong, it focused on ideology and a centralised approach. However, economic factors took centre stage during the Deng Xiaoping period. Under the current Xi Jinping regime, there is a resurgence of ideological factors, purges under disciplinary campaigns and promotion of cadres loyal to Xi. This analysis looks at the changes in the cadre management system under Mao, Deng, and Xi, focusing on the ideological and centralising aspects of the Mao and Xi eras.

Background

In one-party socialist countries, the word 'cadre' has a specific meaning. In his book, What Is To Be Done? Russian revolutionary Vladimir Lenin depicted cadres as the guiding leaders of a revolution, with the masses as followers.[1] He elaborated on the necessity of forming and educating this vanguard from the revolutionary class to lead the revolutionary movement effectively. The word 'cadre' was first used in the party constitution of the Communist Party of China (CPC) during its Second National People's Congress in July 1922.

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In June 1929, the Sixth Party Congress' Second Plenary Session recommended selecting cadres according to "political understanding, discipline, and sacrifice for the interests of the working class." Stuart Schram (1984) writes that in the Gutian resolution of December 1929, Mao advocated the following standards for conducting a more rigorous screening of new members after lamenting the poor level of the existing party membership. He described the requirements of cadres as the following:

1. There should be no errors in members' political outlook (including their class consciousness)
2. Members should be loyal to the CPC
3. They should have a spirit of sacrifice and be capable of working actively
4. They should not seek to enrich themselves
5. They should not smoke opium or gamble

Classification of Cadres under Mao

The People's Republic of China (PRC) was formed in 1949. Systematic cadre management practices significantly developed from the early-to-mid 1950s. Leading cadres were CPC or government members above the county level. They were called so because they had to lead the cadres of the levels below. Local-level cadres consisted of members from the provincial and below levels. Harding (1983) says by the end of 1955, all party and state cadres had been given a rank based on a graded pay system.

As mentioned in the previous section, Mao had asked cadres to be loyal and sacrificial towards the CPC. However, in 1956, in his Report to the Eighth Congress, Deng Xiaoping said, "The former classification of social status has lost or is losing its meaning." Deng wanted to point out that only focusing on a cadre's 'red' and revolutionary aspects was now insufficient, and there was a need to gravitate towards a cadre's technical skills for nation-building. Mao agreed and believed that combining both 'red' and 'expert' factors would be essential for China. Schurmann (1967) says that Mao indoctrinated red cadres to develop organisational commitment and solidarity capacities, but they were not transformed into technical experts. From what Mao said, it can be inferred that he wanted the 'red' cadres to imbibe technical skills, but he did not want them to lose their 'red' character.

Ideology and Centralisation under Mao

Schurmann (1967) divides ideology during the Mao era into "pure" and "practical". Pure ideology is a collection of ideas intended to provide the individual with a coherent and aware worldview. Practical ideology provides concepts intended to provide the reasoned tools for action. The CPC followed the ideology of Marxism-Leninism and the Thought of Mao Zedong. Schurmann (1967) describes that by presenting organisational ideas resulting from the application of Marxist theory to the issues of modern reality, Lenin established a practical ideology for the revolutionary movements that resulted in the formation of communist parties

all over the world. However, Mao moved one step further by creating the practical ideology of the Mao Zedong Thought. Marxism-Leninism acted as the pure ideology, and Mao Zedong Thought acted as the practical ideology. Every cadre had to emulate Mao to develop a mind set akin to the Chairman. Pure ideology took over and became chiefly important during the campaign phases of the Mao period.

A centralising tenet which acted as a counterpart to ideological and red factors was the Democratic Centralism of the CPC. This concept was essential to cadre management. First mentioned in a speech by Liu Shaoqi and later incorporated into the party constitution, the Leninist concept of democratic centralism drove CPC regulations. Liu believed "centralism" referred to impulses emanating from above, and "democracy" as impulses coming from below.[2] Democratic centralism meant that the lower levels should always follow the higher ranks, and local organisations should always follow the central organisation. Each member must also adhere to party rules to the letter and unwaveringly support its choices (CCP, 1945). Democratic centralism is followed to this date, where lower-level government and party bodies follow the order of their superiors.

During the Mao era, there would be a continuous tussle between the 'red' and 'expert' factors. Oksenberg (1968) divides the cadre recruitment and management system into two phases before the Cultural Revolution. The "campaign phase" was when the CPC's main priorities were to mobilise

the masses and focus on the revolutionary aspects of nation-building. This era peaked with the Great Leap Forward of 1958–60, the Socialist Education Campaign of 1963–64, and the Collectivisation of Land and the Socialist Industry Transformation in 1955–56. Oksenberg continues by saying that the "bureaucratic phase" took place when the main objectives were to boost commercial activities and bring social reform. Such stages occurred during shorter periods of economic moderation in 1954, 1956–1957, and 1961–1962.

During the campaign phase, the CPC frequently conducted recruiting drives, allowing 'red' members to join the Party in huge numbers. Political influence was essential for achieving nearly any goal. However, in the bureaucratic era, socioeconomic background became less important for gaining influence, and individuals with higher educational achievements were granted access to influential positions. Politics did not intensely permeate every aspect of society during the campaign phases.

The role of ideology was prominent in the campaign phases, through which the Party exerted control over the cadres and the masses. Shirk (1984) describes the Mao period as being ominated by virtuocracy during the Great Leap Forward and the Cultural Revolution phases. Political elites used virtue to elevate their followers and denigrate those who posed a danger since political virtue was open-ended and flexible. Cadres had to compete to prove their loyalty to achieve welfare benefits. It also became difficult to determine who

was a genuine believer in the Party ideology and who was a career opportunist.

During this period, the pure ideology of Mao Zedong's Thought was implemented during the Great Leap Forward and Cultural Revolution phases. Additionally, the rules of democratic centralism placed all the power in the central government or indirectly in Mao's hands. There were rarely any checks and balances, and the Leninist party structure gave the CPC great power.

Beginnings of Cadre Evaluation System under Deng

China underwent major economic reforms after the Great Leap Forward and the Cultural Revolution. Deng Xiaoping, the prime architect of economic reforms in China since 1978, was sidelined during the excesses of the Cultural Revolution. However, after Mao's death in 1976 and the fall of the Gang of Four, he was rehabilitated. He became the paramount leader of China in 1978.

Under Deng, China moved towards the formalisation of a cadre evaluation system. In 1979, the Organisation Department of the Central Committee released a document requesting the creation of a new evaluation system.[3] In a speech at a Politburo meeting in August 1980, Deng advanced the slogan of making the cadre corps "better educated, professionally more competent, and younger."[4] Deng stated his belief that China's previous many problems and errors had sprung from an excessive concentration of power and a

failure to establish a set of institutions. He lamented that China lacked "regular methods to recruit, reward and punish cadres or for cadres to retire, resign or be displaced" to an expanded meeting of the Politburo. He called for "drastic changes" in the "unsuitable organisational and personnel systems."

In order to replace the cult of personality with collective leadership, he suggested limiting the practice of a single person holding responsible roles in both the state and the party. Deng was the chairman of the Chinese People's Political Consultative Conference from 1978 to 1983 and Chairman of the Central Military Commission of the People's Republic of China from 1983 to 1990, while his official party positions were Vice Chairman from 1977 to 1982. He never became the general secretary of the CPC. It is believed by many that ideology completely vanished during this era. That is not true. The Party still drew political legitimacy from ideological factors, which helped it stay in power. Along similar lines, Deng called to "preserve the four principles" — upholding Marxism-Leninism and Mao's thought, the Socialist Road, the Party's Leadership, and the Proletarian Dictatorship.

Manion (1985) described that the cadre selection and evaluation system was decided by an official roster, known as the *nomenklatura* system, adopted from the Soviet Union. It indicated which top cadres are under its jurisdiction when making final personnel decisions like appointment, promotion, transfer, and removal. The *nomenklatura* system

under Deng became formalised and began using specific quantitative measures to evaluate cadres.

The Central Committee's Organisation Department proposed decentralising personnel management control at a National Conference on Organisation Work in July 1983. To prevent the Central government from having excessive authority, the cadre system underwent a reform in 1984, changing the control from "two-level down" to control over "one-level down." This change meant that the concerned upper-level government could only control cadre management for the next immediate level of government and not for the lower levels. For example, the Central leadership of the CPC could only manage the cadres at the provincial level. The provincial government would be in charge of the county-level cadres.

Effect of the Changes

Shirk (1984) says meritocracy endangered the legitimacy of senior party cadres. Those who derived their power from virtuocracy retaliated as meritocracy extended beyond the economic sphere to include education, administration, and even the internal procedures inside the Party. Meritocratic practices not only reduced Party leaders' influence over the selection and promotion of Party cadres but also reduced their ability to exert authority over workers in offices, factories, and other organisations.

Ideology under Deng reflected economic realities rather than trying to transcend these new realities with pure ideology.

Marxism-Leninism and Mao Zedong Thought became an expression of the institutional interests of the Party, even if it happened to contradict what Mao himself might have said at some point

The primary purpose of these changes was not to let power be in the hands of a single leader and distribute it laterally. Deng chose China's two subsequent leaders (Jiang Zemin and Hu Jintao) to avoid over concentration of power. Both these leaders would stay on for two terms and voluntarily retire. However, the fact that Deng could decide the course of action for the next two decades was a testament to his authority.

The power to select and evaluate cadres was also distributed vertically among the different levels of the administration with the "one-level down" system. Decentralisation of power and authority was essential to economic reforms under Deng, as power was delegated to the lower levels of government and was given subsequent economic freedom to make a transition to a market economy.

Post-Deng Politics3

Several reform efforts in the cadre management system were started in the early 2000s to strengthen the Party's ability to govern. These included enhanced inner-party democracy, changes in procedures for the assessment, advancement, training of state and Party cadres, and multi candidate elections for local village leaders (Shambaugh, 2016). However, these changes were not enforced vigorously. As a result,

cadres engaged in rampant corruption, and the inner-party democracy the top leadership had decided remained only on paper and was not implemented. Changes in the assessment included the addition of more diverse targets for the cadres to fulfil.

The Hu Jintao period was plagued by corruption and a lack of firm leadership. This could have motivated Xi Jinping's vision to create an over-centralised CPC. One instance of intense decentralisation was when, after a public order disturbance in a village in Guangdong province, Vice Education Minister Zhang Baoqing said, "China's biggest problem is obstruction of government decrees. Things formulated in Zhongnanhai sometimes do not even make it out of Zhongnanhai."

Chen (2018) saysthe inability of the central government to mobilise or control local cadres to carry out the institutional and ideological implementation of national policy was demonstrated as the Centre could not control the situation. There was inadequate coordination of policies, rampant corruption, and unstable divisions among the leadership under Hu's leadership. The masses and the CPC leaders embraced Xi's more assertive leadership when he entered office in 2012.

Power Concentration and Rise of Ideological Factors under Xi

President Xi Jinping has mentioned that "economic construction is the party's central work, ideological work is extremely important work for the party." (Xi, 2013). He has brought

back to life Mao's custom of mandating that all Party officials, including the Politburo and important province leaders, participate in critical and self-critical discourse and swear allegiance to the Party's central committee and him as its key figure.[5]

Xi launched various ideological campaigns for Party cadres during his rule, consolidating his control over them. Xi's first ideological campaign for the cadres in the Party's Education Programme was the Mass Line Programme, established in 2013.[6] The program aimed to correct four harmful behaviours, or "four-party styles," in Party cadres with supervisory roles: formalism, bureaucratism, hedonism, and prodigality. According to this new programme, cadres were to engage inself-examination and self-criticism as part of this curriculum and seek feedback from their subordinates (Xi, 2013).

In 2014, the 'Regulations on the Appointment of the Party and Government Leadership' was revised, highlighting the importance of the cadres' political dependability, professionalism, competence, moral self-regulation, and public trust. In 2016, the 'Three Stricts, Three Steadies' and 'Two Lines of Study One Way of Becoming' campaigns were launched to reform all Party members for leading cadres.[7] The Three Strict programme introduced the terms for cadres to study, political discipline and political protocols. The goal of the party member's development was for them to learn through self-study, self-training, and self-reform. The party's ideology dominated their thoughts and actions.

The first country-wide campaign launched by President Xi hinted at the 'Mass Line program' of Mao. During Mao's period, the Mass Line required close ties between the PRC's people and all Party organisations and Party activities. Xi may have started with the Mass Line programme, creating an illusion of a return to the masses, as in the Mao period. With the successive campaigns, Xi has made adhering to party directives synonymous with fulfilling the will of the masses. He has increasingly tried to combine the cadres' commitment to the masses with their political dependability, political discipline and political protocols. Li (2019) points out that "political protocol" was a new concept adopted during Xi's campaign in the Party's political lingo. It emerged in Xi's speeches in the middle of 2014 and the beginning of 2015. Calling it political protocol could mean further formalising rules that the cadre had to adhere to.

Xi believes that socialism should be "pure socialism and nothing else" and that "only socialism can save China and only socialism with Chinese characteristics can bring development to China."[8] We might see this as an allusion to the ideas of pure ideology that Mao relied on to form the thought process. Mao relied more on pure ideology during the Great Leap Forward and the Cultural Revolution. In another example of similarities between the two leaders, Xi has called on the CPC to face unexpected challenges and stated, "Marxism will not remain stagnant."[9] This can be compared to Mao's idea of a continuous revolution of the Chinese people, which was to be led by the CPC.

One of his major focuses in shaping ideological unification has been the concept of Party Discipline, first used by Mao in 1929. Xi first mentioned the term as part of the 'Four Comprehensives' in 2014. In his four-volume series called The Governance of China, he talks about how party discipline incorporates six subdivisions: political discipline, organisational discipline, integrity discipline, mass discipline, work discipline, and everyday life discipline.[10] Political discipline is designed to "ensure cadres maintain a high degree of unity with the Central Committee, and follow its commands, at all times and under all circumstances" (Xi, 2017).

The Cadre regulations that the Party are written and distributed by Party organisations such as the Central Disciplinary Committee, the Organisation Department, or the Propaganda Department, under the name of Zhongfa.[11] They are occasionally released in tandem by the Ministry of Personnel, the State Council, and various Party departments. The lines have become blurred regarding the rules and regulations of the government and party cadres as state ministries publish no documents.

Li (2019) says Ideological Responsibility has been included as an indicator of the cadre evaluation system since 2016. The weight of ideological responsibility is equal to or greater than that of the formation of the economy, the political system, the culture, the ecological civilisation, and the Party. Party committees or party groups handle ideological work at all levels, and the party bodies retain all the power in cadre management.

Along with the rise of ideology under Xi, there has been an attempt to correct the cadre's conduct towards the party, bolstering Xi Jinping's and the party centre's power. The campaign's goal was now to focus increasingly on the party centre, masked under the fulfilment of the interests of the masses. Moreover, Xi was designated the party's "core" in 2016, becoming the centre of the party in every sense, dismantling the collective leadership established by Deng.

The Xi Jinping Thought and his Governance of China series had become an essential part of the cadres' study. It became increasingly challenging to distinguish between Xi's new stance and the party centre. The conflation strengthened party members' ties to Xi Jinping and cemented his organisational leadership.

However, there is no uniform system of promotion and demotion of cadres under Xi. Landry et al (2017) prove that local officials are promoted more based on performance, and higher officials are judged more on loyalty to the Party. When a cadre reaches the upper echelons of CPC leadership, it has become more important that the mindset of the cadres matches with Xi's.[12] Political relationships, therefore, become more significant as one moves up the political ladder.

Disciplinary Campaigns

Xi also centralised power through disciplinary campaigns. If ideology can be termed as the theoretical hand of Xi's centralisation process, disciplinary campaigns are the practical

hand. Disciplinary campaigns under Xi have indicted many officials, both high- and low-ranking, which he calls "smashing tigers and flies" (China Media, 2015). Launched in 2012, Eight Provisions instilled stricter discipline among party members and brought the party "closer to the masses." In 2013, the Commissions of Discipline and Inspection (CDIs) nationally examined more than 30,000 Party officials for breaches of Eight Provisions in the campaign's first year and imposed disciplinary punishments on 7,600 of them. (Li, 2019)

The Party granted the Central Commission for Discipline Inspection (CCDI) permission to open outposts in all Party-State institutions in 2013 (Li, 2015).The CCDI has also indicted officials on the newly-formed concepts of 'political discipline.' The depoliticisation of the Party's disciplinary system, which began in the 1990s, is being reversed as the implementation of political discipline is being normalised. These indictments demand that every Party member shows devotion and loyalty to the Party. The ideological campaign shapes the disciplinary campaign's political viewpoint, and the disciplinary campaign strengthens the ideological campaign.

Age Violations under Xi

Under Deng's reforms and the consequent continuation of reforms under Jiang and Hu, the formal age for retirement was never set in any Party documents. However, informal age restrictions were incorporated for prominent positions to prevent life tenure for a single leader, originating from Deng's early 1980s cadre system reform. Kou and Tsai (2015)

talk about how the primary political role of high-ranking officials is to strengthen the leader's authority. Throughout the CCP regime's history, this has led leaders to hold allies accountable for provincial and ministerial level positions.

Previous leaders like Jiang and Hu elected loyalists to the upper echelons. They voluntarily retired after two terms (although both remained Chairman of the CMC for a period after their retirement). For officials holding positions in the Politburo and the broader Central Committee, an age limit of 68 has been enforced at recent party congresses. This guideline is known in China as the "seven up, eight down" rule, or qīshàngbāxià (Shirk, 2018). However, Xi has been appointing officials loyal to him, even if they have crossed the age limit.

For example, in October 2017, Wang Qishan announced his retirement from the CCP Politburo Standing Committee, but in March 2018, he was chosen to serve as the PRC's vice president. It was anticipated that he would retire at age 68. Similarly, in 2022, Cai Qi was elected as the first-ranked secretary of the Secretariat of the CPC, even though he would reach his retirement age during his tenure. Xi himself has continued in the three posts of General Secretary of the CPC, President of China and the Central Military Commission (CMC) Chairman for the third term in 2022, violating the informal age norms.

Conclusion

It would be incorrect to say that during the Mao period, virtue took over all cadre management and evaluation aspects. There were numerous aspects of bureaucratisation and

emphasis on the 'expert' factors. However, due to the centralising nature of the party-state and the CPC constitution, the state concentrated tremendous power over cadres, especially during the "campaign" phases. Moreover, leading cadres used their growing affluence to wield power and use characteristics of 'virtue' for their benefit. Finally, Mao's ideological campaigns to revive his accurate idea of virtue culminated in failure in the form of the Great Leap Forward and the Cultural Revolution.

In the Deng era, the rise of the technocrats was evident in the later stages of the 1970s and throughout the 1980s. That did not mean there was no emphasis on ideological factors. However, cadre management under Deng became comparatively decentralised for the purpose of nation-building and Deng's ideas of economic liberalisation.

In the Xi era, there was a refocus on ideological factors, combined with disciplinary campaigns and age violations, which scrutinised cadres more closely. A recentralisation of authority has occurred under Xi, as was the case under Mao. The cadre management system has evolved dramatically from its formal institution in 1955 to now.

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Unlocking the Middle Corridor to Leverage Trade Potential between the People's Republic of China and Eurasian Countries: Opportunities, Challenges and Policy Implications

Dr. Falendra Kumar Sudan*

Abstract

This study analyses the opportunities and challenges to develop the Middle corridor and draw policy implications for sustainable and inclusive trade between the People's Republic of China (PRC) and European Union (EU) for stronger regional trade integration along Eurasian route due to Russia invasion of Ukraine and consequent sanctions against Russia. The study has used desk approach research, and secondary data and information applying content analysis and data triangulation method. The study reveals that Russia–Ukraine war induced logistics disruptions along the Northern corridor have reduced trade flows by 40% between the PRC and EU. In 2021, just 8% of cargo passed via the Middle corridor in Eurasian region. The Middle Corridor saw a 52% surge in cargo traffic between 2020 and 2021. The next year, the increase was in excess of 120%. |In 2022, considerable switch to the Middle corridor caused large trade volume of 3.2 million tonnes transit along route, which is expected to reach 10 million tonnes in the near future. All this has attracted investors to the Eurasian region to develop hard and soft infrastructure along the route through stronger

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trade integration and regional cooperation in developing production networks, regional value chains, ports, and shared customs and regulatory mechanisms to draw cargo away from the Northern corridor.

The reliability of the Middle corridor in terms of cost–efficient cargo transit, and smooth and in–time border crossing should be ensured through better trade facilitation for greater intraregional trade, development of industrial zones and market centers like the Northern corridor. Unlocking the full potential of the Middle corridor will have to address substantial challenges linked to effective governance, efficient infrastructure and robust institutions. The bureaucratic and administrative delays and corruption at customs clearance should be tackled effectively at the border crossing points to minimise transit time and costs.

Introduction

The Middle corridor region comprises Southeast Asia and the People's Republic of China (PRC), and passes via Kazakhstan, the Caspian Sea, Azerbaijan, and Georgia to the European Union (EU) nations (Trans–Caspian International Transport Route [TITR] Association, 2022). The Caspian Sea is the biggest interior water reservoir on the earth, which lies between Asia and Europe and share boundary of Caucasus Mountains and massive Central Asian steppe. The Middle corridor region constitutes Asian countries of Kazakhstan, Russia, Azerbaijan, Iran, and Turkmenistan and European countries bordering coast of Caspian Sea (World Atlas, 2021).

During the last two decades, the PRC has emerged as a major economy in the Middle corridor region due to enhanced trade, infrastructure investment and economic growth via its planned integration into global markets (Palue and Hilmola, 2023). The PRC's trade with the South Caucasus countries of Armenia, Azerbaijan, and Georgia, foreign direct investment (FDI) and official finance in different development projects have surged considerably during 2010–2020 (Popkhadse, 2021). Besides exports to the South Caucasus regional countries, the PRC focuses on development of oil, gas, and metals sectors in the region to meet its growing import demand and also develop the regional countries as PRC's gateways to bigger Eurasian markets, which provide scenarios for PRC's infrastructure development in the region mainly under the Belt and Road Initiative (BRI) (Inan and Yayloyan, 2018).

Before the Russia–Ukraine war, up to 90% of freight between the PRC and EU countries plied through the Northern corridor due to considerably well-developed hard and soft infrastructure including shorter rail networks and fewer border-clearance points (Devonshire-Ellis, 2021). The Russia–Ukraine war is viewed as a turning point in the PRC–EU transport policy. Immediately after Russia's invasion of Ukraine, close to half of the transportation activity along the Northern corridor was deferred by the rail and logistics operators (Brixsweden, 2022). This was followed by almost a complete halt of cargo traffic along the Northern corridor due to the EU's severe economic sanctions against Russia, and a reorientation of trade cargo via the Middle corridor between the PRC and the EU countries (Eldem, 2022).

The United States (US), the EU, and other countries including Australia, Canada, Japan, South Korea, and New Zealand have imposed comprehensive sanctions against Russia following the February 2022 invasion of Ukraine. US sanctions comprise curbing the Bank of Russia to withdraw dollar stocks, forbid big Russian banks to transact in dollars, and ban novel investment from US to Russia including export restrictions on US technologies, import prohibition of some items from Russia, and ban on Russian use of US airspace and ports, besides economic sanctions such as entry ban on thousands of Russian persons, officials, military officers, etc.

The US and EU collaborated in inflicting sanctions against Russia and the EU imposed US–like sanctions (Archick, 2023; Belkin et al., 2023; Welt, 2022). The US imposed export restrictions on Russian defence and seaborne economy, ban on imports of Russian oil and energy goods, and deferred usual trade ties including imports of alcoholic beverages, diamonds, gold, marine foods and export of luxury items to Russia (Welt, 2022). The EU enlarged export restrictions on oil refining technologies and banned exports of aviation, maritime, and technology products including drone engines and luxury items to Russia and stopped majority of imports of crude oil and petroleum products, imports of coal, alcoholic beverages, gold, seafood, and steel from Russia (Archick, 2023).

While the EU has not inflicted sanctions on imports of natural gas, but Russia has considerably lowered exports of natural gas to the EU. However, the EU prohibition of maritime oil imports

from Russia and price ceiling imposed by the G7 countries on oil imports from Russia generated economic strains on Russia (Welt, 2022). The EU also imposed restrictions on Russian cargos and access to ports and docks.

Following the sanctions, Russia faced constraints in making imports transactions and receiving exports payment due to ban from the Society for Worldwide Interbank Financial Telecommunication. Exports to Russia declined by 89% from the United Kingdom, followed by 85%, 52%, and 41% respectively from the EU, the US, and Japan during October 2021 to October 2022, which caused supply scarcities in Russia specifically of vital inputs, components, and technology. Russia also experienced decline in 60% of state revenues from exports of energy, fertilisers and grains (European Union, 2023). The EU looks for alternative to imports of oil and gas away from Russia and towards the Central and Western Asian economies (Perdana et al., 2022). Despite all these novel scenarios, the transportation infrastructure of all sorts including road, rail and pipelines along the Middle corridor were not well developed like the Northern corridor, which makes the Middle corridor comparatively slower and less cost effective than the Northern corridor.

The Russia–Ukraine war disrupted demand and supply chains including the trade flows between the PRC and EU countries due to significant fall in shipping cargo traffics. The imposition of trade sanction led to a 40% decline in trade via the Northern corridor in 2022 compared to 2021 (Eldem, 2022). The decline in exports from major countries to Russia is significant during

2021–2022. For instance, the exports from the EU to Russia declined by US$4.6 billion, while exports from the US and United Kingdom declined by $400 million each, and exports from Japan declined by $300 million from 2021 to 2022 (EU, 2023). Trade volume between the EU and PRC through the Northern corridor has declined from 618,180 twenty–foot equivalent units (TEUs) standard–sized containers in 2021 to 386374 TEUs in 2022 by 31.9% in 2022 from 2021 (Rail Freight . com, 2023). The Europe–Asia trade has experienced significant imbalance. For instance, the EU's exports to PRC stood at US$280 billion, while the EU's imports from PRC recorded at US$700 billion (United Nations Economic and Social Council [UNESC], 2022).

The changed scenarios impel considerable adjustments and switch to alternative transport routes such as the Middle corridor. Since the COVID–19 crisis, there has been considerable increase in cargo transfer to rail between the PRC and Europe along all the routes. The cargo traffic along the Middle corridor significantly surged after Russia–Ukraine war due to shutting down of shipping facilities at Ukraine ports and switch from the Northern route via Russia. The size of the cargo via the Middle corridor surged six–times in 2022 as compared to 2021 (Eldem, 2022). The cargos transported through the Middle corridor have surged considerably from 20000 TEUs in 2022Q1 to 80000 TEUs in 2022, while its maximum capacity has been estimated at 100,000–120,000 TEUs (Usov, 2022). These events pushed cargo traffic to the Middle corridor as an alternative freight transport route between the PRC and the Europe. All

these development has motivated the logistics players in the Middle corridor to push considerable investment in both the hard and soft infrastructures to improve the existing capacity. However, the investment potential and opportunities are likely to be profitable if the freight demand along the Middle corridor is sustained at current levels. In recent years, the sea–cargo traffic has also rebounded to recapture the market share. Therefore, the transport and logistics players along the Middle corridor should assess the quantity of cargos served over the years and novel freights performed in recent years to plan the investment.

The PRC and EU attempts to maintain stability in the South Caucasus region to serve their economic interests, which entail bolstering the Middle trade corridor to link Eurasian markets was imperative. Besides, the Middle corridor was considered comparatively cost–effective and stable to link Eurasian markets than through Iran, which is facing severe economic sanctions from the US (Devonshire–Ellis, 2022). The PRC–US trade conflicts also motivate the PRC to manoeuvre and seek alternative to the Suez Canal route for better ties with the EU markets via the Middle corridor despite scant infrastructure and heavy trade cost than the Northern corridor. The PRC–EU cooperation targets bolstering transport and energy corridors via the Middle corridor. Before, Russia's invasion of Ukraine, the EU stayed extremely cynical to the PRC's BRI and termed it as the PRC's global economic and political dominance confronting the EU's regulation–based global order (Grieger, 2021). The EU's Europe–Asia Connectivity Strategy (2018) and

Global Gateway Strategy (2021) were launched to counter the BRI, but remained sluggish (Lau and Moens, 2022). After Russia's invasion of Ukraine, the EU faced considerable trade disruptions and energy shortage, which compel the EU to reorient its strategy towards PRC's BRI (Katja, 2023). The EU's reorientation is directed towards fostering development of Middle corridor by harmonizing BRI and the Trans–European Transport Network (TEN–T) to tackle contemporary issues such as iniquitous procedures and institute lawful hurdles to enhance involvement of European entities. The EU also plans to integrate the BRI TEN–T ventures and influence BRI to enhance infrastructure in the Eastern European countries. Despite all these development, the Middle corridor faces numerous challenges but also provides opportunities to leverage trade participation of the PRC and Eurasian economies in regional value chains (RVCs) and global supply chains (GVCs), which need to be addressed to improve the efficiency of transport corridors in the regional economies. However, very scant literature exists on how unlocking the Middle corridor can leverage the trade potential between the PRC and the Eurasian Countries by reaping the existing opportunities and addressing the challenges from the policy perspective, which this study intends to accomplish.

Objectives

Russia–Ukraine war has severely disrupted the RVCs and GVCs and produced enormous ambiguity in transnational cargo trade between the PRC and the Eurasian countries due

to extraordinary sanctions against Russia imposed by the US and the EU. Big logistics firms have redirected cargos via alternate routes between Asia and Europe than Russia since the onset of the conflict. In this context, the Middle corridor presents an express alternate rail route between the PRC and the Eurasian countries, whose current rail trade share stood at below 5% due to slow increase in rail services since its commencement. In spite of this, major EU's logistics firms and the PRC's rail operators have been cautious of making substantial investments in the Middle corridor. Against this backdrop, the main objectives of this study have been to analyse the opportunities and challenges to develop the Middle corridor, and to draw policy implications for the PRC, EU, and India to leverage the opportunities and address the challenges caused by sanctions against Russia and strengthen the Middle corridor for greater transnational trade between the PRC and the Eurasian countries.

Methodology

A desk approach research has been used to review relevant extant literature, including related scientific studies and reports. Secondary data and information have been sourced from national and international publications, including from the PRC, using content analysis and data triangulation method. This data was later analysed through a deductive content analysis technique. The descriptive approach has been applied to analyse a scenario in its present state specifically when extant information is scant. Knowledge on the impact of the Russia –Ukraine war on trade and transit routes in the Middle

corridor countries in general, and the Eurasian region specifically between the PRC and EU in particular is still evolving and scarce. Therefore, robust qualitative research is still needed to analyse the challenges and opportunities of the Middle corridor to bolster the PRC–Eurasian trade in the context of Russia –Ukraine war and sanctions against Russia. This study is expected to add significantly to the theoretical literature and draw practical policy implications.

Conceptual Framework

A transport corridor refers to clusters of transportation and logistics network linking different economic centres (Priemus and Zonneveld, 2003). A transport corridor can be transformed into an economic corridor by upgrading infrastructure. An economic corridor embraces significantly more compared to a transport corridor (Abdullaev and Akhmedov, 2021) including both the soft and hard infrastructure for promoting greater domestic and/or regional economic pursuits and generates massive prospects to eradicate poverty and realise comprehensive growth (CAREC Institute, 2019). Transport corridors help reduce development deficits in regional landlocked countries through greater access to regional markets and production networks and foster efficient utilization of available regional resources and intraregional trade.

The Middle corridor refers to trade and transit routes covering the Central Asia, Caspian Sea, and Caucasus regions. The Middle corridor consists of above 4250 km and 500 km of rail networks and sea route respectively. This route connects the

rail cargo transport networks of the PRC and EU via countries of the Central Asian region, the Caucasus, Turkey, and Eastern Europe, and provides an alternative route than the Northern corridor passing through Russia (Kenderdine and Bucsky, 2021a). The Middle corridor connects rail container mobility networks and markets of Eurasian countries in general and the PRC EU markets in particular. The Middle corridor has received much attention in the Eurasian countries including the PRC and the EU economies since sanctions imposed on Russia after invasion of Ukraine (Eldem, 2022). Therefore, the Middle corridor can be a potential alternative transport route between the PRC and EU for stronger regional trade integration. Figure 1 portrays the Middle corridor and Table 1 shows the main transport corridors linking Asia and the European countries.

Figure 1: The Middle Corridor

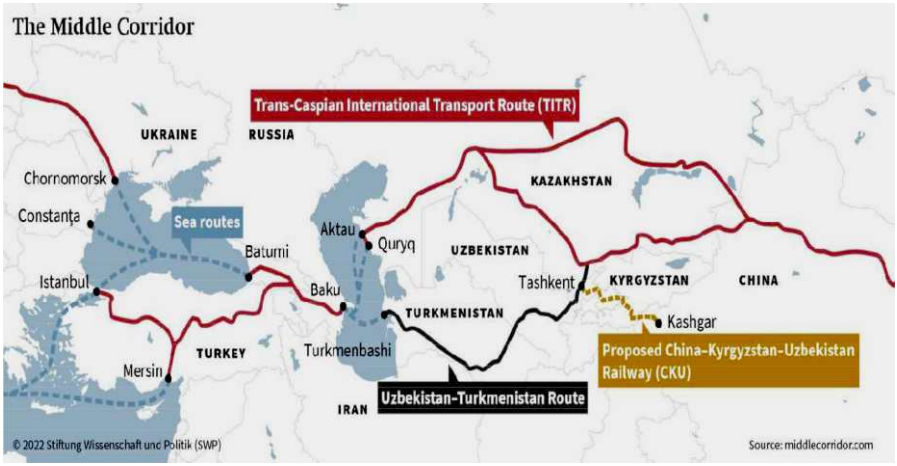


Table 1: Main Transport Corridors Linking Eurasian Countries

Transport Corridor	Description
Northern corridor	Connecting Northeast Asia's ports of Russian Far East and East and Northeast of the PRC to European economies through Trans–Siberian Railway Network via Russian Federation, Mongolia and Kazakhstan
Middle corridor	Connecting Russian Federation and the EU with PRC, Central Asian economies and ports of Arabian Sea
Southern corridor	Connecting the PRC and Southeast Asian economies via marine route to the EU

*Source: Author's compilation based on **KMI** and **UNESCAP** (2019) and Rodrigue (2020)*

Transport corridors facilitate greater mobility of people, international trade, and regional integration. Despite the increasing significance of transport corridors to promote regional trade and integration of RVCs, the benefits remained fairly small and inconsistent. Better execution of transport corridor development entails sound knowledge of its different phases, as shown in Table 2.

Table 2: Phases of Transport Corridor Development

First phase	Development of transport infrastructure through building or revival of highways to enhance physical connectivity and greater mobility of goods between regional economies
Second phase	Links to integration of multiple transport modes for improved trade
Third phase	Links to development of logistics corridor which stimulates economic diversification, businesses, manufacturing, and services
Fourth phase	Transformation of transport corridor into economic corridor, which fosters sustainable economic growth, greater diversity, and invigorating novel economic activities via greater regional economic integration

Source: Author's own

Review of Literature

In the last decade, rail corridors connecting various towns of the PRC and EU countries have developed to boost trade and investments (Zhang and Schramm, 2020). Rail links between the PRC and EU countries can be grouped into: the Northern corridor linking the PRC to Trans–Siberian Railway routes via Russia, the Mid¬dle corridor connecting New Eurasian Land Bridge in the PRC to Rotterdam (Netherlands), the Southern corridor linking land and sea via Caspian Sea to Europe. In 2001, the PRC joined World Trade Organization (WTO) and followed a 'Develop the West' strategy (2000), which motivated the PRC to invest in the Central and Western regions (Ma and Summers, 2009) comprising about 70% of PRC's land (Xinhua, 2009). This led to the development of PRC's all types of transport infrastructure (Garver, 2006; Yu et al., 2012). 'Develop the West' guided the development of multimodal transport centers in PRC's major cities, which produced novel trade flows (Jakóbowski et al., 2018). In 2011, electronics and automotive companies operating in these towns stipulated for competent cargo services using extant rail transport network, which ultimately guided the development of the PRC–EU rail transport corridors at 33% and 50% lower costs than air and ship cargo (Rastogi and Arvis, 2014).

The PRC–EU rail transport corridors linked many cities of the PRC to EU cities (Mo, 2020), opened the gateways for novel trade opportunities (Woxenius, 2007), enhanced productivity, reduced transport costs, and influenced trade links (Rietveld and Bruinsma, 1998), strengthened economic integration (Srivastava,

2011), and promoted dependence of transit neighbours in landlocked countries on infrastructure, cross–border political cooperation, security, and organisational practices (Faye et al., 2004). This approach targets to switch in production models and steered landlocked nations to completely integrate into GVCs, but also displayed the PRC's geopolitical aspirations (Olinga –Shannon, et al., 2019). Development of hard infrastructure aimed to foster trade facilitation aimed to reduce the transit time (AIIB, 2019; Stone and Strutt, 2010), while bolstering of the soft infrastructure targeted to lower border–crossing costs along the corridors (Basu and Rajput, 2017). Trade facilitation reforms along the New Eurasian Land Bridge corridor also posed challenges to achieve greater performance (Pomfret, 2019).

The EU aims to bolster energy security through development of the Trans–Caspian Gas Pipeline to transport Turkmen gas via the Caspian Sea (IISS, 2018). The supply chains disruption induced by Russia invasion of Ukraine led to emergence of the Middle corridor as an alternative transport route linking Asia and Europe (CMS, 2018). This has been built on already recognised gas and oil transit corridor. However, unlike the PRC's command economy, the EU forbids straight interference in rail transport and permits rail networks to function on principles of market economy (Kenderdine and Bucsky, 2021b; Kenderdine, 2018). There is a mistaken argument that the PRC is investing in development of rail transport along the Middle corridor despite the fact that the China Rail Express system operates a cargo subsidy programme to increase rail cargo mobility between the PRC and EU, using the available hard infrastructure (Bucsky and Kenderdine 2020).

The PRC reckons the existing strategic advantage of subsidizing the Middle corridor in terms of generating novel markets and surge in traffic flows along the route. The PRC's local markets can gain from new transport routes, which entail substantial investment in both the hard and soft infrastructures to surmount surge in rail cargo. The reduced transit costs to the Eurasian countries entail sustenance of the PRC's subsidies over long–run to generate traffics along the route. However, the PRC envisages more strategic gains than economic benefits, whereas the European players consider the smaller long–run advantage from investment along the route. Therefore, development of Middle corridor depends on the PRC's local policy support for transport and techno–industrial development (Kenderdine and Bucsky, 2021a).

The review of literature makes it evident that the studies focusing on the opportunities and challenges in the Middle corridor to leverage trade potential between the PRC and Eurasian countries are non–existent from policy perspective. Therefore, this study is a modest attempt to fill this knowledge gap by analysing the opportunities and challenges in the Middle corridor to leverage trade potential between the PRC and Eurasian countries frompolicy perspective and to draw policy lessons for the PRC, EU, and India.

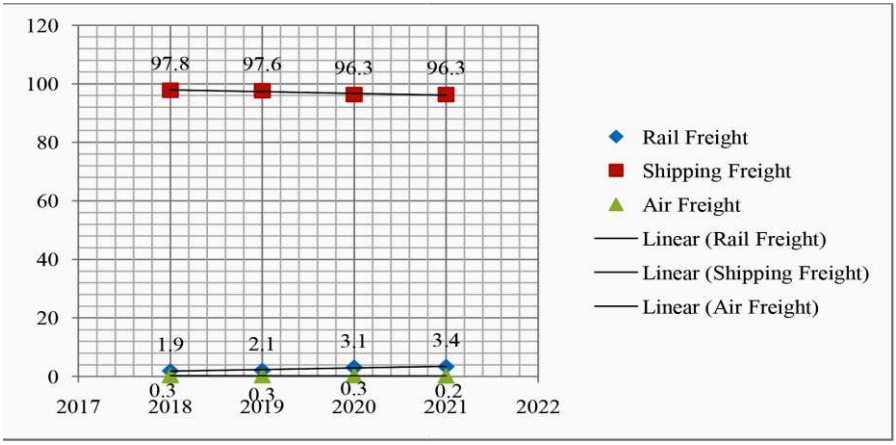
Results and Discussion

I. Opportunities along the Middle Corridor

The Middle corridor can be the shortest railway corridor between the PRC and EU with significant potential for

improved economic integration and regional cooperation (Kenderdine and Bucsky, 2021). The available potential of overland freight movement from the PRC to EU countries demonstrates steady capacity and significant opportunities. Figure 2 shows that rail freight continued surge from the PRC to EU during 2018–2021, while the share of shipping freight movement declined gradually, and air freight movement remained constant from 2018 to 2020 but declined in 2021.

Figure 2: Change in Rail, Shipping, and Air Freights from the PRC to EU, 2018–2021 (%)



Author's graph based on data from www.eurostat.com

Figure 3 shows the frequency and transit time from the PRC to Europe along the Middle, Ocean, and the Northern routes. The Middle corridor is highly efficient in trade transit time between the PRC and EU than Northern route. The Middle corridor presents the EU's entry to emerging markets of Caucasus and Central Asia, Middle East and North Africa, and European Mediterranean regions (Walter, 2022). Figure 4 depicts

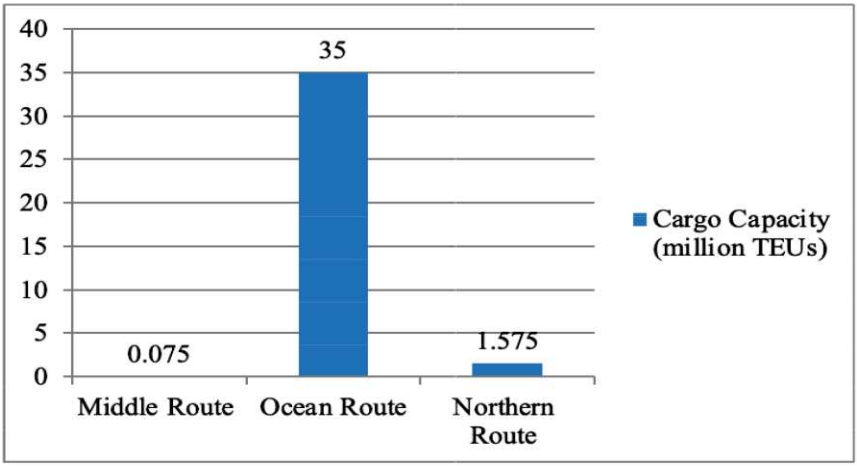
the cargos capacity from the PRC to Europe in the three routes, and Figure 5 reveals the significant surge in traffic size along the PRC–EU–PRC freight trains along these routes between 2015 and 2022. This growth in traffic volume can be attributed to subsidies provided by the PRC's local governments to develop industries and value chains (Pepe, 2020).

Figure 3: Frequency and Transit Time from PRC to Europe along Middle, Ocean, and Northern Routes

Route	Frequency	Transit Time
• Middle Route • Ocean Route • Northern Route	• 1-4 per day • 5.35 sailing days • 41.6 block train sets	• 22-24 days • 12.20 days • 35-45 days

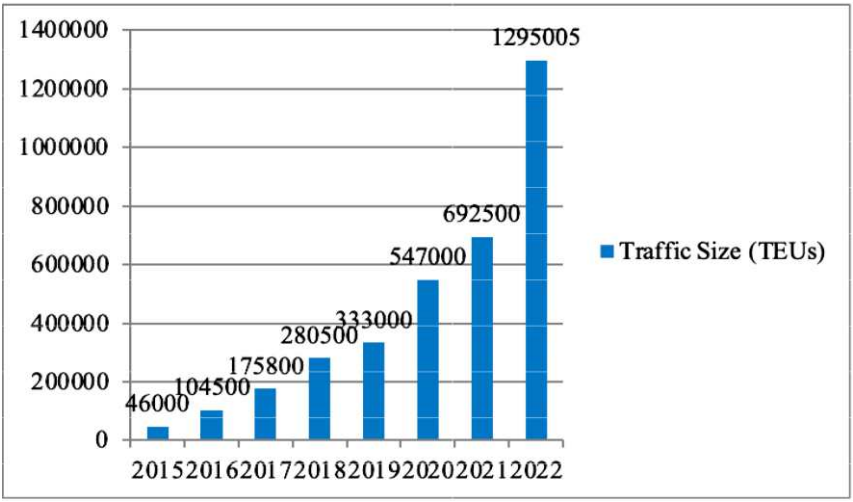
Author's table based on data from www.utlc.com

Figure 4: Cargo Capacity from PRC to Europe along Middle, Ocean, and Northern Routes



Author's graph based on data from www.utlc.com

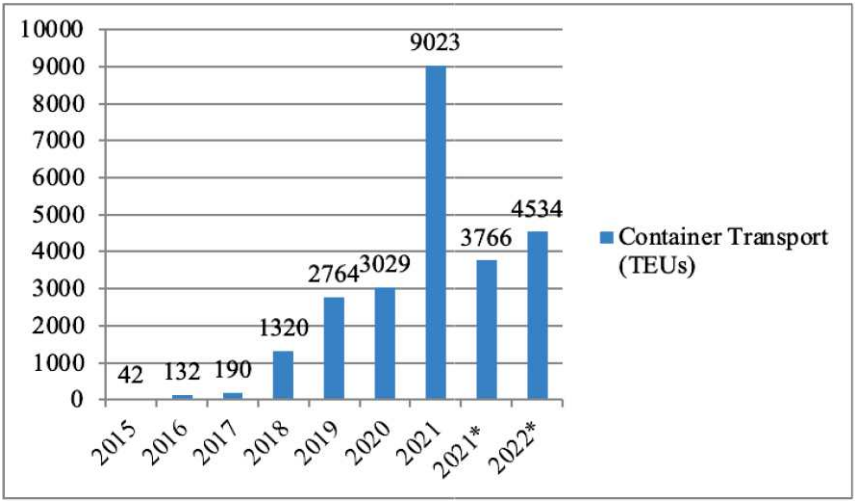
Figure 5: Traffic Size along PRC–EU–PRC Freight Trains, 2015–2022



Author's graph based on data from www.utlc.com

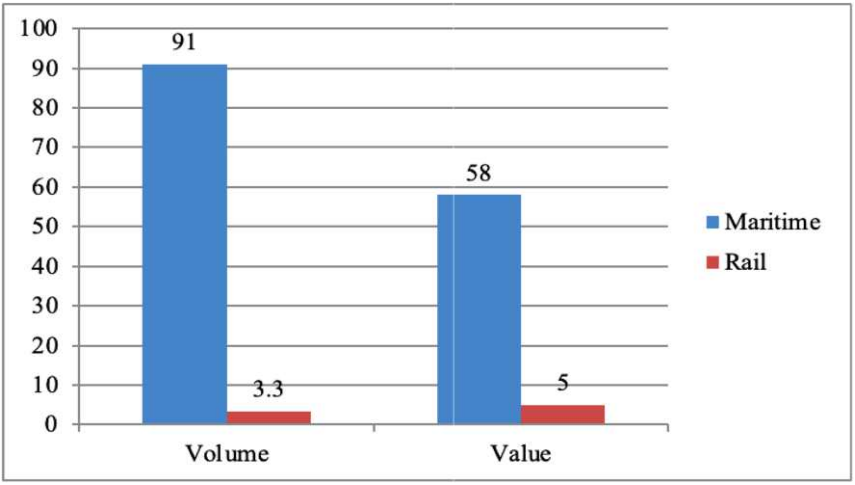
Figure 6 describes the container transport between the PRC and Europe through the Middle corridor, which increased considerably from 2015 and specifically after 2020. In 2021, the PRC–Europe trade via the sea route stood higher in both volume and value terms compared to rail route along the Middle corridor (see Figure 7), while the Northern corridor transported 86% higher than the land traffic between the PRC–Europe in 2019–2021 and the total traffic through the Middle corridor stood at less than 1% (World Bank, 2023).

Figure 6: Container Transport between PRC and Europe through the Middle Corridor



Author's graph based on data from the UNESC (2022)
**Duration of five months*

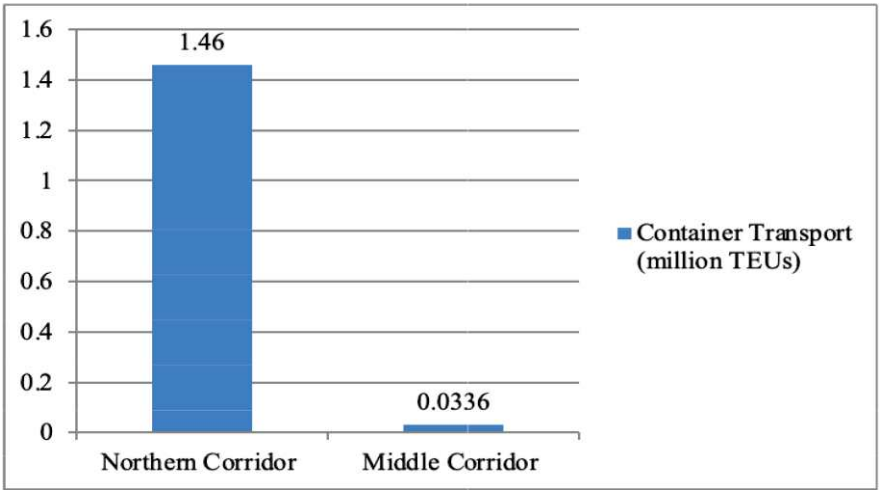
Figure 7: PRC–EU Trade through the Middle corridor, 2021 (%)



Author's graph based on data from The World Bank (2023)

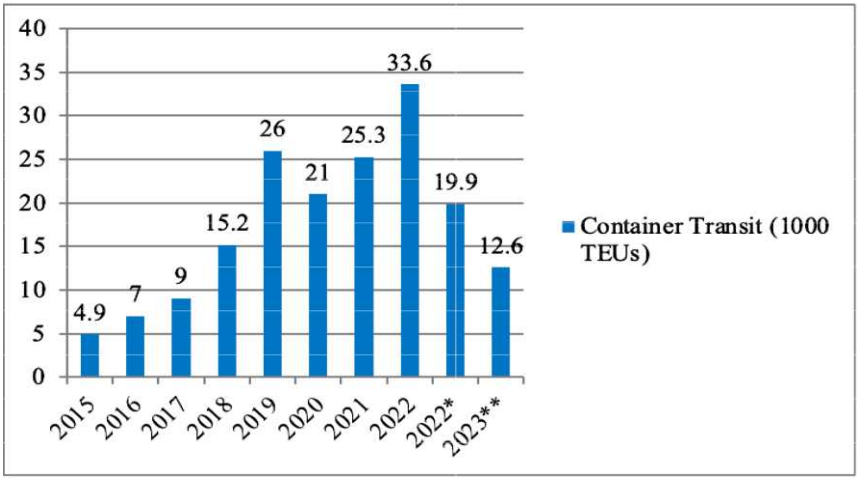
Figure 8 shows that container transport remained considerably higher through the Northern corridor compared to the Middle corridor in 2022, which reflects that the Middle corridor has very limited capacity to fulfill the whole trade cargos requirements and to substitute the Russian routes. Russia–Ukraine war results in fresh impetus to the Middle corridor because most of European transport companies avoided the Northern routes for trade activities as a dissent to Russian invasion and shun confronts of cargos' insurance moving via the Russian routes. Consequently, the choice of trade transit through the Caspian Sea turns relatively appealing and got extraordinary attention after March 2022 till October 2022. The container transport through the Middle corridor surged by 33% in 2022 compared to 2021, which is attributed to switching away of export traffic from the PRC to EU from the Northern corridor due to sanctions imposed on Russia. Figure 9 displays considerable loss in extra freights due to cost inefficiency along the Middle corridor and switching the cargos via sea routes by March 2023. However, the Middle corridor is a highly vital trade cargos alternate route due to 40% decline in the PRC–EU freights via Northern corridor due to Ukraine war (Eldem, 2022).

Figure 8: Container Transport through Northern Corridor vs. Middle Corridor in 2022



Author's graph based on Staff Report (2023)

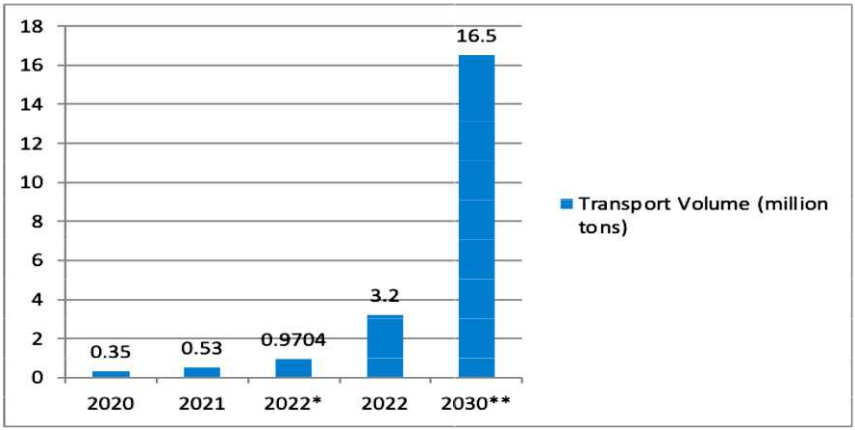
Figure 9: Dynamics of Container Transit along the Middle Corridor



Author's graph based World Bank (2023) data
**March 2022, and **March 2023.*

Figure 10 reveals the growth in transport volume along the Middle corridor by 2030. In 2022, the transport volume along the Middle corridor surged by three–times from 2021 and is expected to increase to 15–18 million tonnes by 2030 depending on growth of cargos capacities (Walter, 2022). Thus, the Middle corridor demonstrates substantial potential for trade and transport transit between the PRC and the Europe compared to the Northern corridor.

Figure 10: Transport Volume along the Middle Corridor

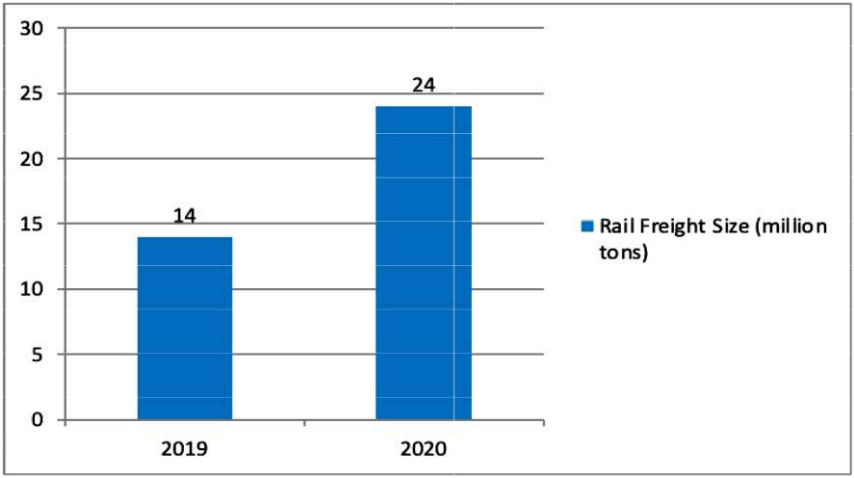


Sources: www.utlc.com and Walter (2022) and Chang (2023)
**First ten months and **15–18 million*

Rail freight size surged significantly from the PRC to EU from 2019 to 2020 (see Figure 11), which can be attributed to a substantial surge in sea freight costs per 40–foot–equivalent –unit (FEU) from a low level in mid–2020 to late–2020 (see Figure 12). More than seven–times surge in sea freight rates increase the transport costs to freight operators and logistics firms, which increased the magnetism of the inland transport due to considerable savings to the freight operators in the Middle corridor compared to the Ocean route (see Figure 13).

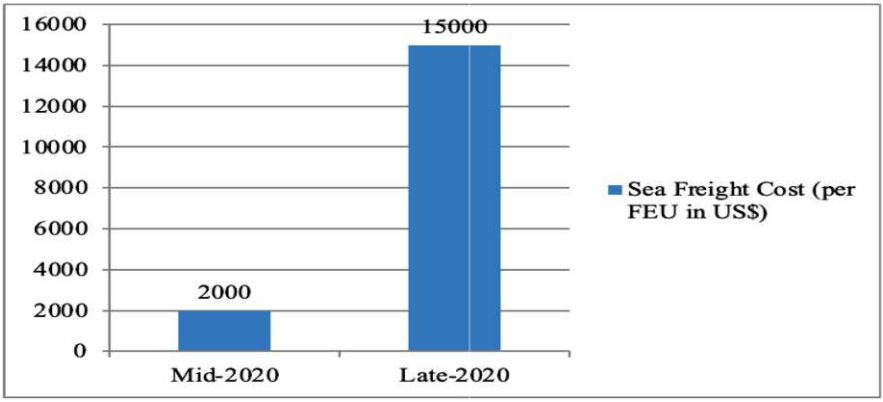
Thus, the Middle corridor's cost–efficiency has been estimated at about 3.9 times (US$0.5 million) compared to the Ocean route (CAREC Institute, 2022).

Figure 11: Rail Freight Size from the PRC to Europe in 2019 and 2020



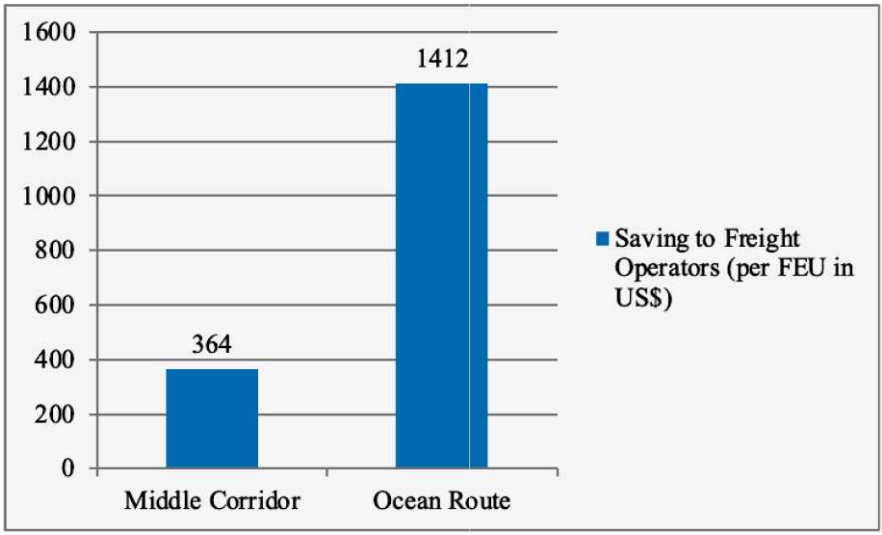
Author's graph based on data from CAREC Institute (2022)

Figure 12: Sea Freight Cost from the PRC to Europe, Mid–2020 and Late–2020



Author's graph based on data from CAREC Institute (2022)

Figure 13: Saving to Freight Operators in the Middle Corridor vs. Ocean Route in Late–2020



Author's graph based on data from CAREC Institute (2022)

The logistics disruptions along the Northern corridor have reduced trade flows significantly between the PRC and the EU due to Russia–Ukraine war (Ruta, 2022), which provides attractiveness of the Middle corridor as an alternative trade route to the Eurasian countries. In 2021, just 8% of the cargos passed via the Middle corridor in Eurasian region. The Middle corridor has experienced 52% surge in cargo traffic between 2020 and 2021 and above 120% increase in cargo traffic along the route between 2021 and 2022. In 2022, trade volume in the Middle corridor surged to 3.2 million tonnes, which is expected to reach 10 million tonnes in near future. This shows tremendous potential to bolster trade integration and stronger

regional cooperation among the Eurasian countries, and the PRC and the EU. The Middle corridor has the potential to lower the trade transit time between East Asia and Europe to about 12 days compared to 19 days along the Northern corridor and 22–37 days through the Indian Ocean route (Eldem, 2022). The Middle corridor countries and firms are showing their interest to develop the hard and soft infrastructures along the route through stronger trade integration and regional cooperation in developing production networks, RVCs, ports, and shared customs and regulatory mechanisms to magnetise the cargo away from the Northern corridor.

The PRC invested US$962 billion globally under the BRI, of which construction and investment stood respectively at 23% and 15% in the Silk Road Economic Belt passing through trade corridors of the Central and Western Asia linking regional economies and the Eurasian countries (Wang, 2023). The EU's logistics firms such as Maersk, Nurminen Logistics, Rail Bridge Cargo, CEVA Logistic, and numerous PRC's rail operators and freight forwarders mostly the state–backed capital and state–owned logistics firms than the private companies (Fitch Ratings, 2023) have started their operations in the Middle corridor due to which cargo capacity surged more than six–times between 2021 and 2022 (Eldem, 2022).

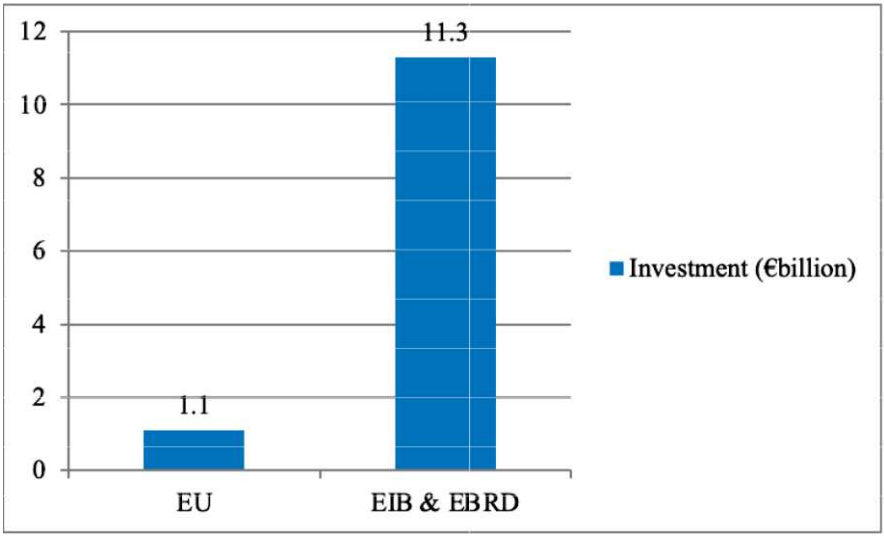
Since the Russian invasion of Ukraine and consequent imposition of economic sanctions, cargo freights through the Middle corridor have swelled, though, admittedly, from a small

base. While Central Asian countries have stayed nonaligned to the war, these nations have observed gains via the Middle corridor as an alternative route compared to the Northern corridor, despite inadequate transit capacity to foster larger intraregional trade. It is anticipated that transit capacity along the Middle corridor is likely to increase after completion of Turkey's Marmaray railway, which will facilitate the PRC's cargos via Central Asian region to transit directly to European countries. The EU has fostered the revival of multimodal transit route through Baku, and the TEN–T networks consisting of Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine along the Middle corridor (Azhgaliyeva and Kalyuzhnova, 2021).

Novel multi¬lateral and bilateral projects have been initiated to bolster the transport routes and logistics along the Middle corridor, which can surely encourage regional trade integration, develop industrial activities, and stronger economic integration and regional cooperation in the Eurasian region in general, and the PRC and the EU in particular. In 2018, the EU launched a novel strategy focusing on the Europe–Asia rail connectivity and invested considerably in regional connectivity. Figure 14 portrays the EU's investment in regional connectivity in Central Asia during 2014–2020. The EU's investment in regional connectivity in the Central Asian countries along the Middle corridor routes are multiple times greater compared to investment made by the PRC (Russell, 2019). In 2021, Europe launched the Global Gateway policy to muster US$300 billion

up to 2027, of which significant funding will be for transport infrastructure development in the Middle corridor region, while in 2022, the European Bank for Reconstruction and Development (EBRD) has allocated funding of US$656 million for 17 transport projects in Central Asian countries along the Middle corridor (Gusseinov and Abykayev, 2023). The EU has committed substantial investment in developing extra–regional transport development in the Middle corridor countries to increase the Eurasian trade potential, development of energy and supply chains through greater economic cooperation and trade integration in near future.

Figure 14: EU's Investment in Regional Connectivity in Central Asia, 2014–2020

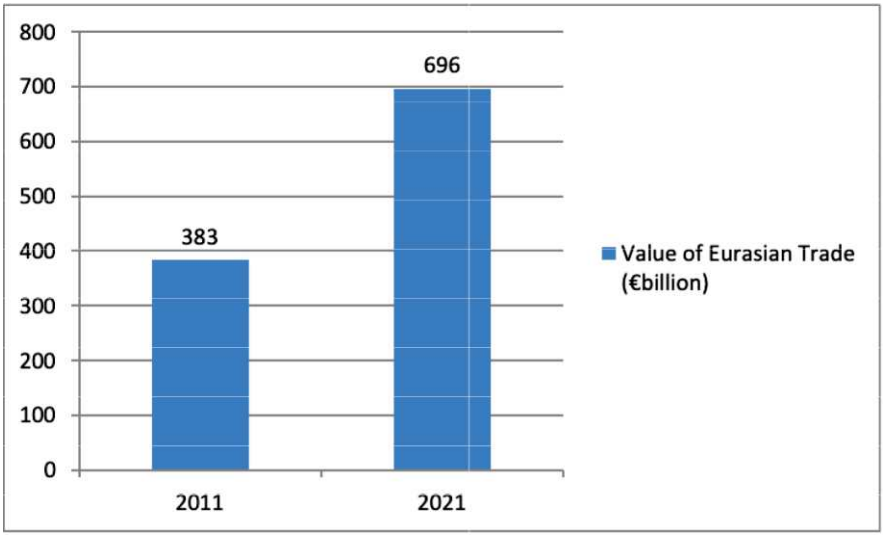


Author's graph based on data from Russell (2019)
EU= European Commission, EIB = European Investment Bank, and EBRD = the European Bank for Reconstruction and Development.

The EU has also emphasised the requirement for alternative routes to develop trade links in Eurasian countries due to prevailing geopolitical scenario (Archick, 2023). The EU envisaged that development of the Middle corridor has strong potential to leverage GVCs, address energy crisis, provide alternate rail cargo routes, and develop markets and collaborators in the Eurasian region for fostering and bolstering regional economic integration strategies for benefits of all stakeholders.

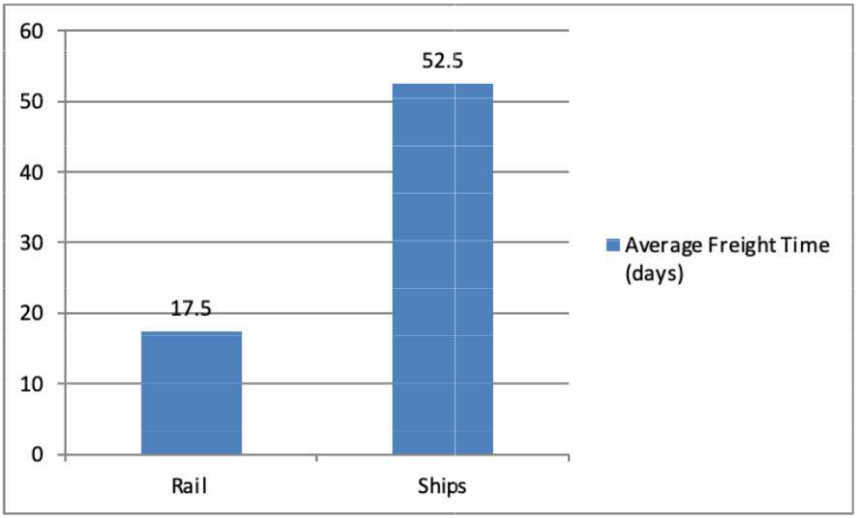
The trade of Asian nations with EU stood at 36% of their entire trade. Eurasian trade's value approximately increased by two–times from 2011 to 2021 (see Figure 15), while Figure 16 shows the average freight time of Eurasian trade in 2022. The freight through rail and ship respectively took 15–20 days and 45–60 days. Rail freight surged significantly to 2% in 2021 from 0.6% in 2011 (Zhang, 2022). The cost efficiency of rail freight is higher due to greater reliability and less time than ships. In the last five years, rail freight connectivity surged more than two times between the PRC and EU countries (Brinza, 2022). During 2020–2022, more than 1000 rails were operated along the PRC–EU express routes (Yang, 2022). Large number of Asian countries and lately Vietnam has also been linked to Eurasian rail network (RailFreight, 2022). The rail freight along the Eurasian corridors is expected to grow around 10–16% (UIC, 2021) due to sanctions on Russia and disruptions of land–transit along the Northern corridor in Eurasia region.

Figure 15: Value of Eurasian Trade, 2011–2021



Author's graph based on data from Eurostat (2021)

Figure 16: Average Freight Time of Eurasian Trade, 2022



Author's graph based on data from Zhang (2022)

The PRC considered the Middle corridor as an alternate trade route to connect Eurasian countries for larger link to global markets. The Eurasian countries envisage the PRC's active participation highly vital to greater success of the Middle corridor. The PRC considers the policy gains of extending extant subsidies offered by the state–owned transport enterprises to support infrastructure development along the Middle corridor, which can create new markets and boost trade and transit traffic along the route. However, this requires considerable PRC's investment in improving compatible hard and soft infrastructure along the route besides domestic investment strategy to develop new industries and transportation networks (Kenderdine and Bucsky, 2021b). In the PRC's perspective, Russia cannot control the Middle corridor like the Northern corridor and the US cannot openly embargo the Middle corridor like traditional maritime route (Palu and Hilmola, 2023). Therefore, the Middle corridor has immense strategic significance to the PRC's alternate trade links to the EU and other Eurasian countries.

Indeed, the trade transit through the Middle corridor has surged, regardless of feeble growth in demand due to global slowdown, which should be considered as a vital factor in development of alternate route. The Middle corridor countries plan to increase the cargos capacity along the route considerably to 10 million tonnes, whereas in 2020 Russia's Trans–Siberian railway has transported 144 million tonnes of cargos and in 2023 the conventional sea route shipped more than 1 billion tonnes (Chang, 2023). Therefore, if the global demand dipped, the potential transport routes such as the Middle corridor can be faded, which has emerged as an alternate route due to Russia–Ukraine war.

II. Challenges to Leverage the Middle Corridor

Since the Russia–Ukraine conflict, several cooperation efforts have been initiated at the bilateral, trilateral, and quadrilateral levels in the Middle corridor region, which reveal performance in different aspects like customs and cross–country policy discourse and paved the way to magnetise trade transit along the Middle corridor, enhance regional trade and bolster economic integration. Several inter–ministerial dialogues in the Middle corridor countries showcased the prospects for sound development of transport and logistics along the routes. It is expected that these efforts will surely enhance industrial and trade scenarios and bolster the RVC for the benefit of the Middle corridor countries.

Regional cooperation and integration along the Middle corridor countries can be bolstered robustly by evolving a mechanism for stronger collaboration among the PRC and EU countries to attract more freight and much needed investment in both the hard and soft infrastructure along the route. The EU and Kazakhstan have also showed their concerns for novel routes linking Eurasian countries through joint cooperation, given the contemporary geopolitical scenario. For instance, the EBRD launched investment of above US$100 million to develop railways in Kazakhstan in mid–2022 to improve Eurasian connectivity and regional trade. If the Middle corridor countries are unable to progress in intended direction and the various agreements and declarations are not translated into real politics, the challenges will remain. In view of the prevailing energy crisis and Russia–Ukraine conflict, the EU wants alternative transit routes than the Northern corridor. In this context, the Middle corridor region has displayed huge

market prospect. Therefore, the EU can foster execution of novel regional integration strategies through knowledge exchange and shared regulations for trade and transport transit mechanisms by aligning the energy and transit strategies of Middle corridor countries for mutual gains (Eldem, 2022).

Besides the immense opportunities offered by the Middle corridor, unlocking its potential to leverage Eurasian trade faces considerable challenges such as the bureaucratic delays, corruption, political instability, and regional conflicts, including challenges linked to effective governance, efficient infrastructure, and robust institutions. These challenges should be addressed through collective efforts to ensure long–run feasibility of the Middle corridor.

II. I. Technological Barriers

The rapid surge in the need for an alternate route to the Northern corridor for greater regional integration and trade connectivity has increased the attempts to surmount technological barriers to improve the efficiency of the Middle corridor. The Eurasian economies along the Middle corridor have strengthened cross–border collaboration to increase the advantages of improved mobility and trade links caused by decline in cargos along the Northern corridor due to Russia–Ukraine war.

II. II. Structural Barriers

Tackling structural barriers needs action on two fronts: increasing the trade volumes via hard infrastructure such as

additional ports and rail networks along the Middle corridor, and establishing soft infrastructure like shared customs procedures, lower tariff, integrated regulations, and shared technological norms for ports modernisation. These efforts are expected to significantly reduce the overland distance, transit time and border costs between the PRC and EU and the Eurasian countries along the route.

II. III. Political Instability

Despite geopolitical and economic significance of this novel trade route and completion of major infrastructures, the Middle corridor confronts challenges of episodic political instability. The Middle corridor region suffers from political instability, poor governance and border conflicts. Therefore, the success of Middle corridor requires regional stability, for which addition of Armenia is essential in this corridor, which can deter Yerevan to look for collaboration with Russia and Iran and also economically benefit Armenia. The EU should make all efforts to normalise the Azerbaijan–Armenia relations.

The EU can foster the process of peace and stability along with restoration of transport and trade corridors, given the weakening position of Russia in the Middle corridor region. At the same time, the EU should collaborate with Turkey to steer peace and stability via trade in the Middle corridor region. Given the trade potential and the benefits of energy security, the EU can visualise emergence of this alternate route as a win–win prospect to be grabbed (Eldem, 2022). Kazakhstan and Kyrgyzstan have also encountered sporadic unrest in recent

past (Shahbazov, 2022). Therefore, efforts should be made for greater peace and shared prosperity in the Central Asia.

The success of Middle corridor will also rest on outcome of the Russia–Ukraine conflict. Russian success may persuade Moscow to disrupt the alternate transport route. The political conflict in Georgia can also derail success of the Middle corridor. The PRC stayed aloof from political scenarios of the Middle corridor region and remained non–aligned to the Nagorno –Karabakh dispute. The surge in transit demand and evading the Northern corridor motivated the PRC to take greater interest in the Middle corridor (Shapiro, 2020). At the same time, the PRC and EU have varying foresights on development of the Middle corridor.

Therefore, the major concern is who will manage the vital infrastructure — the PRC or EU or collaborative efforts. In the Central Asia, the overall control of the EU is negligible and the PRC is likely to be major investor. In the South Caucasus region, the EU's position is strong, where it is expected to contribute in development of sea ports and rail networks. Thus, both the PRC and EU can be major prospective players in the development of Middle corridor (IISS, 2023). In brief, it is essential to promote the political will for greater collaboration in long–run success of this alternate corridor through dialogues and negotiations and shared knowledge expertise (World Bank, 2023).

II.IV. Inadequate Infrastructure

The inadequate hard and soft infrastructures cause the transit delays and increases border costs to reap the intended

economic benefits and needs to be addressed so that the Eurasian trade along the corridor can be surged substantially. The reliability of the Middle corridor in terms of cost–efficient cargos transit, and smooth and in–time border crossing should be ensured through better trade facilitation for greater intraregional trade, development of industrial zones and market centers like the Northern corridor. The ports capacity with new terminals and ferries along the Middle corridor should be bolstered for faster cargos mobility. In brief, the challenges linked to efficient transit governance, robust transit infrastructure and effective and compatible institutions along with the bureaucratic and administrative delays and corruption at customs clearance should be tackled effectively at the border crossing points to minimise transit time and costs.

Conclusion

Trade opportunities and potential along the Middle corridor have surged considerably since Russian invasion against Ukraine, despite sluggish global demand. However, the trade volumes along the Middle corridor are still substantially lower compared to the Northern corridor and the traditional maritime route. Therefore, development of the Middle corridor as an alternate trade and transport route for the Eurasian countries in general and the PRC and EU in particular demands substantial investment from the PRC and the EU to develop shared hard and soft infrastructures including common customs procedures and trade regulations at border clearance to minimise the transit delays and trade costs. The Middle corridor can link the PRC to Eurasian countries to bolster the

BRI by making substantial investment to reduce transnational cost of cargo services by lower taxes and transit fees to foster container trade between the PRC and Eurasian countries and to improve the long–run feasibility of this alternate route. Therefore, unlocking the potential of the Middle corridor can be a win–win situation for all participating countries.

The strengthening of cargo transportation will also bolster the production activities along the route and strengthen RVCs and GVCs. Efficient Middle corridor can intensify the political and economic relations between the PRC and Eurasian countries along the route. This corridor can generate sustainable alliances to attract considerable investment from the EU to strengthen intercontinental transport links and build robust regulations for transnational trade. This will also be compatible to the EU's approach to foster RVCs and the PRC's strategy to develop greater East–West trade away from sea transportation due to increasing conflict in the Indo–Pacific region. Thus, the Middle corridor can be a robust rail trade route than sea route for the Eurasian countries away from Russia and Belarus. Similarly, the PRC can consider the Middle corridor as a more viable alternate trade route option in the context of Russia –Ukraine war. This requires stronger commitment from the PRC to foster novel rail transportation routes for greater RVCs through robust institutions, compatible customs regulations, better green cargo corridors, reliable production networks and sustainable RVCs. Stronger development of the Middle corridor requires dynamic participation and investment of the PRC to leverage economically more efficient trade route through robust RVCs and highly economically resilient logistics.

Policy implications

The Middle corridor's expansion eventually relies on policies of the PRC linked to external affairs, internal manufacturing, and geo–industrial strategies. Other players in the Middle corridor consist of state ports authorities, and transport and logistics firms along the PRC–EU routes. Besides, the PRC and EU, the Middle corridor holds substantial potential for economic growth and trade facilitation in other economies along the routes. However, these economies have little policy influence to tap the potential and address the challenges linked to bolstering rail cargos along the Middle corridor. The existing challenges are linked to non–compatible institutions and geo–economic industrial policy barriers in the PRC and EU. The PRC and EU have considerable extant transnational rail and ports networks for trade, which leave other Middle corridor countries to institutional and geo–economic–industrial policy risks from the PRC and EU. For instance, the PRC represents industrialised stage, the EU displays post–industrialised phase and other Middle corridor countries demonstrate semi–industrialised stage. Inadequate transit infrastructure and the lengthy border–clearance procedures pose a significant challenge to the Eurasian countries for robust transit and trade flows (Miecznikowski and Radzikowski, 2017). Therefore, bolstering the trade and transit infrastructures in the Middle corridor entails institutional and industrial integration in the regional economies for stronger trade.

The Middle corridor economies need to develop compatible domestic market oriented institutional and fiscal policies for

both state and private players to gain from the PRC and EU's investment in transport networks (Bucsky, 2020; Bucsky and Kenderdine, 2020). The PRC confronts institutional and industrial policy uncertainties emanating from other Middle corridor countries for regional transport and trade integration. Eurasian economies can benefit from the PRC's infrastructure investments and subsidies to attain greater trade and transit efficiency.

Stronger regional economic integration is necessary for improved transportation networks, larger trade flows, industrial development, and infrastructure investment in Middle corridor economies with active support of the PRC and EU. The compatible institutions targeting at better trade facilitation and smoother trade and transit cooperation in the Eurasian economies will attract substantial investment from the PRC and EU. The PRC's fiscal incentives for movement of rail cargos along the Middle corridor will foster greater trade between the Middle corridor countries and bolster Eurasia trade with the PRC and the EU.

I. Policy Implications for Middle Corridor Economies

The Middle corridor economies should embrace more liberalised trade policies and bolster logistics to enhance regional integration. Regional trade and industrial strategies of the Eurasian economies should be integrated with the PRC and EU trade and industrial policies. Efforts should be made to strengthen the trade regulatory institutions through stronger collaboration among the Middle corridor economies. Suitable

policies should be developed to divert cargos away from the Northern corridor linking the PRC and EU.

II. Policy Implications for the PRC

The PRC's transport and trade policies should be highly transparent to effectively integrate the compatible–policies of the Eurasian economies. The PRC should collaborate with relevant EU's players and stakeholders to increase the trade cargos along the Middle corridor. The PRC should learn from the best performing institutions of the EU to achieve greater economic integration along the Middle corridor economies.

Greater economic efficiency of the Middle corridor calls for generating novel collaboration and cooperation in corridor countries to develop market–oriented, economically viable and green investment in hard and soft infrastructure for rail cargo and ports to increase support of the PRC and the EU to bolster the sustainable production networks and RVCs. Increase in economic prospects along the Middle corridor requires heavy investment (Kenderdine and Bucsky, 2021). The Middle corridor entails investment of €3.5 billion in upgrading both the hard and soft infrastructures to transport more than 10% of freights transported via the Northern corridor (Usov, 2022). The needed investment can be met from the Asian Development Bank (ADB) financing to the development of transport corridors under the Central Asia Economic Cooperation (CAREC) Program, the Asian Infrastructure Investment Bank (AIIB), European Commission, European Investment Bank, and the EBRD, besides liberal

financing from the World Bank to the governments of the countries along the Middle corridor, who are expected to benefit largely through infrastructure development. The robust mechanism should be developed to raise sufficient revenues through transport levies, and trade and customs clearance charges not only to maintain and sustain the transport and transit apparatus but also to repay the finance raised and shun the problem of debt trap. A stronger institutional mechanism should be developed for greater cooperation among the countries along the routes to ensure equitable gains from development of corridor. However, in the process, the PRC and EU countries along with Kazakhstan are expected to gain more.

The simple, compatible and efficient shared customs procedures, operations and tariffs should be developed along the Middle corridor routes to aid faster mobility of rail cargo, reduce costs, lower time at border crossing and minimise delays at ports. In this context, the common trade and transit standards for customs clearance should be established among the bordering countries along the routes for greater trade facilitation and smoother border clearance. Cutting delivery time is the main advantage of rail transportation over sea freight and a shared customs environment is one of the main tools to attract cargo from sea to rail.

III. Policy Implications for the EU

The Russia–Ukraine war and consequent restrictions on operating of Russian cargo companies in the EU and the embargo on entry of EU's truckers into Russia led to a diversion of trade freight away from the Northern corridor to the

alternate Middle corridor. The trade imbalance between the EU and PRC also stood significantly high. Europe also envisions both greater access to surging Central Asian markets via the Middle corridor and a speedy entry into the Middle East, North African and European Mediterranean markets through routes via Georgia and Turkey. Europe plans to lower its reliance onthe Northern corridor to achieve greater diversification and resilience of supply chain. Besides, Europe entails energy access from Azerbaijan and other countries of Central Asia via the Middle corridor. All these economic opportunities reflect greater EU's interest in developing the alternate route. Keeping the above in view, the EU should proactively participate in promoting various segments of the Middle corridor to indicate the PRC and the Middle corridor countries about its sustained commitment in Eurasian region to bolster their economic resilience to external supply disruptions.

The existing EU's investment and institutional cooperation strategies in the Eurasian region for sustainable and inclusive connectivity should be further bolstered. The EU should:

- Foster investment and technological cooperation to establish efficient custom procedures and regulations in the Middle corridor countries.
- Embrace the PRC both bilaterally and multilaterally for robust collaboration in instituting efficient customs and transit procedures in the Middle corridor for increased bilateral and multilateral trade.
- Collaborate with the PRC to boost synergies between EU's connectivity strategy and PRC's BRI. This will

improve the trade balance between the EU and PRC, increase faster access of EU countries to markets of Central Asian countries in general and Azerbaijan's energy resources in particular through the PRC's BRI and closely knitted CAREC transport corridors.

Despite geopolitical competition, the EU–PRC collaboration fostered development of the Middle corridor via balancing the BRI and TEN–T to address current unfair practices and establish legal barriers to foster participation of European organizations. The EU envisages incorporating the BRI and TEN–T projects and persuades the BRI to improve transport networks in East Europe. The PRC searches mutual prospects in rival transportation ventures, while concurrently asserting PRC's decision to command in this sphere. The PRC should promote multilateral structures for robust and effective investment collaboration with the EU and Middle corridor countries to reduce the volatility linked to Eurasian road links. The PRC should foster the Middle corridor countries to attract private investment for developing stronger production networks and RVCs through greater industrial investment and robust collaboration in banking along the routes. Last but not the least, the long–run feasibility of the Middle corridor should be guaranteed by strengthening the hard and soft infrastructures along the route.

IV. Policy Implications for India

India plans to change its logistics to tackle the challenges posed by emergence of the Middle corridor. Rejuvenating the

multimodal North–South transport corridor instituted by Russia, India, and Iran in 2000 can be a significant policy option for India. The North–South transport corridor is highly relevant in the context of supply chains reforms in Eurasian region. India's trade and cargo firms require tapping considerable surge in unconventional logistics prospects in the region.

Bolstering of the North–South transport corridor can potentially foster intra–regional and intercontinental transport and trade links, lower trade costs, create novel manufacturing activities, and accomplish the trade and transit capacities along the routes connecting the Central Asia and the EU. By 2030, the cumulative latent cargo traffic consisting of container and non–container freight through all routes and transportation modes of the North–South transport corridor is estimated at 15–25 million tonnes and the freight volumes are expected to potentially surge 20–fold (Vinokurov et al., 2022). Therefore, development of the North–South transport corridor will need considerable investment in both the hard and soft infrastructure to improve not only the trade and transit connectivity but also strengthen industrial activity along the trans–Eurasian routes.

The novel rail network along the North–South trade corridor linking Russia and India through Azerbaijan and Iran can be highly beneficial for strengthening India's trade ties with the Eurasian economies. India can tap the existing trade potential in the Eurasian region through the North–South trade corridor and also tackle the challenges of expected

surge in the PRC–EU trade via the Middle corridor due to moribund of the Northern corridor and substantial growth in freights away to the Middle corridor. Besides investment in transportation infrastructures along the Middle corridor countries, the trade transit infrastructure including customs procedures has also been improved, which can potentially improve the efficiency and geo–economics of the Middle corridor vis–à–vis the Northern corridor and bolster trade integration of the Central Asian economies to the PRC–EU markets.

However, the development of an alternate transport and trade route can disentangle the trade and transit benefits to the Central Asian economies. The North–South trade corridor can be a feasible option to the Central Asian economies and also thwart the PRC–EU influence in the region. Therefore, India should actively participate in bolstering the North–South trade corridor to significantly increase economic and trade integration with the Central Asian economies and can influence PRC's geo–economic and geo–political ambitions. India should actively participate in the Ashgabat Agreement to bolster multimodal transportation network and Russia–India Free Trade Agreement to develop both the hard and soft infrastructures along the North–South trade route as an alternative to the Middle corridor.

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Making Sense of China's Political Strategy Behind Dominating Critical Mineral Supply Chain: A Case Study of China's EV Sector

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Introduction

In the post-Cold War era, neoliberal principles dictated global relations focused on creating an interdependent economy. In this vision, China was placed at the centre of the Western capital's economic strategy. However, this is now under reconsideration as geopolitics dominates the discourse. Simultaneously, China is rethinking its economic strategy as it sees its rise being challenged. In this context, the role of economic policy has risen, and it plays a dual role as a state's instrument — building a state's geopolitical capacity and as a tool of political influence.[1] Besides, these countries augment economic potential in specific sectors by controlling and managing their entire supply chain to maximise their economic strength or increase their resilience to future threats. The domestic benefits that come with capabilities in certain sectors can also have geopolitical implications for the global economy. Such capabilities can sometimes be relatively small and often asymmetrically large. The development of differential power capabilities between great powers risks being weaponised as tools of foreign policy and economic warfare. Even if the

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underlying logic of developing capacities and capabilities is not initially harmful. However, that does not stop states from using these as threatening instruments.

In China's case, as its economy stagnates, it will have varied impacts. The growth of the domestic economy is an essential consideration for the Communist Party of China. Under President Xi, Chinese nationalism is linked with China's growing economy, changing from his predecessors, Hu Jintao and Jiang Zemin, who focused more on emotive issues. Therefore, it becomes crucial for him to make the economy stronger and more resilient. In this endeavour, Xi has revised the core national interests by elevating security to the samelevel as development; the latter was the priority under Deng to Hu Jintao.[2]

What adds to this challenge is the changing international perception of China. The US-China rivalry has implications for its security, economic growth, and prospective technological advancement. To ensure that the Chinese economy remains resilient, the party has invested in addressing the sector that will drive future economic growth, which is the critical mineral supply chain. China's vision is manifested in programs and initiatives that are based on securing the raw materials — critical minerals — that are responsible for its growth. The vulnerabilities and dependencies stemming from the supply chain benefit one actor, helping it to pursue its strategic objectives.[3] The paper is not focused on the geographical placement of the resources but rather on the state's control

over flows and spaces and its impacts on the economy. In other words, the paper is interested in analysing the political strategy behind China's control over the critical mineral supply chain and its benefits for the electric vehicle (EV) sector.

Methodologically, the paper employs qualitative study through content analysis based on primary and secondary sources, like speeches of political leaders, policy documents, government reports, press releases, and analysis from state-affiliated news portals and subsidiaries. The paper proceeds in three stages. The first creates a framework, borrowing from the geoeconomics literature, to analyse the domestic politics around dominating critical mineral supply chains. The second focuses on understanding the manifestation of domestic politics to political strategy under Xi Jinping. Finally, drawing upon the analysis, the third section presents the importance of the critical mineral political strategy in the development of China's EV sector.

Geo-economic framework and China's critical mineral supply chain

The paper aims to understand the Chinese political strategy behind establishing a firm hold on the critical mineral supply chain in the EV sector. Although the intention behind dominating the sector globally is not the sole consideration in Chinese strategy, the domestic factor likely plays a more influential role in deciding the direction and developments. External considerations drive other factors that also vary in the overall equation.

However, the paper focuses on understanding the domestic compulsions that shape a state's strategy in certain sectors.[4] Geo-economics is the most appropriate analytical framework domestically to make sense of this. We are not focusing exclusively on the manifestation of geo-economics as a foreign policy tool, although we will touch upon it briefly in the second section. Here, we borrow from the argument that political strategy reflects the convergence of innenpolitik and aussenpolitik factors.

Our case study focuses on highlighting the domestic elements more than the external ones. In other words, the innenpolitik factors dominate the aussenpolitik in our case study. This is a different way to see the geo-economic theoretical framework, as it follows a bottom-up rather than a top-down approach. The case study avoids making any causal correlation between the external factors often seen in the literature on geoeconomics, which also shows a unique environment in which the case study plays out. Geoeconomics, in this case, plays out uniquely. China aims to pursue a different strategy '[i]n the new geoeconomic era... through economic instead of military means.'[5]Geoeconomics is defined here '... as [an] … application of economic means of power to realise strategic objectives'[6] that stems from control over the critical mineral supply chain. The strategic objectives in China's case are interlinked with three factors we have identified — economic growth, the development of strategic emerging industries (SEI), and the instrument of foreign policy as a tool. Here, 'geo dimension in geo-economics means that the economic bases of national power must have

decisive geographical features'[7] , which means China must have indirect or direct control. The paper defines using natural resources as a strategic leverage to maximise one's national interests. The geoeconomic framework incorporates both realist and liberal elements, which helps explain the paper's objective and make sense of economic resilience as a way to create interdependence and growth, followed by the future politicisation or even weaponisation of the supply chain if the need arises. The following section focuses on China's domestic capacities and capabilities in the critical mineral supply chain and its role in shaping its EV strategy.

China's Critical Mineral Supply Chain Political Strategy

This section is focused on highlighting two important points: China's critical mineral supply chain politics and the strategy associated with it. The politics here refers to two specific considerations: linkages with the economics of the state, which is a driving factor for the Chinese communist party's vision for a modern socialist state, and the second one that looks at its strategic aspects, in other words, ways in which it benefits and maximises China's interests. Polity in China is linked to its economic stability, which is a direct consequence of sustainable economic development and growth. This economic growth is based on the assumption that China will continue to grow consistently for the next decades.

However, many scholars have questioned the prospect. China is reeling under pressure as it strives to maintain growth. Under these circumstances, the importance of certain strategic

industries becomes vital due to two characteristics: their propensity to contribute to a state's economic development and growth that are linked directly to its national and financial security. One of the strategic sectors that we have focused on is the electric vehicle (EV) sector part of the Green Energy Transition, which has great potential and has been supported by the state since the early 2000s with government schemes and is also linked to maintaining its economic superiority in digital innovation and technological advancement over the US. However, to achieve this goal, China depends on critical minerals considered the building blocks of innovation, research, and EV sector growth.

President Xi's politics and policies: Integrating Security and Development

Under Xi, national security and development have become intertwined; it is now called the 'National security path with Chinese characteristics', and this has occurred when the distinction between the party and the government is becoming murky.[8] While addressing the National Security Commission in 2014, Xi said, 'development is the foundation for security, and security is a condition for development.'[9] Taking forward this vision, China's 2035 developmental objectives were introduced that aim to achieve certain goals — build a modernised economy, join the most innovative countries club, and increase economic strength and scientific and technological capabilities, all of which are essential ingredients to becoming a modern socialist country.[10]

The 14th five-year plan also reiterates this thought, that quality and efficiency are directly linked with incorporating science and technology (S&T) to build China's national capabilities to 'strengthen the domestic market, further optimize the economic structure, and significantly improve... capacity for innovation.'[11] The development and security interlink age is emblematic of how the critical mineral supply chain is connected with the state's economy and security. In this endeavour, the party sees the role of enterprises and ESI as key actors in maintaining, controlling, and innovating the critical mineral supply chain. These enterprises are vital in different forms, as regulators, facilitators, or supporters. The state sees them as essential players and seeks to improve the market-oriented mechanisms for technological innovation, strengthen the status of enterprises as the principal entities of innovation, promote the concentration of various innovation factors in enterprises, and form a market-oriented technological innovation system characterised by enterprises as the main entities and the in-depth integration of industry, academia, research institutes, and users.[12]

After coming to power, Xi regained authority from government agencies to establish a top-down approach and implement his strategy of the Chinese socialist dream.[13] To fulfil this vision, China has identified some main tasks to achieve in the critical minerals sector — 'further, strengthen the basic geological survey of minerals, strengthen the exploration of strategic minerals that are in short supply, accelerate the promotion of key mining projects, vigorously promote scientific and technological research, increase financial

investment, and exploration.'[14] Moreover, Xi has emphasised strengthening the supply chain of critical minerals. While visiting Sichuan — a resource-rich province in China — he said, '[w]e should strengthen the production and supply of... strategic mineral resources and build a strategic base to guarantee the supply of important primary products for the country.'[15] This essentially emphasises the importance of establishing a resilient supply chain for China's economic security and development.

To fulfil his objectives, the party requires the support of state-owned enterprises (SOEs) and the private sector. Cheung argues that in achieving Xi's 'common prosperity' vision that is based on two pillars, material prosperity and spiritual prosperity, Xi needs the support of the private sector to sustain 'economic growth' and undertake the 'wealth redistribution' process.[16] Particularly, 'technology-intensive' and 'low-carbon footprint' industries are important to achieve China's 'high quality economic growth', therefore making the electric vehicle sector's role vital for Xi.[17] Along with a focus on development, environmental protection is another important issue for Xi. Under his 'ecological civilisation' vision, which calls for 'resource conservation' and 'environmental protection.'[18]

In the sector of natural resources, he reiterated that '[w]e [Party] will improve the paid use system for natural resources and innovate and improve the price formation mechanisms for natural resources…'[19] The reorganisation of the bureaucracy into two ministries around the Ministry of Ecology and

Environment (MEE) and the Ministry of Natural Resources (MNR) is another step towards reaching the ecological civilisation vision. It is also symbolic of China's emphasis on holistic management, bureaucratic efficiency, and appropriate regulations in the natural resources sector.[20] The goal of the MNR has been redefined into '...overseeing the development and protection of China's natural resources, setting up and implementing a spatial planning system, and establishing a system for paid use of natural resources.'[21] As mentioned earlier, the three factors shaping China's critical mineral supply chain — economic growth, SEI development, and the state's instrument — are all linked.

As domestic demand has risen, China is looking to constrain its exports, particularly of critical minerals that are more needed, like rare earths. Since the mid-2000s, China has undertaken 'completed integration' for rare earth mining, separating and smelting, and formed 'large-scale enterprise groups' intended to improve the performance and quality of rare earths, reducing the total number of enterprises.[22] The Chinese government has pushed for a whole-of-government approach, coordinating with various ministries—the Ministry of Environmental Protection, the Ministry of Land and Resources, the Ministry of Industry and Information Technology, and the Ministry of Public Security — to address serious issues like 'illegal mining,' 'smuggling,' 'irrational exploration,' and 'environmental damage.'[23] As the situation becomes more severe with increasing illegal mining, further restrictions are applied by the central government in China.

The steps taken are similar to what Beijing took in the 1980s as it tried to regain control of the extraction process.[24]

Political Strategy Behind The Critical Minerals Supply Chain

From the start, China has played strategically with the critical minerals sector, putting its national interests first. Traditionally, the central government leveraged its vast mineral deposits to attract foreign mining companies across the globe and used its technological tools to gain mining knowledge and investment.[25] As it has achieved the largest exporter status in some critical mineral categories, particularly rare earth, it has also systematically reduced its exports, keeping in mind two important considerations — domestic demand and developing SEI — but there has also been an occasional case of it being used as a foreign policy instrument, even though inconsistently.

The state often justifies these restrictions, citing national security or economic growth. China is getting serious about the critical mineral supply chain, and what makes it different is the role of the private sector in supporting the state's efforts in developing strategic industries like semiconductors and EVs.[26] These private companies have an entrenched interest in conserving their monopoly domestically and an ambition to capture the global market, and in this vision, they proactively seek the assistance of the Chinese state.

Economic Growth: Under President Xi, China has used its large deposits of critical minerals to build up scalable downstream production facilities, achieving a huge parity in relative costs.

This helped it to substantially reduce production costs, making it affordable, accessible, and exportable. This also converges with China's Dual Circulation Strategy (DCS), a 'two-pronged development strategy that seeks to spur China's domestic demand in addition to catering to export markets and... create conditions that allow domestic and foreign markets to boost each other.'[27]

Doubling down on this strategy, China is now building competitive industries at par with global standards. This has been possible as the process of politicisation of national security is redefined and expanded to include 'sustainable and healthy development' of the economy and society.[28] Broadening further to 'scientific and technological security' and 'environmental security' is driven by Xi's 'political and ideological' view.

The 14th five-year plan reiterates Xi's vision for China, aiming to '... strengthen the planning and control of strategic mineral resources, improve reserve security capabilities, and implement a new round of breakthrough strategic initiatives for prospecting.'[29] In addition, the plan stresses 'innovation and advanced manufacturing' and 'self-sufficiency and boosting domestic demand' as strong priorities compared to the 13th five-year plan.[30] All this is done to advance an interlinked definition of security with the Chinese economy at its centre. It is based on a growing recognition in Beijing that these s trategic resources are vital for its economic prosperity.

An article in China Daily stated that the '[r]esources and energy are vital to the national economy and people's livelihood... [o]nly by firmly holding energy and resources in its hands can a country achieve high-quality social and economic development and ensure the confidence of the people to live and work in peace and contentment.'[31]

Development of SEI: China's whole-of-system approach is focused on pushing reforms, fast-tracking policies, and incentivising specific sectors to develop SEI.[32] The goal here is to provide private enterprises with the best development environment, promote their high-quality development, and encourage them to be a part of 'major national strategies.'[33] In China, the public and private sectors are part of the SEI, contributing to strengthening the critical mineral supply chain at all levels — upstream, midstream, and downstream segments. The participation of companies in strategic initiatives launched by the state varies depending on their expertise and investment. Different ministries also act as enabling actors, pushing for reforms and streamlining policies, regulations, and laws.

Wang Guanghua, China's Minister of Natural Resources, said that 'China's Ministry of Natural Resources (MNR) will focus closely on the national strategic needs and implement another round of strategic actions to seek breakthroughs in critical mineral exploration and expand production capacity.'[34] This assertion was made mainly in the backdrop of intensifying tech competition and political contestation with the US, where

the role of SEI, like BYD and CATL, has proved to be very important in the EV sector. The aim for MNR for the next five years is to implement another round of strategic actions for breakthroughs in exploration, achieve increased production capacity for critical minerals, and bolster mineral resource reserves.'[35]

Foreign Policy Instrument: There seem to be two schools of thought in China, one preferring a cooperative and collaborative approach and the other preferring an aggressive, reciprocal, and coercive approach.[36] China is accused of using critical minerals, especially rare earth, as an economic coercion tool as part of its foreign policy strategy. These acquisitions are due to its intensifying control over the supply chain and arbitrary decisions. The 2010 incident with Japan is often cited while pointing towards Beijing's weaponisation of critical minerals.

However, this study shows that there is no concrete proof for this, and even if it were true, it was more of a case of 'erratic shipments.'[37]

China has not weaponised but definitely politicised the supply chain. This also means there are cases where China has also used critical minerals as a foreign policy instrument, signalling its displeasure and reciprocal behaviour, as in the case of restricting the export of gallium and germanium in 2023.[38] A Global Times article linked the export restriction on gallium and germanium with China's national security; it stated that the restriction was to protect 'national security and interests'

and not for any other reason.[39] However, a Ministry of Commerce press conference release further confirmed the assertion that stated that 'since items related to gallium and germanium are dual-use items, it is an international practice to implement export control on them. China requires a licence for items related to gallium and germanium to ensure they are used for lawful purposes. This is part of our efforts to safeguard national security, implement international obligations for non-proliferation, and contribute to global peace and security'.[40]

This shows that military concerns emanating from dual-use are also shaping China's decision-making. Even though 'national security' and 'coercion' are the reasons, this seems to be an isolated case influenced more by the tech war between the US and China, which is an expected retaliation strategy.[41] However, the thinking was already there. In 2020, In an editorial in China Daily, Jai Baisong, an economist, argued that,

> *China could control the export of strategic resources based on civilian and military use, which means it should have two sets of export regulations — one for the export of rare earths for civil use and the other for military use. Regulations for the export of rare earths for civilian use should follow the rules of free trade, but they should be accompanied by a verification system for the use of resources to ensure they are actually meant for civilian use. And those parties that import rare earths from China for civilian use and yet use them in the military sector should be held accountable.*[42]

On the other hand, as concerns regarding Chinese monopolies over supply chains increase, China has taken certain steps to assuage these doubts. Mei Xinyu, a Chinese Academy for International Trade and Economic Cooperation research fellow, called 'rare earth as international merchandise' and asked for global cooperation for a 'stable, safer, and predictable' trade.[43] Some steps have been taken in this direction. In 2023, China increased its quotas for rare earth to 120,000 tonnes, a 20 percent increase from 2022, to address certain concerns that many Western capitals feel. Wu Chenhui, an independent analyst, said that 'the increase in its rare-earth quota will ease other countries' concerns over China's rare-earth exports this year.'[44] China realises that it cannot coerce countries with arbitrary decisions as it also impacts its own domestic SEI, which is critical for economic growth, and there are some concerns about this issue. The Chinese Ministry statement demonstrates the problem that '...countries with critical mineral resources need to play a positive role in keeping relevant industrial and supply chains safe, secure, and stable. Countries need to jointly step up to their due responsibilities in the global supply of minerals and ensure the normal functioning of relevant trade and economic cooperation.'

Simultaneously, China has restricted any serious discussion at international forums on critical minerals, seeing this as an exercise to isolate China. In July 2023, during the G20 Energy Transition Ministers Meeting in India, China opposed any mention of the 'Critical Minerals Security' issue.[45] In 2023, China also opposed any discussions on environmental concerns

arising from deep-sea mining of critical minerals in the International Seabed Authority's Council, a 36-nation policy making body.[46]

China's three-pronged strategy to dominate Critical Mineral Supply Chain: Politicisation, Intensifying competition, and Increasing Investment

The politicisation of the supply chain is a process that encompasses the whole-of-system, with political and industrial elites working together. Many heads of private companies engaged in mining and refining are members of the National Party Congress (NPC), such as Ganfeng Lithium Chairman Li Liangbin and Chery Automobile Co. Ltd. Chairman Yin Tongyue.[47]

They play an active role in influencing decision-making in China atthe highest level, 'provid[ing] policy support for Chinese companies looking to invest in overseas mining resources, including establishing cooperation mechanisms for trade, investment, and technology with resource-rich countries', and this also includes 'defin[ing] some minerals as critical minerals,' and 'encourag[ing] the promotion of related development and investment in countries taking part in China's Belt and Road Initiative, encompassing emerging markets where much of these minerals are located.'[48]

In addition, we also see people from the public sector play a vital role as consultants. Yang Wongwei, deputy head of the Baotou Research Institute of Rare Earth's Hangzhou branch and

a deputy to the NPC and other deputies have suggested improving China's competitiveness over the US and its allies.[49] Due to China's emphasis on DCS, it is also expanding its rare earth quotas as domestic demand surges for the neodymium magnets required for Evs.[50]

Since 2021, China has invested approximately $2 billion in 41 new rare earth projects in Inner Mongolia to ensure that it meets the domestic demand for its SEI.[51] While focusing on increasing its targets in refining and mining, China is also investing in new research technologies focused on the least environmental pollution. It has developed a new technique known as electrokinetic mining cleanly and economically, and that has given great results, achieving '…a recovery efficiency higher than 90 percent, an 80 percent decrease in polluting agent usage, and a 70 percent reduction in metallic impurities.' In addition, it has taken specific steps to ensure domestic availability and management of critical minerals like rare earths and strengthen the supply chain. One important step is cracking down on illegal mining and stopping the outflow of minerals.[52] In 2021, with the merger of the Aluminium Corp of China, Ganzhou Rare Earth Group Co., and China Minmetals Corp, the China Rare Earth Group Co. was formed; this was done to 'mark the new integration in the rare earth industry' in China.[53] Besides this, it promotes high-quality development and brand management.[54]

Going forward, China is expected to take more proactive steps to further its private industry interests, particularly in the face

of intensifying competition with the US, using its economic clout and diplomatic network.[55] Due to this, we may see a recurring pattern of what happened in the 1980s, when most companies received support from the Chinese central government, which led to them gaining control in the 1990s of the upstream supply chain. China is thinking strategically about bringing in tools to regulate the sector to establish a mechanism to stop low-price dumping.[56] We are seeing a top-down approach to arresting the de-regulation of the industry, and the regional mergers point to this trend.[57] It is investing in rare earth research and innovation to maintain its edge in the strategic industries that highly depend on rare earth research and innovation as it will 'help fend off the impact of restrictions on imports of the critical minerals imposed by the US and its allies.'[58]

The rare earth conglomerates have also established an international trade branch to 'promote industrial integration and protect strategic resources' aimed at 'further integrating the rare-earth industry [and] … strict import and export management of strategic materials.'[59] Such measures increase competitiveness, better management, and more substantial prices in the international market.[60]

China's EV Sector and Critical Mineral Supply Chain: Gaining Strategic Advantage

China recognises the world's complexity, as stated in its 20th Congress party report, which talks about the presence of '... strategic opportunities, risks, and challenges' amidst rising known and unknown factors; this means that every economic

and developmental opportunity must be taken seriously in face of major challenges like slower growth, excessive debt, and industrial overcapacity. President Xi has identified five major developmental concepts — innovation, coordination, green, openness, and sharing — as guiding strategies to address these challenges.[61] The first three concepts are important for our paper: innovation in 'science and technology, but also in management and processes,' the coordination emphasises on 'optimis[ing] economic development and efficient allocation of resources', and green development, that 'preserves the environment and develops eco-friendly industries.'[62]

These concepts are also found in the 14th five-year plan for National Economic and Social Development, with long-term goals for 2035. These long-term goals indicate that China would achieve green modes of production, reduced carbon emissions, and a better ecological environment'.[63]

China, Energy Transition, and Critical Minerals

In 2020, Xi, while addressing the United Nations General Assembly, announced a net zero target by 2060.[64] The aim is to tackle climate change by promoting sustainable development domestically and building a shared future.[65] To fulfil its 2060 target, China's Nationally Determined Contribution focuses on peaking CO2 emissions by 2030, lowering CO2 emissions per unit by 65% of the GDP from the 2005 level, and increasing non-fossil fuel energy to 25% of the overall energy production. In addition, it has enacted policies such as Made in China 2025 to move from 'low end' to 'high end' manufacturing.[66]

China's strategic interest is driven by three factors: reducing carbon emissions, mitigating environmental impact, enhancing energy security, and contributing to the economy.[67] To fulfil this goal, securing the critical minerals supply chain is essential for China. This connects with the earlier stated point that economic interlinkages with security and technological innovation are vital, and China sees the potential in the growth of the EV sector. For example, the share of electric cars has grown substantially; in 2021, it was 5%, 9% in 2022, and 14% in 2023, with a 60% share of overall EVs in China.[68] Currently, it is dominating both the EV car sales and battery supply chain; its share of exported cars increased from 25% to 35% from 2021 to 2022.[69] The control over the entire supply chain of EVs, from upstream to downstream, has given China an added advantage in dominating the EV sector.

This coincides with its strategic economic objective to dominate emerging economic sectors, and the 14th five-year plan states it clearly,

> *[w]e will base ourselves on industrial-scale advantages, supporting advantages, and first-mover advantages in some fields, consolidate and enhance the competitiveness of the entire production chains in … new energy … and other fields, and build strategic and comprehensive production chains starting from complete machine products … that conform to the direction of future industrial changes.*[70]

Besides the sector's success, China has also adopted an elementarily cautious approach toward the EV sector prospects,

particularly due to the uncertainty of mineral markets and geopolitics. President Xi looks at the success of CATL as 'both joy and worry', and has reportedly asked companies to balance between 'development and security.'[71] However, even with its risks, China has not stopped betting on the future of the EV sector. With its EV policy, China has captured and developed a sustainable upstream and downstream supply chain of raw supplies — 'minerals, metals, cathodes, and anodes.'[72] Having command over the supply chain helped it grow domestically and export its cars and batteries with rising EV demands globally. China controls most parts of the EV supply chain; half of cobalt, a quarter of lithium, 60% of rare earths, and two-thirds of graphites.[73]

In 2022, it refined 70% cobalt and graphite, 60% nickel, 95% manganese, and two-thirds of lithium, and all these are essential raw materials used to make an EV battery.[74] Systematic market intervention through reduction policies, tax breaks, exemptions, and incentives has acted as a stimulus, adding to the growth of the EV sector. However, these policies also affect demand for raw battery materials such as lithium, cobalt, and nickel, further affecting other sectors such as refining, mining, and manufacturing.[75] These benefits to the industry were first started in 2014 with a 10% purchase tax on NEVs until 2020, which was extended till 2022 due to COVID.[76]

In addition, the tax breaks have also been extended until 2027.[77] China has also encouraged research and development by providing USD 111 million, as mentioned in the 13th five-year plan.[78] These measures support the green technology

industry and EV sector, giving stability and encouraging investment in green transition sectors such as the electric mobility sector.[79] With state intervention, Chinese companies like CATL and BYD now dominate the EV battery supply chain. The strong battery supply chain has helped private carmakers gain an edge in the domestic market by boosting their sales.

Recently, Chinese carmaker BYD displaced Tesla as the world's largest-selling EV manufacturer, with 526,000 full EV sales compared to Tesla's 484,000 in the last three months of 2023.[80] This comes a year after China overtook Japan as the largest automobile exporter globally.[81] Now, EV sales account for almost a quarter of Chinese automobile exports. The state plays a significant role by giving clear policy direction and supporting the industry ecosystem through incentives and subsidies. For New and Intelligent Vehicles, as stated in the 14th five-year plan, the objective is to make breakthroughs in key technologies such as high-safety power batteries, high-efficiency drive motors, and high-performance power systems for new energy vehicles and accelerate the R&D of key components such as the basic technology platforms for intelligent (connected) vehicles, software and hardware systems, steer-by-wire chassis, and smart terminals.[82]

Many manufacturers are looking to invest in new technologies to shift away from critical minerals such as lithium. Chinese companies have invested in developing alternatives to lithium-ion batteries, like sodium-ion batteries, which currently dominate the entire supply chain and technology.[83] With a

combined capacity of 100 GWh, there are around 30 plants either operating, under construction, or planned focused on sodium-ion batteries, one leading player in the technology is CATL, which has been able to reduce the cost by around 30 % less than the traditional Lithium iron phosphate (LFP) batteries.[84] They have also adopted smart strategies to adjust growth amidst the economic slowdown focusing on smaller models to cut costs and increase its domestic and global competitiveness.[85] With control over the critical mineral supply chain, it has helped reduce the overall costs of manufacturing cars.[86] Lithium-ion battery demand has also grown globally from 330 GWh to 550 GWh from 2021 to 2022, along with battery demand in China at 70%.

This has contributed to increasing demand for critical minerals, where China holds substantial sway over critical minerals like lithium and cobalt. The lithium demand in 2022 exceeded the supply, even with increased production.[87] Due to global factors and supply and demand issues for critical minerals, there have been many changes in battery chemistry. However, China has maintained the lowest prices due to the huge manufacturing of almost 65 percent of battery cells and 80 percent of cathodes.[88] This also has a roll-on effect on EVs, as studies have identified battery and electronic components as essential for the success of the EV industry.[89] China is expected to expand more aggressively in securing critical mineral supply chains, considering the rising demand for New Energy Vehicles (NEV), which has surpassed the expected 20 percent target in 2022, three years before its

original target of 2025.[90] As the cost decreases due to domestic manufacturing with top-notch technology, Chinese car manufacturers are looking to export and enter new markets.[91] Chinese companies are investing more in domestic and global mining to leverage the EV sector's economic potential. In 2023, BYD invested US$4.2 billion in Jiangxi and Yichun provinces, with plans for 30 GWh of batteries, 100,000 tonnes of lithium carbonate production, and expanding lithium mining sites.[92] This is part of BYD's 'vertical strategy' focusing on 'expanding to lithium-iron-phosphate materials, lithium carbonate refining, and even lithium mines.'[93] Similarly, CATL invested in Sinuowei mining in Sichuan, securing 300,000 tonnes of Lithium reserves to strengthen its critical mineral supply chain, and is also expected to consider bidding for the exploration rights of two more mines.[94] Chinese companies are looking to secure more mining projects in emerging markets such as Argentina, Mexico, and Mali, as geopolitics have reduced the options in Australia and Canada.[95] For example, some Chinese companies like Yuxiao Fund and Tianqi Lithium were not allowed in Australia and Canada on the grounds of 'national interest' and could not qualify for the 'exceptional basis' criteria.[96] Due to this, there has been a diversion towards developing countries; Zijin Mining, Ganfeng, BYD, and CATL have ventured into these markets to secure mining and refining rights.[97] Chinese EV and battery maker giants like BYD, CATL, and Nio want to expand their manufacturing production beyond China in Thailand and Hungary to capture emerging markets and regions.[98] Another reason to establish stronger relations with upstream players is to acquire 'minority interests in mining assets or

forming mining and refinery joint ventures (JVs)' to manage costs, which is part of the some companies backward integration push strategy.[99] The backward integration is vital as it strengthens the supply chain, 'improve[s] cost management and margin protection and provides for more secure raw materials,' which accounts for 60–70 percent of battery cost and 'components supply.'[100] The success of Chinese private companies is also linked to the support they get from the local and central governments in China in the form of tax incentives, subsidies, and diplomatic connections. For example, Nio, a Tencent-backed private company and emerging EV manufacturer, got bailouts of USD 1.4 billion and USD 1.6 billion from the Hefei Municipal government and state-owned bank in China; the former now owns 24 percent of Nio China and in exchange, Nio has committed its 'core businesses and assets in China, including vehicle research and development, supply chain, sales and services, and Nio Power' to its subsidiary.[101] BYD, one of the largest EV companies in China, receives the government's help in subsidies that support its '7+4 EV strategy' through public procurement for public transportation, further helping to subsidise companies' expansion. [102] One study has identified three findings, supported by central and local policies, as playing a critical role in selling at least half of EV sales from 2015 to 2018.[103] There are also downsides to the support that the EV sector receives. The EV sector boom has also led to the rise of graveyards where EV cars sit idle. Across cities, major car-hailing companies now out of business have left hundreds of cars.[104] This shows the

dark underbelly of EV adoption in China, which is mired in cheating on state subsidies and illicit business activities.[105]

Looking offshore for critical minerals

To address the issues of energy security from dependence on other countries for critical minerals, Chinese Minister Wang said that they 'will launch a new round of domestic prospecting operations, focusing on strategic bulk minerals and minerals that are in short supply'.[106] To overcome this deficiency, China has used the Belt and Road Initiative (BRI) as a geoeconomic tool to maximise its interests by investing in mining projects in BRI participant countries. In 2023, investment in mining has grown by 131 percent compared to the first half of 2022 on the back of rising demand due to the green transition.[107] Chinese mining companies like Zhejiang Huayou Cobalt and CATL dominated the list of the largest Chinese investors in 2023.[108] Apart from rare earth being particularly abundant in China, it has invested or is investing heavily in projects focused on other critical minerals in either Latin America or Africa. Lithium is a mineral of particular importance due to its use in batteries, EVs, renewables, and supercomputers, and countries like the US consider it essential for its economic and national security.[109]

Chinese public and private companies are very proactive in securing lithium minerals; these include Ganfeng Lithium Co. Ltd., Tianqi Lithium Corp., Zijin Mining Group Co. Ltd., BYD, and CATL.[110] The government gives the leadership here as it sees these 'sectors as part of its core strategy' and a way to manage fluctuating minerals like lithium costs by strengthening

relations with upstream players.[111] This strategy to venture beyond China has shown flexibility by adopting innovative practices like buying minority stakes in companies for refining and mining, and this works in cases like Indonesia, which has stopped any export of nickel ore. It shows the adaptability of Chinese firms, particularly at a time when we have seen countries leveraging these resources to add to domestic growth. Some countries are in Africa, like Zimbabwe and Ghana, and Western Asia.[112]

Conclusion

China has systematically built up its critical mineral supply chain domestically and globally by linking all components of upstream, midstream, and downstream segments. China's political strategy has aimed to dominate the critical mineral supply chain's mining, processing, and end-product ecosystem. This focus is driven by three factors: economic growth, the development of SEI, and supply chain application as a foreign policy instrument. The geoeconomic framework employed in the paper helps to understand the political strategy behind China's control over natural resources as a strategic leverage to maximise its national interest, particularly under President Xi's tenure, where security and development considerations are more interlinked. His leadership has fostered a political economy where technology incentives and low carbon footprint sectors are considered vital for the high growth of the Chinese economy. The EV sector, in particular, has benefited from state support through incentives, tax subsidies, and bailouts, but more so from an established critical mineral

supply chain, which has helped the domestic manufacturer build up capacities and capabilities in the battery supply chain, considered an essential factor for the EV industry. With faster adoption of EVs in China, the state aims to achieve three objectives: de-carbonise its economy, achieve a net zero goal, and, most importantly, establish China as the dominant player in the global EV sector. As Chinese EV manufacturers control the critical mineral supply chain, they are working even more closely with the state to further establish a stronghold over new mining projects, with a vision to enter and dominate offshore markets. It can be concluded that the political strategy behind controlling the critical mineral supply chain is an important driver in China's EV sector success.

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Prospects of China's Dominance in Critical Minerals Supply Chain

By Neha Mishra*

Abstract

Over the past decades, China has strategically positioned itself as the dominant force in the value chain, starting with mining, then moving on to production, and finally processing. China employed tactics such as offering low prices and operating costs to make other countries reliant on China for raw materials, manufacturing, and technology without receiving any technology transfer in exchange. With the global commitment to energy transition and rising consumption of critical minerals, global demand is expected to quadruple by 2040 as per the sustainable development scenario by the International Energy Agency, thus furthering the supply chain risk and dependence on China.

This study shall explore whether this dominance and global dependence on China will be sustained, considering the global shift towards resilience and diversification. The article examines the strategies employed by China to maintain dominance in the supply chain in response to challenges at the domestic level and growing diversification at the global level. The study argues it will never be 'Zero China' in the critical

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minerals supply chain, but rather 'Less China' given the diversification efforts and investments made by high import-dependent and resource-rich nations. China's current dominance in critical minerals is projected to diminish by 2035, primarily due to the declining trading equation with other countries. However, it is improbable that China's dominance will entirely vanish, as the efforts to diversify will gain momentum at a slower rate due to limited processing technology and recycling potential. To conduct the research, the study encompasses factors such as geo-economic investments in resource-rich regions, consolidation of state-owned enterprises, implementation of production and export quotas, regulation of illicit mining, and balancing of domestic environmental challenges with industrial growth. The study employs mixed-methods research using explanatory design, as part of which the article analyses quantitative data about China's critical mineral strength and declining trends, based on which the study has conducted qualitative interviews with industry and academic experts on critical mineral industry in Europe, the US, India, and Japan.

Introduction

During the early 1990s, major organisations such as the Intergovernmental Panel on Climate Change (IPCC) and global environmental conferences like the Rio Summit (1991), the UN Framework Convention on Climate Change (1992), the Paris Agreement Conference (2015), and the latest Glasgow Conference (2021) heightened awareness regarding the risks associated with climate change.[1]

During these summits, all countries have consistently underlined the importance of prioritising energy transition and decarbonisation as primary objectives. As a result, countries have been encouraged to prioritise the security of the supply chain for critical raw materials (CRM) required to meet their energy transition goals, hence increasing their demand. In addition, the huge technological and economic importance of CRM, along with worries about their future availability due to geopolitical and geological factors, has made it even more important to protect the supply chain of CRM for the future of the energy transition. Countries like China have placed a high value on expanding their supply chain for raw materials since the 1990s, which has played a crucial role in achieving their energy transition objectives. Over the decades, China's robust position in the global supply chain has made the world vulnerable to China's geopolitical aspirations on various occasions. Consequently, countries like the United States and the European Union have been compelled to decrease their reliance on China to guarantee the resilience of their supply networks for both their defence and energy transition goals.

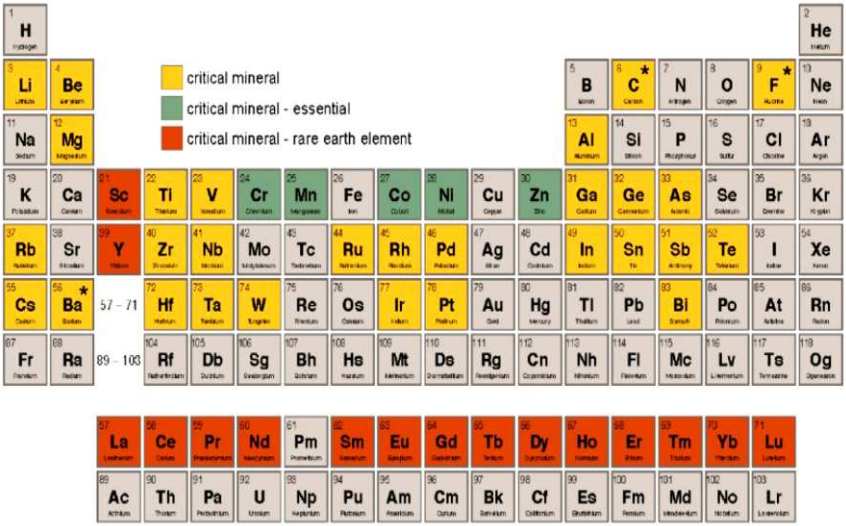
This article seeks to examine the future viability of China's dominance in the supply chain of critical minerals, taking into account the global tendency towards diversification and reducing dependence on China. This document has five sections. The first section discusses the significance of critical minerals as an expanding geo-economic domain and involved global concerns such as supply chain challenges, geopolitical disputes,

export restrictions, and others. The next section explores China's dominance in the CRM supply chain through an analysis of its reserves capacity, production share, substantial exports, advanced research and development efforts, and domestic policies enhancing China's geopolitical and strategic influence over the world. The subsequent section analyses factors challenging China's dominance, including declining production capacity, increased domestic consumption, cases of illegal mining, adherence to environmental, social, and governance (ESG) standards, and global diversification to decrease dependence on China. The last segment analyses the strategies being employed by China to uphold its dominance and evaluates whether China will sustain its control in the supply chain despite the global endeavour to diversify and decrease dependence on China.

Contemporary Global Outlook Around Critical Minerals

Critical minerals are called critical strategic minerals, battery minerals, and energy transition metals internationally because they are used in wind turbines, electric vehicle batteries, and power networks. CRM includes copper, aluminium, cobalt, lithium, graphite, rare earth elements, and other minerals and metals (See Figure 1).[2]

Figure 1: Critical Minerals in the Periodic Table



***Source**: Jill Jenkins, "Outlining Potential Biomarkers of Exposure and Effect to Critical Minerals: Nutritionally Essential Trace Elements and the Rare Earth Elements", MDPI, December 19, 2022. https://www.mdpi.com/2305-6304/11/2/188*

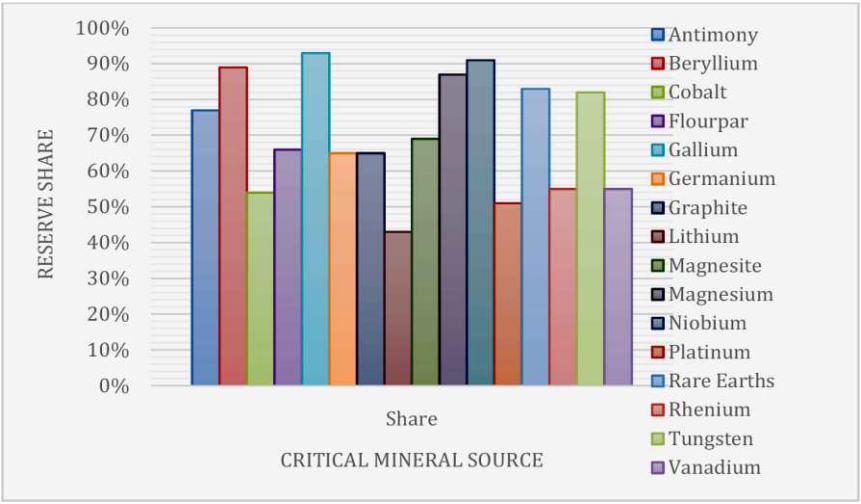
Due to the commercial geography of each critical material, all nations import critical minerals and related technology or rely on a steady demand for their resources, thus needing a well-functioning global market. Supply chain patterns show resource supply and demand interdependence between countries, which have been threatened by geopolitical issues and supply shortages induced by escalating demand for certain commodities and their mining and processing concentration.[3] The pandemic crisis and the Russia-Ukraine conflict have shown how supply chain disruptions may adversely affect the global economy. In addition, securing the supply-value chain of critical minerals is crucial to supporting the global

shift towards clean energy and cutting-edge technologies, turning interdependence into resilience efforts among countries.[4]

It is important to highlight that the extraction of critical resources is heavily concentrated in specific geographical regions, such as Australia, which holds the top position in lithium production; Chile, which is renowned for its copper and lithium production; China, a major producer of graphite and rare earth elements; the Democratic Republic of the Congo, which is a significant producer of cobalt; Indonesia, which is a major producer of nickel; and South Africa, which dominates in platinum and iridium production (See Figure 2).

In the past decade, countries that possess abundant resources have emerged as major destinations for global investments, thus serving as the central point for the development of geopolitical agendas.[5]

Figure 2: Countries with Critical Mineral Strength



Source: Nicholas LePan, "The New Energy Era: The Impact of Critical Minerals on National Security", Visual Capitalist, April 28, 2020, https://www.visualcapitalist.com/new-energy-era-critical-minerals-u-s-national-security/. Accessed on 20 August 2023.

Various nations employ distinct yet highly comparable methods to define "critical minerals." For instance, Geoscience Australia defines critical minerals (CM) as "metals, non-metals, and minerals that may face a potential shortage in supply due to geological scarcity, geopolitical issues, trade policy, or other factors." The US National Science and Technology Council (USNSTC) understands CM as those having vulnerable supply chain and lack of these minerals would result in major economic or security consequences. The European Union defines CM as those that possess substantial significance to the EU economy and are accompanied by a considerable level of risk in terms of their availability. The criticality of countries that supply raw or processed minerals is evaluated based on

supply-side variables.).[6] Based on these understandings, about eight countries have formulated their own list of critical minerals (refer to Table 1), and are actively implementing various initiatives and strategies to ensure their accessibility and supply chain security.

Table 1: Critical Minerals List Announced by Countries

Country	Year	Number of Listed Critical Minerals	Major Focus	Common Critical Minerals
China	2016	24	Improve supply capability and utilisation	Antimony Beryllium Cobalt Gallium Germanium Graphite
USA	2018	35	Develop a critical minerals strategy	
European Commission	2018	30	Secure access to raw materials	
Japan	2018	31	Secure the trading	
Australia	2019	24	Develop as the world leader in critical minerals supply chain	Indium Lithium Manganese Rare Earth Elements Tantalum Titanium Uranium Vanadium Zinc Zirconium
USA	2020	50	Emphasised their role in national security or development	
Canada	2021	31	Secure the supply chain	
India	2023	30	Work towards its *Atmanirbhar Bharat*, focusing on high-end manufacturing and green energy.	

Source: Neha Mishra, "India's Potential and Significance in The Critical Minerals Club", News18,https://www.news18.com/opinion/opinion-indias-potential-and-significance-in-the-critical-minerals-club-8268763.html. Accessed on 8 September, 2023.

China's Critical Minerals Dominance

The term "strategic minerals" (战略矿产) was initially popularised in Chinese media in 1951 via an article published in the People's Daily, the official newspaper of the Chinese

Communist Party (CCP). The essay, named "Bloody Business: How Landlords and Businessmen in Latin America Amass Wealth during Conflict," claimed that the United States had successfully achieved an almost exclusive control over the procurement of strategic minerals. Early publications used the term to criticise the US and USSR's tactics for gaining control over "strategic" resources abroad. The terms "strategic minerals" and "critical mineral resources" were absent from government documents or public statements made by high-ranking Chinese officials until the beginning of the 21st century. In a 2000 presentation on resource management, Wen Jiabao, who was then the Vice Premier of China, pushed for the domestic exploration of "strategic minerals" as a means to enhance resource security and utilisation. The inclusion of "strategic minerals" in the Tenth Five-Year Plan for Land and Resources has elevated its status in China's political discussions. Additionally, there was a proposal to create a national reserve system specifically for strategic mineral resources. Presently, its use has broadened beyond conversations about the rivalry between dominant nations for authority over "strategic minerals" to encompass arguments about China's internal need for these resources (specifically, minerals that hold strategic significance for China).[7]

Chinese experts have established the meaning of the term "strategic minerals" by employing certain, but occasionally intersecting, criteria or standards. China strategically utilises elements such as supply risk, national defence, economic

development, and security significance to exploit critical minerals for its geo-economic purposes.Chinese analysts suggest their country may attain strategic objectives by using its position as the leading provider of critical minerals globally.[8] The extraction of critical minerals is primarily focused in a limited number of economies, namely Latin America and Australia for lithium, Chile for copper, Indonesia for nickel, the Democratic Republic of Congo for cobalt, and China for rare earths, which encompass a group of elements crucial for clean energy applications. Even though China doesn't have a stranglehold on the majority of the world's mineral resources, the fact that it controls the refining operations — the middle step in turning raw materials into finished products — is a big reason why the world has been worried about the dependence on China.[9]

Nabeel Mancheri, Secretary General of the Global Rare Earth Industry Association, states that China systematically executed a comprehensive plan to progressively establish its dominance in the value chain of critical minerals. This plan started with mining, then moved on to manufacturing, and ultimately encompassed processing. China has achieved dominance in the supply chain of critical minerals by consistently offering low prices, so fostering reliance among other nations for raw materials, manufacturing, and technology, while withholding technological expertise. In addition, China has made significant investments in research and development (R&D) to enhance its processing capabilities and expand its investments in foreign countries.[10]

In addition, the following other factors have contributed to develop the domination of China in the critical mineral supply chain:

I. Leading Reserves, Production, and Export Share

China's dominance is mostly attributed to its superior processing capability for critical minerals, including copper, nickel, cobalt, rare earth elements, and lithium. It is currently at the forefront of manufacturing critical intermediate goods such as magnets, overseeing every step from mining to processing with strict oversight in the country. Currently and specifically, China holds a dominant position on the global market and entire value chain for the following critical minerals: antimony, cobalt, rare earth elements (REE), gallium, germanium, and graphite (See Table 2).

I.I. Aluminum

The manufacture of aluminium is a major factor in both energy usage and the emission of greenhouse gases (GHGs). China is a leading producer of aluminium and is experiencing a growing manufacturing capacity. From 2007 to 2022, China's primary aluminium production increased 2.8 times, and China's share of global production reached 56.2%, bringing significant changes in its aluminium sector.[11]

I.II. Antimony

Antimony shows promise as a viable substitute for anode material in rechargeable lithium-ion batteries, which are widely

employed in electric vehicles.[12] In 2022, China maintained its position as the foremost global producer of antimony, contributing to 55% of the total global mining production.

I.III. Cobalt

Cobalt is a critical mineral for emerging energy technologies, most particularly electric vehicles (Evs), while geopolitical shifts have heightened the potential for cobalt supply disruptions. China currently occupies the highest in cobalt consumption globally, mostly driven by its rechargeable battery industry.[13] The majority of China's foreign cobalt ownership is concentrated in the Democratic Republic of the Congo, in which the ownership-influence potentially decreased the vulnerability of China's refinery industry to supply risks, as it reduced the reliance on net imports from 97% to 68%.[14]

I.IV. Gallium

Globally, primary gallium is acquired as a byproduct through the extraction of bauxite and zinc ores utilised in the manufacturing of integrated circuits, photodetectors, and solar cells. China's main capacity for producing low-purity gallium has been around 650,000 kg per year since 2020, after increasing from 140,000 kg per year in 2010. China had around 84% of the global capacity for low-purity gallium.[15]

I.V. Germanium

Germanium is mostly utilised in electronics and solar applications, fiber-optic systems, infrared optics, polymerization

catalysts, as well as other applications including chemotherapy, metallurgy, and phosphors. A prominent Chinese manufacturer of processed germanium products, located in Yunnan Province, has disclosed that the production of germanium wafers for satellites during the period of January to June 2020 was over sevenfold compared to the wafer production in the first half of 2019.[16]

I.VI. Graphite

Graphite is an indispensable component in industrial sectors like clean technologies, refractories, and steel production. As the principal provider, China controls the global graphite market with 65% of production capacity (See Table 2). The escalating need for electric vehicles (EVs) and the subsequent reliance on graphite have led the global automotive sectors becoming more reliant on China for their graphite supply chains, which has generated concerns regarding the potential financial implications.[17] Matt Gryphon, a portfolio manager at Maple-Brown Abbott stated, "If China ceases its lithium exports, alternative sources can be found in countries such as Australia, Chile, and Argentina. However, if China halts its graphite exports, there are no other available supply options.[18]

I.VII. Lithium

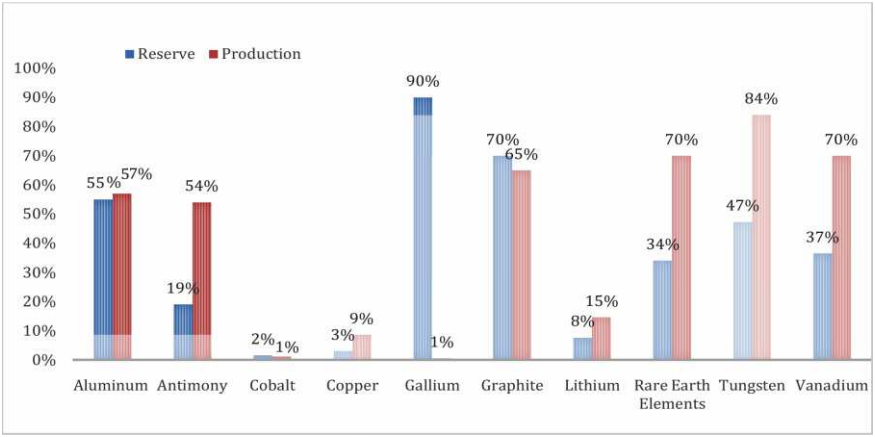
Lithium is a raw material required for future-critical industries, such as supercomputing, renewable energy, mobile phones, and electric vehicles. China's two leading lithium producer companies- Ganfeng Lithium Co. Ltd. and Tianqi Lithium Corp.

are attempting to acquire upstream raw materials in preparation for the expansion of production.

I.VIII. Rare Earth Elements

The main sources of rare earth elements in China are the byproducts obtained from the large Baotou iron ore mine situated in Inner Mongolia, Northern China, rather than from specifically designated rare earth mines. Key urban hubs for rare earth industry and mining are Baotou, Sichuan, and Ganzhou. Since 2010, China had 24 documented companies active in the production of rare earth concentrate, as well as 100 facilities dedicated to smelting and separating these materials, and thereafter has become the primary producer of rare earth oxides and the leading exporter of rare earth permanent magnets to high-import-dependent countries.[19]

Figure 2- China's Share of Global Critical Minerals



Source: United States Geological Survey, "Mineral Commodity Summaries 2023", https://pubs.usgs.gov/publication/mcs2023. Accessed on 10 December, 2023.

II. Advanced R & D, and Technology

The advancement of technology promotes the increase in resource availability and the decrease in resource usage, which includes enhancing the efficiency of mineral extraction, expanding current production capacities, and discovering unexplored mineral deposits. In the case of China, the commitment to R&D has been a part of its critical mineral strategies. For instance- China has established prestigious institutes and universities to study the chemistry and uses of rare earth elements, including Peking University and the Chanchun Institute of Applied Chemistry and Baotou Research Institute of Rare Earths. The "Cascade theory of countercurrent extraction" proved to be groundbreaking by Dr. Xu Guangxian, who even called as the "father of China's rare earth industry," that completely altered the country's approach to rare earth production.

Research and development initiatives in China have been aimed at establishing a domestic vertically integrated supply chain, including Programme 863, the National Basic Research Programme, and the National Programme for long and medium term Scientific and Technological Development.[20] Moreover, China leveraged foreign investments to streamline the acquisition of cutting-edge technology and machinery for the extraction and refinement of rare earth elements, therefore bolstering China's processing capabilities.[21]

III. Favourable Domestic Policies

China has been establishing policies regarding critical minerals since the 1970s, through a primary concentration on the rare earths industry that begin to expand rapidly through an export rebate system with focus to attract new producers and simultaneously increasing its foreign exchange reserves.[22] A significant policy advancement in the critical mineral industry emerged following Deng Xiaoping's famous declaration in 1992, "The Middle East has oil, while China has rare earth elements," which highlighted China's confidence in its dominant position in the global rare earth industry..[23]

Through the implementation of various policies and initiatives, China efficiently surpassed the United States as the primary provider of rare earth oxides and magnets, ultimately establishing itself as the dominant player in the rare earth market. The resource boom in China has mostly been driven by the strategy of resource nationalism, which involves the involuntary consolidation and concentration of indigenous mining companies. By 2015, China became the leading recipient of Foreign Direct Investment (FDI) due to its exceptionally cheap operational expenses.[24]

To improve the oversight of the rare earths industry, the central government implemented its first Development Plan for the Rare Earths Industry (2009-2015). The objective of this plan was to enhance regulatory oversight over exports and mining projects, enforce distinct environmental obligations, and methodically restructure the industry by centralising rare

earth mining activities within a limited number of state-owned companies (SOEs). In 2016, China created its inaugural inventory of 24 critical minerals, referred to as the official catalogue, a mineral classification carried out by Chinese scientists and officials, which had substantial ramifications for both industry and society.[25] In 2016, the central government released the second 'Development Plan for the Rare Earths Industry (2016-2020)' to promote research on advanced uses of rare earth elements using an innovation-focused strategy.[26]

China's long-term policies have consistently emphasised the importance of critical minerals, and this focus is expected to continue with the its fourteenth five-year plan (2021-2025). The new plan shifts China's strategic focus from "dominating" to "securing" the supply chains of rare earths, which aligns with the evolving demands of the current geopolitical dynamics.[27]

IV. Disregarded Environmental Challenges

The BBC claimed in 2015 that China's dominance in the rare earth market can be ascribed to its willingness to face environmental risks that other countries may choose to avoid. It should be noted that the production of one tonne of rare earth oxide from ionic-adsorbed clays yields 2000 tonnes of tailings and 1000 tonnes of wastewater containing heavy metals, a reason that have hindered the development of this industry in other nations, particularly the USA.[28] China has achieved better levels of efficiency and cost-effectiveness in production because to its limited environmental and legislative control, which exempts it from government-specific

laws. Moreover, China tolerated substantial environmental damage in the rare earth industry as it pursued rapid industrial progress.[29]

V. Geopolitical and Strategic Leverage

China's move towards maximizing deliberate strategies around its critical mineral strength begin with the famous statement by Deng Xiaoping in 1992, that 'The Middle East has oil, and China has rare earths (中東有石油,中國有稀土)" reflecting resource nationalist interests of China.[30] The cessation of China's exports of rare earth elements (REE) to Japan in 2010 further prompted extensive studies on how China could utilise its market dominance to achieve political objectives. China strategically employs raw materials and assesses their criticality, which is partly impacted by perspectives on China's resource policies and strategies.[31]

In June 2011, the US, EU, Mexico, India, Brazil, Japan, and Korea accused China of restricting raw material supply in violation of WTO norms, and filed a WTO complaint against China in March 2012 questioning its export quotas, licences, and minimum price. In response, China argued that its export limitations were to accommodate domestic demand, manage mineral prices, natural resource conservation, and environmental concerns, which is reasonable under WTO rules, namely the general exception clause of Article 20 of the GATT.[32] After an August 2014 WTO ruling sided with the US, EU, and Japan, China was ordered to erase export levies and quotas as China is still exploiting resources for domestic

use, it cannot ban exports due to environmental concerns.[33] In reaction to an unfavourable verdict, China eliminated the quota system and replaced it with a more rigorous licencing system for exporting from China.[34]

In 2019, rare earth elements gained attention again after China asserted its intention to utilise the elements as a strategic tool in its trade conflict with the United States. Chinese actions and embargo made the whole world realize the need of resource strategy, and proved how China is a decade ahead of the world. The United States' reliance on Chinese rare-earth elements persists in the manufacturing of electric vehicles, wind turbines, and drones. According to the US Geological Survey, China supplied 80% of the US's rare earth minerals in 2019, and this increased to 98% in 2020.[35] Renmin Ribao, the Chinese Communist Party's Central Committee journal, declared, "We advise the U.S. side not to underestimate the Chinese side's ability to safeguard the development rights and interests. Don't say we didn't warn you." This showed China's confidence in its REE supply chain monopoly, which affect importer countries, and how it can use the same as bait to negotiate their demands.[36]

The export limitation implemented in August 2023 on industrial products and materials containing gallium and germanium is indicative of China's embargo measures pertaining to minerals, extending beyond rare earth elements. The regulatory limitation on the exportation of these raw materials used for semiconductors and optoelectronic devices

has been justified by China on the grounds of national security and interest.[37]

Challenges to China's Critical Mineral Dominance

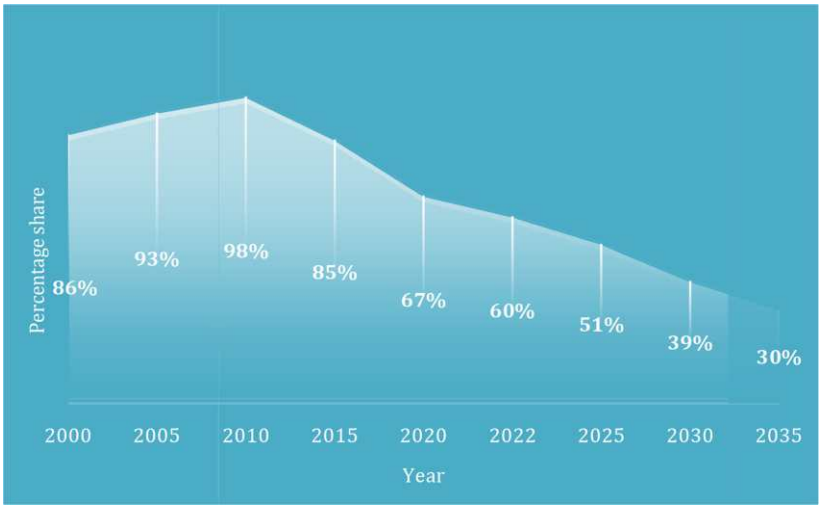
Despite its position as the world's largest trading nation and resource strength, China recognises the significance of global supply networks and potential risks even more than other countries. Due to the geopolitical embargo and trade competition, major trading partners are reducing imports of processed critical minerals and manufactured goods from China and exploring alternative suppliers. This suggests that China's trade restrictions are leading to retaliatory costs. Furthermore, China's critical mineral industry has challenges due to local concerns, such as rampant illicit mining, adverse environmental effects, and the low operating costs affecting domestic industry. Increased domestic consumption and a decline in production capacity make these problems even worse.[38] The particular challenges encountered by China's critical mineral industry are as follows:

I. Declining Production Share and High Domestic Consumption

China's increased demand for critical minerals is primarily driven by its commitment to the energy transition and clean technology-driven development. China, like other resource-dependent economies, faces difficulties due to limited availability, fluctuating pricing, and decreasing production share (see Figure 3). China has the position of the primary

importer of critical minerals, despite being the leading exporter, owing to its rising domestic consumption and demand. It should be noted that China's control over critical minerals is mostly concentrated in the processing stage, as it still needs to depend on the importation of raw ore to undergo processing.

Figure 3: China's Declining Rare Earth Production Share by 2035



***Source**: USGS Mineral Commodities Summary- Rare Earths Statistics and Information (2000-2035). https://www.usgs.gov/centers/national-minerals-information-center/rare-earths-statistics-and-information. Accessed on 10 December, 2023.*

For instance, China, despite being the leading producer and processor of REEs, has experienced a substantial increase in the import of rare earth compounds. Indeed, the Molycorp factory in California initiated the importation of certain

minerals for the purpose of purifying them in China. China's imports have caused a reversal in the international supply chain of rare earth elements (REE) in the upstream sector. When the extraction of minerals inside a country is limited due to concerns about the environment or regulations, smelters in China have to bring in concentrated minerals from other countries in order to fulfil the demand of the downstream industry and make the most of their processing capabilities. Surprisingly, the increase in imports from China has a detrimental effect on the domestic pricing of rare earth elements (REE) and an advantageous impact on international prices.[39]

II. Impact of Environmental, Social, and Governance (ESG) Standards

Mining projects also pose serious environmental, social, and government (ESG) hazards. Political unrest, military warfare, human rights violations, bribery, corruption, pollution, water shortages, and wildlife loss are among these concerns. Investors, downstream industries, and civil society have been scrutinising these implications, which cause short-term production issues and strong opposition to local and global mining projects. Thus, governments and companies need to manage ESG-related regulation, ethical norms, and reputational issues to avoid future risks.

Critical Mineral mining activities have significant adverse effects on the environment during the stages of mining, smelting, and separation, resulting in ecological harm, water contamination, soil erosion, and pollution. Approximately 1

metric tonne of ionic rare earths (REs) manufactured in southern China results in the production of 60,000 cubic metres of waste gas including hydrofluoric acid, 200 cubic metres of sewage contaminated with acid, and 1 to 1.4 metric tonnes of radioactive waste.[40] China is facing an escalating tension between mining activities and environmental preservation as it continues to expand the exploration of critical minerals. In addition, the global requirement for mining compliance with licensing requirements and environmental standards poses a challenge to China's practice of disregarding environmental concerns.

III. Global Initiative to Reduce Dependence on China

Sprecher et al. outlined a framework consisting of four key mechanisms that enhance resilience to mitigate supply interruptions, including diversifying primary production across countries and promoting recycling; Stockpiling commodities to mitigate temporary disruptions; Enabling producers to reduce material demand by improving qualities on the demand side; and Utilising substitution to effectively mitigate the consequences of supply disruptions.[41]

Kotaro Shimizu, Chief Analyst at Mitsubishi UFJ Research and Consulting, said "The world recognised the necessity to reduce the supply chain risk after China imposed a geopolitical embargo on rare earth against Japan during the Senkaku-Diaoyu island conflict in 2010."[42] Diversifying production networks has become important to combine the strength of manufacturing countries with resource-rich countries. Japan

has been funding recycling and sought new alliances in Mongolia, Myanmar, and other south-central Asian countries to secure raw materials.[43] Following the trade war, the US restricted trading with Chinese enterprises in advanced chips, equipment, designs, software, and even prohibited non-U.S. companies from selling China proscribed U.S. products. Multilateral initiatives like the Supply Chain Resilience Initiative (SCRI) initiated by India-Japan-Australia, Quad Critical Minerals Partnership, Mineral Security Partnership have established to ensure strong and adaptable supply chains with mutual agreement, thus decrease reliance on China.[44] In addition, the increasing significance of critical minerals and emerging supply chain risks has led many nations to publish lists of these minerals using their own criteria in recent years (See Table 1).

Several bilateral initiatives, such as the collaboration between Australia's Lynas Rare Earths Limited and Japan Rare Earths B.V. (JARE) to improve their processing capabilities, and the partnership between India and Australia to work together on critical mineral projects like cobalt and lithium, have great potential to promote diversification away from China thus puts a challenge to China's dominance. Concerning China's weaponization of mineral supply to Japan over Senkaku-Diaoyu dispute(2010) and the trade dispute between the US and China (2018), states that are high-import-dependent are introducing policies and strategies at bilateral and multilateral levels to reduce their dependence on China and secure their supplychain. Examples include the Quad Critical Minerals

Partnership Act, the European Raw Materials Alliance (2020), Australia's Global Resources Strategy (2021), and the US Compete Act (2022), among others.

Will China be able to Sustain its Dominance?

It is worth noting that China has achieved supply chain dominance through the development of production-driven specialisation in its supply chain cities over the last four decades, spanning from foreign direct investment-driven clusters in Guangdong to single-producer clusters in Zhejiang that brought Chinese goods to the global market. This study proposes three phases of China's presence in the critical mineral supply chain based on the trends: Phase I: 'Emerging Dominance' (2000–2010): From Importer to the Primary Exporter; Phase II: 'Geopolitical Leverage' (2010–2020): From Primary Exporter to Geopolitical and Strategic Export Embargoes; Phase III: 'Sustaining the Dominance' (2020–2030): From dominance to supply chain security or resilience

I. Geo-Economic Investments

China's impact in the field of critical minerals is progressively growing as its companies are presently exploring alternate regions to procure critical minerals such as lithium and cobalt, as a result of the enforcement of progressively rigorous regulations on foreign investments in developing markets such as Africa and Latin America.

Due to China's growing interest in extracting and refining their reserves of rare earth elements (REEs), the resource

strengths of Northern and Western Africa have become increasingly shaping a geo-eco-economic engagement. Chinese banks have provided loans to several African countries, such as Angola, Djibouti, Ethiopia, Kenya, and Zambia, as reported in 2021, which possess valuable natural resources. These loans accounted for more than 20% of the total loans supplied to Africa. In addition, China's extensive economic relations with African mineral producers have heightened concerns for the United States, thus effectively shifting the ongoing resource competition between the US and China to Africa, where China once again gains a greater influence.

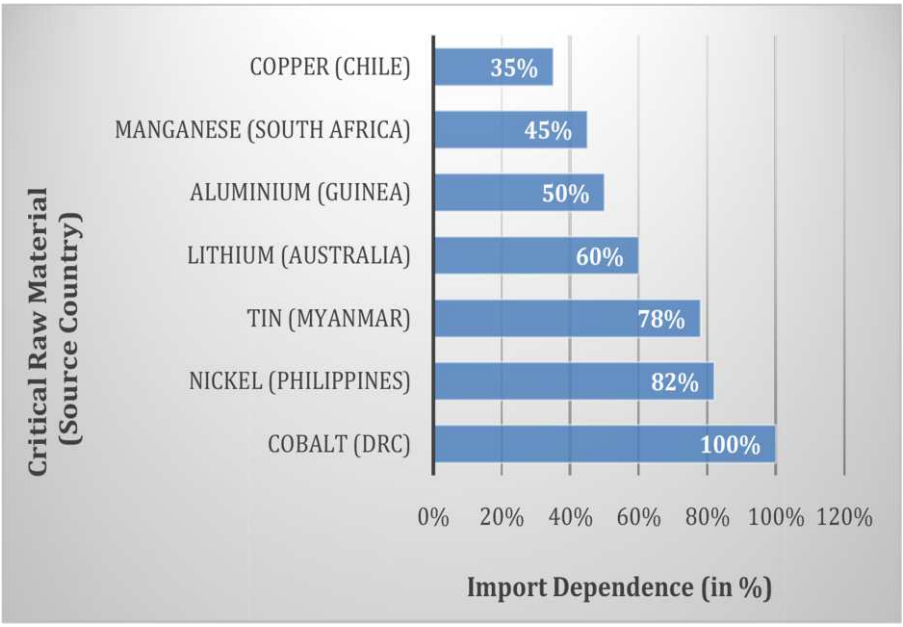
Chinese companies have initiated the financing of mining and processing activities in resource- rich nations (See Table 2). For instance- a chinese company Shenghe holds the majority of shares in Greenland Minerals, an Australian business registered on the stock exchange, which possesses the Kvanefjeld Rare Earth Elements (REE) deposit located in Greenland.[45] China has implemented a long-term strategy to enhance its supply chain security by acquiring critical raw materials from foreign sources (See Figure 4), which serves to protect the Chinese economy from the adverse consequences of environmental regulations, such as the exhaustion of domestic resources, declining ore quality, and increasing domestic mining expenses.

Table 2: Chinese Overseas Critical Mineral Investment Projects

Announcement Date	Project Name	Resource Country	Acquired Company	Project Value (In Million)
May 2018	S. Q. y Minera de Chile	Argentina	Tianqi Lithium Corp., China	4,066
August 2018	Cauchari-Olaroz Project	Australia	Jiangxi Ganfeng Lithium Co. China	138
July 2022	Lithea Inc. Company	Canada	GFL International Co. China	962
May 2022	Lakkor Tso Salt Lake	Argentina	Zijin Mining Group Co. China	741
February 2022	Bikita Minerals (Pty) Ltd.	China	Sinomine Resource Group Co., China	212
December 2021	Arcadia Lithium Project	Zimbabwe	Zhejiang Huayou Cobalt Co. China	343
October 2021	Neo Lithium Corp.	Canada	Zijin Mining Group Co., China	721
May 2021	Bacanora Lithium Plc	Democratic Republic of Congo	Ganfeng Int'l Trading (Shanghai) Ltd. China	262
March 2021	Minmetals Salt Lake Co.	Australia	Qinghai Liangcheng Mining Co. China	226

***Source**: Charles Chang, et. al., "China's global reach grows behind critical minerals", S&P Global, August 24, 2023. https://www.spglobal.com/en/research-insights/featured/special-editorial/china-s-global-reach-grows-behind-critical-minerals*

Figure 4: China's Initiatives to Diversify Raw Material Supplies



Source: IEA, *"Critical Minerals Market Review 2023",https://iea.blob.core.windows.net/assets/afc35261-41b2-47d4-86d6-d5d77fc259be/CriticalMineralsMarketReview2023.pdf*

II. Prospective Policies, Production Quota, and Promote Exploration (PPPs)

Under WTO regulations, governments have the authority to levy a tax on resources to promote their national interests, as part of which the government allocates revenue generated from resource taxes to invest in sustainable sectors, such as the recycling of renewable energy resources.[46] For instance- China's rare earth (RE) resource tax was first introduced in 1993 and updated in 2011 and 2015 (See table 3).

In 2016, the National Plan for Mineral Resources (2016-2020), also referred to as the Mineral Resources Plan, identified a set of 24 "strategic minerals" including of six energy resources, 14 metallic minerals, and four non-metallic minerals. This list also indicated China's apprehensions regarding possible scarcities and supply chain vulnerabilities resulting from the rapid expansion of domestic demand, which is projected to grow steadily and significantly by 2035, and heightened global competition.[47] The Plan covers China's comprehensive mineral resources sector strategies, including both inward and outward ones. Inward strategies prioritise mining, mineral efficiency, industrial upgrades, innovation, circular economy, and green development in the industry. The outward strategies aim to promote international cooperation in mining activities in China and globally, with the aim to increase foreign investor access to China's mining industry, attracting finance, innovative technology, and managerial skills. According to the Plan, China should establish large, competitive multinational enterprises to enhance and extend mining ventures overseas, leveraging existing and future joint projects in BRI economies (e.g. infrastructure).[48] In 2017-2021, central and local governments invested billions in exploratory efforts annually. The Natural Resource Taxation Law allows local governments to offer tax exemptions or reductions for mineral exploration.

Table 3: Stages of Resource Tax in China

Period	Resource Tax
Before 1994	Tax rate was 0 and free RE mining
1994–2011	Tax rate was 5.66 CNY per tonne for light RE raw ore and 2.00 CNY per tonne for heavy RE raw ore.
2011–2015	By weight, the tax rate for light RE raw ore was 60 CNY per tonne and 30 CNY per tonne for heavy RE raw ore.
After 2015	For light RE concentrate ore, the ad valorem tax rate is 11.50% in Inner Mongolia, 9.50% in Sichuan, and 7.50% in Shandong. For heavy RE concentrate ore, the ad valorem tax rate is 27.00%.

Source: *Jianping Ge, Yalin Lei, "Resource tax on rare earths in China: Policy evolution and market responses", Resource Policy, 2018, https://doi.org/10.1016/j.resourpol.2018.07.016.*

The mining industry in China has historically been subject to significant protectionism, but it is currently undergoing a gradual process of liberalisation to allow for increased global participation. Nevertheless, the challenge lies in striking a balance between the aspiration for cutting-edge foreign technology and restricting the direct involvement of foreign equities in the mining industry. The introduction of the new Foreign Investment Law in 2019 allowed foreign investors to participate in the important mineral mining sector, with the exception of rare earths, radioactive minerals like uranium, and tungsten. In 2022, the restrictions on exploration, mining, and transfer of mining licences for rare earths, uranium, and tungsten, as stipulated in the 2019 law, were also removed for foreign businesses, through a general permission and approval process overseen by the Ministry of Natural Resources.[49]

Jan Giese, Senior Manager Minor Metals and Rare Earth, Tradium GmbH noted that "China constantly maintains a competitive price framework by keeping costs low. China employs a pricing strategy known as the "Shopping Mall Strategy," in which consumers are initially attracted by a buy one, get one free offer but eventually encounter higher prices as they get dependent on the product. At times, China manages to keep the expenses for raw materials at a minimum by utilising a 'spot price mechanism', even if it incurs some losses in such a situation. The goal is to attain sustained profitability by upholding a strategy of keeping costs low for raw materials. As an illustration, China has set the cost of purifying light rare earth elements deliberately low to ensure continued dependence on investment. Recently, the price of gallium has intentionally been maintained at a high level in order to secure profitability, given the industry's reliance on China."[50]

China's strategy is to prioritise producing and selling finished items, such as solar panels and other environmentally friendly technology products, at competitive prices rather than focusing on keeping the price of raw materials low, an approach that allows China to pursue significant profits.

III. Balancing ESG Standards and Operation Domestic Industries

To deal with the environmental challenges, China has been adopting and implementing following strategies: Promote

green Mining; Impose environmental standards; Licensing conditions/obligations and penalties to impose compliance; Promote Mining Circular Economy through Recycling and utilisation of waste residues during mining and smelting. It even follows a 3R strategy- Reducing, consumption of mineral resources during exploration; Reusing waste residues; and Recycling used resources.[51]

In 2022, the Implementation Plan for Carbon Peak in the Non-ferrous Metals Industry was introduced which establishes a recycling target of over 24% for the fourteenth five-year period. Additionally, it sets a longer-term objective of developing a green, low-carbon circular industrial system by the end of the fifteenth five-year period (2026-2030).[52] It should be emphasised that "most of the treatment of tailings and radioactive are dealt with by local governments in China, for instance—Inner Mongolia", according to Kotaro Shimizu, head analyst at Mitsubishi UFJ Research and Consulting. As private companies go on with their operations, they show little regard for the impact on the environment. For example, a radioactive material prompted the local administration to order the relocation of residents in interior Mongolia.[53]

IV. Centralised State-Owned Enterprises

Chinese authorities have advocated for consolidation in order to enhance the control of their domestic sector, following the removal of export restrictions from their options by the 2014 WTO judgment. [54]

Three of China's "Big 6" rare earth SOEs joined into one mega-conglomerate in December 2021 when the China Rare Earth Group was approved by the State-Owned Assets Supervision and Administration Commission (SASAC). The recently established rare earth mega SOE incorporates the rare earth divisions of two research firms, Grinm Group Corporation Ltd. and China Iron & Steel Research Institute Group, as well as three of the "Big Six" SOEs that control the rare earth market: CHALCO, China Minmetals Corporation, and Ganzhou Rare Earth Group Co., Ltd. Chinese central planners have tremendous pricing power and influence over global supply due to the company's control over a quarter of the world's mineral-bearing rare earth elements (REE) and 60% of the production of rare earths. "Situation and Policy of China's Rare Earth Industry" from 2012 and "Several Opinions of the State Council on Promoting the Sustainable and Healthy Development of the Rare Earth Industry" from 2011 both document the government's stance on the matter, which is to push for consolidation. According to the documents, the goal of consolidation is to bring all projects in line with government goals, decrease conflicts among businesses, and eliminate redundant work.[55]

Conclusion

The sequence of events that culminated in export restrictions exposed China's dominance over critical mineral supply chains. Initially, China's dominion was limited to rare earth elements but encompassed to other critical minerals. These

events have emphasized the critical role that China plays in the global supply system and the continued reliance of many countries on China, despite attempts to reduce dependence. This prevailing dominance appears to be enduring, contingent upon China's prospective policies to comply with global ESG standards and issues of domestic industry and making geo-economic investments in resource-abundant regions like Africa and Latin America. It should be noted that market scale of critical minerals is still not big, for instance- only 20,000 rare earths are produced globally, as countries still lack processing capacity outside China.

However, as Nabeel Mancheri also pointed that "We should remember that the old market and state were not reliant on China for these materials, as processing raw materials is not a complex task and can be done by countries that are developing their own processing capacity."

Diversification initiatives will certainly be a challenge for China, considering the ongoing efforts for international standardisation in the ESG requirement, local mining, consensus on a transparent and open price index, a free trade agreement for critical mineral strength, and a low barrier to access to critical raw materials. Overall, the diversification serves as a challenge to China only if the focus continues to be on absolute advantage and mutual interest, not relative gain. Although Japan lacks domestic mines, it prioritises recycling and sea-bed mining. However, both methods are expensive, and recycling is still a developing process. While not posing

a direct challenge to China's dominance, it has the potential to do so through bilateral and multilateral alliances with the United States, Australia, India, and Canada. A decade ago, the global community heavily relied on China for more than 90% of its needs.

However, with the imposition of an embargo, there has been a noticeable increase in efforts to diversify. Despite a decrease in dependence, Japan continues to import 50% of its goods from China, as pointed out by Kotaro Shimizu.

Despite the diversification initiatives, the economies of Western countries rely on specialised technology, despite the deteriorating political climate that present a significant challenge to decouple from China. Without importing end-products from China, conducting commerce becomes challenging for countries. As pointed by Jan Giese, the contact between governments has faced challenges in the current volatile geopolitical climate, but the interaction between industries remains positive and characterised by a strong mutual desire in sustaining business operations. Nevertheless, industry-to-industry interactions are hindered by the geopolitical situation between governments, which makes it difficult to finalise business deals as they are unable to obtain an export licence, authorisation, and encounter other obstacles.

Based on a comprehensive analysis, it is anticipated that China's influence will be considerably reduced, but not entirely eliminated, as a result of the inventive capacities of the European Union, United States, Japan, India, and other countries. The analysis indicates that by 2035, the global community will not eliminate its reliance on China but will reduce it significantly due to the rapid decline in commercial relations with other nations and ongoing efforts to diversify. Overall, the study suggests that it will not be 'Zero China, but 'Less China'.

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Understanding the PRC's Information Operations Against India

Dhara Shah*

Introduction

The on going military stand off between India and China has necessitated a deeper understanding in New Delhi of Beijing's use of information as an instrument of warfare to secure strategic advantage. The People's Republic of China (PRC) has conventionally use din formation as a tool of political warfare, to target the Communist Party of China's (CCP) internal and external enemies, and to counter negative perceptions of Beijing's increasing assertiveness globally (Charon and Jeangène Vilmer 2021). While efforts at this information 'warfare' have largely been focused on Taiwan and the United States and its allies, India has been are centtar get, following the military confrontation in Eastern Ladakh in 2020.

Beijing's 'information operations' against India primarily encompass the creation, manipulation, or selective use offalse information by Beijing, across military and non military domains, to discredit New Delhi's international profile, advance territorial claims, and project Chinaasa responsible internation alactor. This paper draws up on three case studies - the Doklam stand off (2017), the COVID-19 pandemic, and the Galwan Valley stand off (2020), to understand how China

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employs information operations against India for political & strategic gains.

Section 2 delves in to the history of Chinese military & strategic thought on information warfare, while Section 3 examines various definitions of Information Operations. Beijing's motives behind deploying information operations against India are explored in Section 4, and Section 5 attempts to decode the actors involved in information operations, focusing primarily on the role of Chinese diplomatic missions in India, state/ Party-owned and affiliated media organizations, and social media in amplifying Beijing's messaging in India.

Drawing primarily from English-language academic and media sources, Section 6 elaborates on the tactics deployed, ranging from the use of falsely attributed material to the creation of deep fakes, all with the overarching goal of manipulating public perception and sowing confusion. Section 7 attempts to decode messaging patterns which focus on asserting Chinese supremacy, and framing a negatived is course around India.

While the success of these information operations is debatable, they are of consequence to India's domestic stability and global strategic out look. Section 8 examines how, over the long term, such targeted campaigns have the potential to compromise public perception of India's political leadership, informational about the state's ability to defend the nation from external threats, and even impact elections. In the military domain, they serve to reduce morale, heighten threat perceptions, and increase chances of altercation. From a strategic perspective,

they also under mine bilateral relations by expanding the trust deficit between the two sides, and could deter political leadership on both sides from investing in confidence building measures (CBMs). Thus, disinformation campaigns engender a hostile international environment, limiting prospects of peace.

It is important to note here that what one perceives as disinformation or malign intentions could likely be disputed by another. Sophisticated information operation soften blur the boundaries between bonafide and manipulated information, posing risks to data collection and interpretation. Thus, despite the best of intentions, writing about disinformation could in advertently perpetuate distorted narratives. Given these challenges, this paper consciously adopts a diagnostic approach to wards recognizing China's capacity to disrupt India's information ecosystems, and emphasizes on the need for New Delhi to invest in strengthening its deterrence capabilities.

I. History

Are view of Chinese government literature, media commentaries, and social media messages, shows that the PRC's use of information as an instrument of strategic competition extends to both military and non-military domains. For instance, in 1952, during the Korean War, Beijing had alleged that the United States had been responsible for out breaks of bubonic plague, anthrax, cholera, and encephal it is in parts of China and North Korea–achargevehemently denied by Washing ton D.C. (DiRest a, etal. 2020). Over the last decade, the PRC has similarly used information as atoolo legitimize its historical

claims over the South China Sea; to reinforce the narrative that Taiwan's 'reunification' with the PRC was imminent; to inflame public opinion in HongKong, including against the United States; and to claim its sovereignty over the Indian state of Arunachal Pradesh, among others. (Charon and Jeangène Vilmer 2021; UNI2006; Bhattacharya 2006).

In the military domain, Shen Weiguang, a soldierina field unit of the People's Liberation Army (PLA), first wrote about the integration of information with conventional warfare in 1985 (Mulvenon and Yang 1999). In his book' Information warfare', Shenargued that information could be used in concert with military, psychological, and electronic warfare to weaken the enemy's command and control capability (Troxler 2022). The United States' success in disrupting and destroying information systems during the Gulf War precipitated greater analytical focus by the PLA on the subject (Mulven on and Yang 1999).

References to 'information warfare' subsequently found a mention in a paper published by Major General Wang Pufeng at the Academy of Military Science, Beijing, in 1995, where he explained how information could be used in counter-reconna is sance operations, to plant false intelligence with in the opponent's side and inspire in correct assessments (Pufeng 1995). His colleagues, Senior Colonels Wang Baocun and Li Fei, elaborated up on the concept by describing information warfare as "combat operations in a high-tech battle field environment in which both sides use information-technology means, equipment, or systems in arivalry over the power to obtain, control, and use information." (Baocun and Fei 1995).

Wang and Li further held that information war or warfare had both an arrow and abroad meaning. In then arrow sense, it destroyed and/ or disrupted the enemy's information systems and flow whilst protecting one's own, while the broader sense pointed towards warfare dominated by information in which digitized units used information [smart] equipment (Baocun and Fei 1995).Author Dean Cheng reasoned that the broader meaning of the term translated in to a "strategic in formation war" that made use of information and information technology in the political, economic, S & T (science & technology), diplomatic, cultural, and military are nas to secure information advantage (Cheng 2014). Information war (xinxizhan; 信息战) there fore involved making information itself the focus of warfare (Cheng 2014).

II. Defining Information Operations

Western scholars have used diverse terminology such as' sharp power' (Walker and Ludwig 2017), 'in fluence operations'(Charonand Jeangène Vilmer 2021), 'information shaping' (Ohlberg, etal. 2023), and ' information manipulation' (Ohlberg, etal. 2023), 'to describe Beijing' sefforts at using information to seek strategic gains. This paper subscribes to RAND Corporation's all-encompassing terminology of" Information Operations and Warfare", which includes the collection of tactical information about an adversary, as well as the dissemination of propag and a in pursuit of a competitive advantage over an opponent (RAND Corporationn.d.). Since effortsat" information collection, management and analysis,

transmission and exploitation" are also a peacetime undertaking (as explained below; Cheng 2014), this paper chooses to label them simply as' Information Operations.'

An information operation could use three types of information – misinformation, disinformation, and malinformation – to determine the scale and intensity of the attack. According to the United States' Cyber security & Infrastructure Security Agency (CISA), Misinformation is false, but not created or shared with the intention of causing harm; Disinformation is deliberately created to mislead, harm, or manipulate a person, social group, organization, or country; and Malinformation is based on fact, but used out of context to mislead, harm, or manipulate (Cybersecurity & Infrastructure Security Agency (CISA) n.d.).

In Chinese government parlance, the terms"rumors" and "fake news" have of ten been used to refer tomis/dis/ malinformation, and alleged 'rumormongers' have been subject to various penalties and crack downs (Repnikova 2018). In 2016 and 2017, the PR Cenacted sever allaws to combat on line rumors and regulate internet news services, which required social media platforms to repost government-acknowledged news, and prohibited the dissemination of independent articles (Repnikova 2018). In 2018, Beijing also introduced a regulation mandating micro blogging service providers to establish an "anti-rumormechanism, "placing responsibility on companies for filtering and regulating on line information (Repnikova 2018).

From the government side, the Cyberspace Administration of China (CAC) launched a special campaign in May 2023 to clean up online information, closing more than 100,000 on line social media accounts that disseminated "fake news" and impersonated state-controlled media, underscoring federal concern over information distortion and manipulation (Orr and Baptista 2023).

III. Objectives

Experts at the Institute for Strategic Research (IRSEM) in Paris have reported that the PRC uses information operations (they call these 'influence operations') to tar get the Communist Party of China's (CCP) internal and external enemies, control groups that could defy its authority, construct a coalition around the Party to serve its interests, and project influence a broad–anapproach they term as "United Front" (Charon and Jeangène Vilmer 2021). They added that Information operations (IO) are essentiallya "war time and peace time undertaking" which encompass"public opinion, psychological and legal warfare" (Charon and Jeangène Vilmer 2021). Other scholars have similarly argued that the PRC wants to reshape the world by using mis/dis/malinformation to promote a "brand of technology-enabled authoritarianism", and advance its irredentist aspirations, citing sever alinstances in Taiwan, the United States, etc. (Di Resta, etal. 2020; Charon and Jeangène Vilmer 2021).

The PRC' sattempts at information operations against India have been insufficiently studied, primarily because IO as

aconcept gained prominence only after the2016 elections in the United States, leading Western scholars to understandably study the impact of IO on their own countries and allies first. While Indian strategic experts and diplomatic correspondents are increasingly cognizant of the risk sposed by Beijing's information operations against India, the topic is of ten subsumed under the broader category of influence peddling and operations.

That said, think tanks affiliated to the Indian military such as the Centre for Land Warfare Studies (CLAWS, affiliated to the Indian Army), and the Observer Research Foundation have focused on the PRC's information warfare strategies and cyber attack capabilities, providing insights into the platforms used, military units likely to be involved in the process, and implications for India. (Yadav 2021; Ahuja and Diwan 2023; Bommakanti 2023). Media correspondents and historians have also provided comprehensive accounts of Chinese discourse and perceptions of India, like Shastri Ramachandran's 'Let There Be Light: Prisms of India-China Cultural Relations' which record instances from 2009-10 from the author's time in Beijing (Rama chandran 2023).

These, however, offer little evidence of the PRC's current objectives and methods to carry out information operations in India. This paper there fore seeks to address this gap by examining PRC objectives in carrying out information operations against India, tactics involved, recurring themes, and understand if/how these translate in to strategic gains for Beijing.

An analysis of CCP and state documents, elite opinion, media reports, and social media content on India show that Beijings ought to deploy information operations against India in three instances–the military stand of fin Doklam (2017), the Covid-19 pandemic(starting 2019),and the military confrontation in Galwan (2020). Attempts to deploy information operations are also evident in relatively peaceful periods in 2018-19, though the scale and intensity differ. This paper there fore chooses to analyze the above-cited literature between January 2017-August 2023 to understand how information operations are deployed against India for strategic gains.

Victory or dominance in information operations essentially meant securing one or more of the following objectives:

1. Imposing reputational costs on India by portraying New Delhi as a meddler in the sovereign affairs of another state (Doklam) and/orviolating the PRC's territorial integrity (Galwan).

2. Maintaining the military power differential by spreading dis information about deployment of weapons along the Line of Actual Control to assert Beijing's strong position, and to under minem India's military morale by showing dramatic footage of military casualties.

3. Advancing territorial claims in Ladakh, Arunachal Pradesh, and Doklam trijunction via documents and imagery that counter India's sovereign claims.

4. Portray a positive image of China: China has employed information operations to effectively shape its narrative and promote its interests, with the goal of showing China in a positive light to domestic and international audiences.

5. Distract domestic audiences from Beijing's mismanagement of the pandemic, by spreading conspiracy theories about the origin of the virus in the Indian subcontinent and framing a negative discourse on India's management of the COVID-19 pandemic (Graham Harrison and Mc Kie 2020).

Beijing there fore employed of fensive and defensive in formation operations to discredit New Delhi's international profile, advance its own sovereign interests, and protect its own reputation.

4. Actors

Several agencies (State and Party-run and affiliated) are responsible for implementing Information operations. IRSEM explained that these include (but are not limited to) the Central Propaganda Department, the United Front Work Department, International Liaison Department, Communist Youth League, Ministry of State Security, and Taiwan Affairs Office; public and private companies like Beidou and Huawei, and digital platforms such as We Chat, Weibo, and TikTok, help in data collection (Charon and Jeangène Vilmer 2021).

The PRC's defense white paper in 2015 had indicated that Beijing would employ integrated combat forces to"prevailinsystem-vs-system operations featuring information dominance, precision

strikes and join to perations" (The State Council Information Office of the People's Republic of China 2015). Military reform sunder taken that year subsequently included the establishment of the PLA Strategic Support Force (PLASSF) as a new, separate service to focus on the conduct of information warfare. (Harold, Beauchamp-Mustafaga and Hornung 2021). On April19, 2024, PRC President and Chairman of the Central Military Commission (CMC) Xi Jinping announced (Ou and Li 2021) the end of the PLASSF, a move which resulted in the creation of a new Information Support Force (ISF, 信息支援部队) and the alteration of there porting relationships of two of its departments, where the SSF's Aerospace Systems and Network Systems departments were reportedly re-designated as the Aerospace Force and Cyberspace Force, respectively, and all three bodies would report directly to the PLA's CMC. (Nouwens 2024)

Central to India's case is Chinese diplomatic and media (traditional and digital) presence in India, which has attempted to create a pro-Chinanarrative, albeit with varying degrees of success. The Chinese embassy in New Delhi, and Consulates in Mumbai and Kolkata, have been important government representatives in the information space, with official publications serving as important repositories onarange of issues from positions on the on the border, status of bilateralties, to the missions' public diplomacy initiatives and views. They have also invested substantially in expanding their digital media presence in India, with former Chinese ambassador to India, Sun

Weidong, ranking among the 'Top10' most-followed Chinese diplomats on Twitter (the account currently has 96. 1K followers (Sun2017), not to of arbehind his colleague in the United States with 117. 8K followers (Chinese Embassy in Us2019). Observers have reported that Chinese diplomats in India have been 'wolf-warriors' by daring to take on senior Indian minister son what they perceive as contentious issues, or have engaged Indian politicians – particularly from the Left parties in India, using Communist linkages – to convey Beijing's position (PTI 2005; Gupta, Why foreign diplomats become wolf warriors in India 2023; Embassy of the People's Republic of China in India 2017).

To solicit favor able elite opinion, the PRC has also extended out reach to foreign nationals who speak up on the PRC's behalf, or transmit PRC messages (Ohlberg, etal. 2023).Mediare ports have detailed how the PRC has attempted to build a positive narrative of Beijing by' grooming surrogates' i.e. proxy scholars (researchers) in think-tanks, university professors, and other policy experts t write pro-PRC articles, in return for monetary compensation of up to US$400 (nearly ₹33,000). (DiResta, etal. 2020; Mukhopadhyay 2023).

According to Freedom House, prior to the Galwan clash and the pandemic, Chinese state actors have also actively engaged in efforts to cultivateties with Indian journalists (Ghosal Sing hand Cook, Beijing's Global Media Influence 2022 2022). Ananth Krishnan, The Hindu's former correspondent in Beijing, noted that the objective was to "Tell China's story well" (Krishnan, New Messengers: The Role of Traditional and New Media in

2023) . Krishnan further reported an alleged arrangement between the Chinese Embassy in New Delhi and the Indian media, which enabled reporters to live in Beijing for 10 months, along with monthly stipends and all expenses-covered tours twice every month to different Chinese provinces. The first two cohorts of the program were also reportedly awarded degrees in International Relations from Renmin University in Beijing, although this was subsequently discontinued. (Krishnan, New Messengers: The Role of Traditional and New Mediain China's External Messaging During India– China Border Crises 2023).

With in China, media out lets sought to hire Indian journalists and editors to refine messaging in the English language for external audiences. Krishnan noted that CGTN (China Global Television network) had employed at least four senior Indian editors in its headquarters in Beijing, while China Daily had at least three senior Indian editors on board (Krishnan, New Messengers: The Role of Traditional and New Media in China's External Messaging During India–China Border Crises 2023). How ever, bilateral tensions have currently impacted the stationing of journalists in both countries. (Krishnan, Last Chinese reporter 'expelled' after India denies visa extension 2023).Commentaries and op-edson India, never the less, find frequent mentions in Chinese media out lets like the Global Times, People's Daily, Xinhua (all with close ties to the state or the Party), and play an important role in deciphering elite and media opinion.

Inanoped on Chinese in fluence operations, Indian journalist Shi shir Gupta further noted that influence peddling through the media was legitimate in Chinese power play. (Gupta, Influence peddling through the media is legitimate in Chinese power play 2023). When it comes to media presence, the PRC had built as izeable information network in India, stationing as many as 14 Chinese journalists in India at one time (though the number now stand satzero) (Ministry of Foreign Affairs of the People's Republic of China 2023; Krishnan, Last Chinese reporter 'expelled' after India denies visa extension 2023). This was supplemented by its own extensive use of the Indian media, with Chinese diplomats publishing regularop-eds and advertorials in leading English dailies The Hindu, the Times of India, the Free Press Journal, and the Economic Times, and giving interviews to local media out lets (Ghosal Singh and Cook 2022; Krishnan, New Messengers: The Role of Traditional and New Media in China's External Messaging During India–China Border Crises2023).However, there is limited direct media owner ship by the Chinese public or private sector, given that Indian investment laws cap foreign direct investment in the media sector to 26%(UNCTAD 2020).

To over come language barriers, Chinese state media out lets operate accounts on social media in Hindi, Bengali, Tamil, and Urdu, and have avast number of followers. (Ghosal Singh and Cook, Beijing's Global Media Influence 2022 2022). The state broad casting conglomerate China Media Group (CMG) Hindi's Face book page, for instance, has 11 million followers (CMG

Hindi 2013), while CMG Tamil has 10 million followers (CMG Tamil 2015). Under taking an assessment of the PRC's IO sin several Indian languages is an ambitious, time-consuming task, limited by language constraints. Further, the author's own limited proficiency (beginner-level) in the Chinese language impedes a qualitative assessment of China's domestic content. This paper there fore restricts it self to PRC information operations only in the English language, in India and at home.

In the wake of the military stand off in Galwan in June 2020, India had banned 220 Chinese apps (over three separate announcements) including TikTok, We Chat, and Weibo, citing them as "prejudicial to sovereignty and integrity of India, defense of India, security of state and publi corder." (Press Information Bureau (PIB) 2020); PIB2020; PIB 2020). The decision, coupled with the PRC's prior restrictions/bans on Twitter and Facebook, and social media platforms' own censorship, severely limited the stream of information, particularly public opinion, from both sides. While this paper has attempted to address the issue by using archived material, secondary sources, and accessing open- source information on Twitter/Facebook accounts of Chinese institutions and individuals, the author never the less wishes to under score the asymmetry of information available in government and private domains, and acknowledges that access to public opinion from social media apps would have enabled a deeper understanding of the PRC's information operations against India.

5. Tactics of PRC Information Operations

IO can be used to sway public opinion through a variety of tactics, ranging from misleading click bait messaging to misattributing information, or creating false narratives. This paper draws upon techniques identified by CISA and RAND that pose risks to information infrastructure and systems in the Indian context (CISA 2022; Paul, etal. 2022).

a) Use and amplification of falsely attributed, fabricated material: In a study on 'The Role of Information in U.S. Concepts for Strategic Competition', RAND noted that operations in the information environment (OIE), particularly disinformation and propaganda, included planting, distributing, or promoting misleading news stories (Paul, et al. 2022). This technique was evident during the military stand of fin Galwan, where Indian media have reported at least three Twitter handles that spread misleading in formation on New Delhi's defense capability and military preparedness.

For example, @evazhengll (whose account currently stands suspended),reported to be a Chinese national and Fudan university alumnus, misled audiences through a video on Twitter showing ten Indian soldiers being administered hyper baric oxygen treatment by the PLA in Galw an valley, and adding that the PLA had not suffered any casualties in the clash (Zheng 2020). First Post noted that the video, which had received around 100,000 likes and wasre- tweeted by prominent journalists in India

and the UK, was actually a CGTN video from three year sprior (Choudhury 2020). This author corroborates with the findings, given that the video was that of an oxygen chamber used by the Tibetan Armed Police. (CNTVL has a 2017).

In another instance of propagating disinformation, @CNPakWW (currently suspended) belonging to 美麗的男何金濤 (Měilìdenánhéjīntāo or beautiful man He Jintao) a self-proclaimed harbinger of 'China-PakFriendship' tweeted a video of US Military Apache Choppers flying over Lake Havasu in Arizona claiming these were Chinese helicopters patrolling over Pangong Tso, garnering about 5400 views (美麗的男何金濤 2020; Dahiya 2020).

Similarly, @osintbelongingtoa 'CathyRolanova', whoclaimed to bean open-source intelligence expert, published misleading images about the confrontation and claimed that the PRC had 'occupied' Pangong Tso lake using satellite images of an Indo-Tibetan Border Police camp. (Dahiya, 'Cathy Rolanova' – The Many Lies of a Self-Proclaimed OSINT Expert 2020).

With in there alm of conventional media, a December 2020 article in the Global Times spot lighted are search endeavor conducted by scientists from the Chinese Acade my of Sciences, Fudan University, and the University of Texas in Houston., which postulated that the earliest inception of human-to-human transmission of the COVID-19 virus may have occurred on the Indian subcontinent. (Liu 2020). It is note worthy that this

study, having not undergone peer review, was initially disseminated via a preprint platform, only to be subsequently retracted at there quest of its authors (SSRN n.d.). None the less, the Global Times proceeded to characterize this with draw al as a matter steeped in scientific intricacies, there by absolving itself of any culpability in the dissemination of potentially misleading information. (Liu 2020).

b) Using prominent thought leaders and influencers: Key personalities in the media and military have also helped in the spread of mis/dis/malinformation, though it is difficult to differentiate between actors sharing information based on personal motivations and those who do so at the state/Party's behest.

   For example, Shen Shiwei, a key media personality on political and economic issues, shared a video on January 1,2022, showing PLA soldiers raising the Chinese flag in an unspecified location in Galwan Valley (Shen 2022). Thevideoreportedlygarnered1.7 million view son Twitter, and triggered a heated political debate in India on its military prepared ness and capabilities. (Krishnan, New Messengers: The Role of Traditional and New Media in China's External Messaging During India–China Border Crises 2023).It also led the opposition to ask the Modi government to "break its silence" and explain how PRC troops unfurled a Chinese flag in Galwan valley (Mohan 2022).

Similarly, on May 31, 2020, 15 days before Galwan, Twitter user handle @dafengcao posted that the Indian side had first broken the consensus on the border, along with a picture of injured soldiers, presumably Indian. (Cao, There seems to be some kind of consensus on both sides before, however, the Indian broke it first after releasing the foot age2020). While news out lets in India have raised questions regarding the authenticity of the image ,it is important to note Dafeng is a regular commentator on PLA-issues,having a sizeable following on Twitter, including prominent Indian strategic experts, underlining how key individuals play an important role in information operations (in advertently or other wise.) (Banerjee 2020; Caon.d.).

c) Pro-PRC Opinion Through Indian Nationals: The PRC has also used Indian nationals to amplify it santi-New Delhi messaging, though it is again difficult to distinguish between messages shared due to personal motivations and Party/state-lednarratives. For instance, an Indian national Gaurav Tyagi finds multiple mentions in the People's Daily and the Global Times espousing pro-PRC opinions, including suggesting that India change its name to 'Back wardistaan' considering the nation's prevailing socio-economic challenges, and by calling on Chinese companies to focus on domestic resources rather than allocating investments to India. (Tyagi, Letter to the Editor: Indian media should focus on synergy rather than confrontation

with China 2017; (Tyagi, Chinese companies should focus on domestic resources rather than investing in India 2016).

d) Disguising/Hiding the source: This technique has often been deployed by the Chinese embassy in New Delhi, to mislead audiences about the original source of published material.

To illustrate, this author found eight instances between 2017-23 where the embassy had misstated that the Indian media had "published" 'special pages' on key historical events like the founding of the PRC, or CCP, or Tibet, concealing that these were 'advertorials' and had been labeled so by the media houses that published them. (Embassy of the People's Republic of China in India 2022; Embassy of the People's Republic of China in India 2022; Embassy of the People's Republic of China in India 2022; Embassy of the People's Republic of China in India 2021; Embassy of the People's Republic of China in India 2021 ;Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2019).

Similarly, in at least three in stances, the embassy chose to state that it 'received' interviews from media houses or reporters, when these were simply public diplomacy initiatives(likea photo exhibition), or the embassy seeking to present the official government version on the military confrontation in Doklam and Galwan (Embassy of the

People's Republic of China in India 2022; Embassy of the People's Republic of China in India 2017; Embassy of the People's Republic of China in India 2022). The embassy has also used the "Response (s) to media query" format multiple times, where in a web page follows a Q & A format on a particular issue, but offered no details on who sought these queries, when, and why (screens hot below).

Home > Embassy News

Response to media query by Spokesperson of Chinese Embassy in India Counsellor Wang Xiaojian on the raid by the Directorate of Enforcement of India on vivo India

2022-07-06 22:57

Q: On July 5 ,the Directorate of Enforcement of India conducted raided 44 production and operation sites related to vivo and its dealers across the country on suspicion of money laundering. Do you have any comments?

A: On July 5, the Directorate of Enforcement (ED) raided vivo and its dealers at 44 production and operation sites across the country for allegedly violating the provisions of The Prevention of Money Laundering Act (PMLA). We are following the issue closely.

The Chinese government always asks Chinese enterprises to abide by laws and regulations overseas and firmly supports Chinese enterprises in safeguarding their legitimate rights and interests.

The frequent investigations by the Indian side into Chinese enterprises not only disrupt the enterprises' normal business activities and damage the goodwill of the enterprises, but also impedes the improvement of business environment in India and chills the confidence and willingness of market entities from other countries, including Chinese enterprises to invest and operate in India.

The essence of China-India economic and trade cooperation is for mutual benefit and win-win results. The bilateral trade volume between China and India strikes a historical record of over 100 billion USD in 2021, which reflects the huge potential and broad prospect of economic and trade cooperation between our two countries. China wishes the Indian side to investigate and enforce the law in compliance with laws and regulations, and effectively provide an fair, just and non-discriminatory business environment for Chinese enterprises to invest and operate in India.

All these instances exemplify how disinformation can be perpetuated by distorting the origin of information, there by undermining the public's ability to discern truth from falsehood.

e) Undermining India's image and Indian Leadership's Credibility: The PRC has also attempted to manipulate public perception and sow confusion by undermining India's leadership, in print and digital media.

On July21,2017,The Global Times in an editorial claimed then-ExternalAffairsMinister Sushma Swaraj had 'lied' to the parliament about India's alleged 'invasion' of 'Chinese territory' in Doklam (Global Times 2017). The paper further went on to undermine the Indian leader by stating that that New Delhi's impetuous action had stunned the international community. (Global Times 2017). In reality, however, the original statement reflected Indian concerns over the PRC's action in the tri-junction point, and its alignment in the Sikkim sector, which were un settled as per Point 13 of the 2012 Border agreement. (MEA Sushma Swaraj's statement on military stand off with China at Doklam 2017).

Further, The Global Times in a July 2021 editorial also distorted a statement made by Union Minister of State for State Transport and High ways V.K. Singh, on the number of times India had defended its territory, claiming this was evidence of admission by India as being the true aggressor in the Galwan stand off (The Hindu Special Correspondent 2021; Ai 2021).

On August 16, 2017, China Xinhua News also released a video titled "7 Sins of India" featuring a Chinese actorina Sikhturban, speaking in a mock Indian accent, and accused

New Delhi of "trampling" international law (China Xinhua News 2017). The video was criticized as racist, and parodying the Sikh community, both in India and a broad (BBC 2017).

In May 2021, the PRC's Central Political and Legal Affairs Commission also mocked the COVID 19 pandemic in India, by juxtaposing a photograph of a Chinese rocket poised to blast in to space with a cremation pyre in India, with the title "Lighting a fire in China VS lighting a fire in India" (BBC 2021). While the post was quickly taken down by the Communist Party-run news service that posted it, it lingered as a provocative example of the PRC's unsympathetic and critical attitude to wards India. (Buckley 2021).

f) Targeting Indian Media: In his analysis on the role of media in the Vietnam war, Washington Post reporter Joel Achenbach has argued that "Partisan journalists, wielding verbal flame throwers, view their "objective" counter parts as retailers of false balance." (Achenbach 2018). This has been particularly true in the PRC's context, where the Chinese embassy in New Delhi has criticized the Indian media on at least 22 instances between January 2017 and August 2023 for sensation alizing the status of the bilateral relations, particularly during military confrontations, diminishing the PRC's reputation, or for its alleged misreporting of the PRC's core interests in Taiwan, Xinjiang, and the South China Sea. The table below lists these headlines:

Date	Headline
January 15, 2023	Spokes person of Chinese Embassy in India refuting the allegations against China made by the US State Department official during his visit to India (Embassy of the People's Republic of China in India 2023)
June 9, 2022	Spokes person of Chinese Embassy in India Counsel or Wang Xiaojian solemnly refuting groundless allegations against China made by the US military official during his visit to India. (Embassy of the People's Republic of China in India 2022)
April 5, 2021	Spokes person of Chinese Embassy in India solemnly refutes wrong comments of Indian media on Taiwan-related issues (Embassy of the People's Republic of China in India 2021)
April 2, 2021	Chinese Embassy Spokes person's remarks on Indian media report son joint WHO-China study report of origins of Covid-19 released by WHO (Consulate-General of the

	People's Republic of China in Mumbai 2021)
March 23, 2021	Spokes person of Chinese Embassy in India solemnly refutes wrong comments of Indian media on Xinjiang- related issues (Embassy of the People's Republic of China in India 2021)
March 2, 2021	Response to media query by Spokes person of Chinese Embassy in India on some Indian media hyping so-called "Chinese hackers launch cyber attacks on Indian facilities" (Embassy of the People's Republic of China in India 2021)
January 27, 2021	Response to media query by Spokes person of Chinese Embassy in India Counsel or Ji Rong on media reports that India will continue to ban Mobile Apps with Chinese Background (Embassy of the People's Republic of China in India 2021)
December 30, 2020	Spokes person of Chinese Embassy in India Counsel or Ji Rong solemnly

	refutes wrong comments of Indian media on Tibet(Xizang)-related issues (Embassy of the People's Republic of China in India 2020)
December 17, 2020	Response to media query by Spokes person of Chinese Embassy in India on Indian media hyping "CPC members infiltrating some Indian agencies" (Embassy of the People's Republic of China in India 2020)
October 27, 2020	Statement of the Chinese Embassy in India solemnly refuting China-related false allegations of US senior officials during their visit to India (Embassy of the People's Republic of China in India 2020)
October16,2020	Statement of Spokes person of Chinese Embassy in India Counsel or Ji Rong on Indian media interview advocating "Taiwan in dependence" (Embassy of the People's Republic of China in India 2020)
September 3, 2020	Spokesperson of Chinese Embassy in India Counselor Ji Rong refutes the China related false remarks from US Senior Official at the U.S.-India

	Strategic Partnership Forum (Embassy of the People's Republic of China in India 2020)
August 25, 2020	Spokes person of Chinese Embassy in India Counsel or Ji Rong solemnly refutes article advocating "Tai wan Independence" published in Indian media (Embassy of the People's Republic of China in India 2020)
May 14, 2020	Statement made by Spokes person of Chinese Embassy in India Counsel or Ji Rong on Indian media interview advocating so-called "Taiwan's participation in WHO "(Embassy of the People's Republic of China in India 2020)
May 2, 2020	Spokes person of Chinese Embassy in India Counsel or Ji Rong refuted article advocating "Taiwan's participation in WHO" published in Indian media (Embassy of the People's Republic of China in India 2020)
April 28, 2020	Statement of Spokes person of Chinese Embassy in India Counselor Ji Rong on Indian media interview

	advocating so-called "Taiwan's participation in WHO "(The Consulate General of the People's Republic of China in Kolkata 2020)
April 14, 2020	Response to media query by Spokes person of Chinese Embassy in India Counsel or Ji Rong on the time line of COVID-19 pandemic (Embassy of the People's Republic of China in India 2020)
April 3, 2020	Spokes person of Chinese Embassy in India Counselor Ji Rong refuted some media blaming China for so-called concealment of Covid-19 situation (Embassy of the People's Republic of China in India 2020)
March 30, 2020	Statement of Spokes person of Chinese Embassy in India Counselor Ji Rong on some Indian media articles advocating so-called "Taiwan's participation in WHO" (Embassy of the People's Republic of China in India 2020)
March25,2020	Refutation by Counselor Ji Rong, Spokes person of the Embassy of China in India, on stigmatizing China for COVID-19 (Embassy of the

	People's Republic of China in India 2020)
February 29, 2020	Spokes person of Chinese Embassy in India Counselor Ji Rong Sent Representation Letter to Indian media Refuting article advocating "Taiwan Independence "(Embassy of the People's Republic of China in India 2020)
September17,2019	Spokes person of Chinese Embassy in India Counselor Ji Rong Senta Representation Letter to the Editor of Asian Age (Embassy of the People's Republic of China in India 2019)

While attempting to quantify Chinese media commentary on Indian media lies beyond the scope of this paper, head lines like

- "Indian media should focus on synergy rather than confrontation with China "(Tyagi, Letter to the Editor: Indian media should focus on synergy rather than confrontation with China 2017),

- "Indian media rumormongering risks sparking conflicts, damaging ties" (Li 2 020),

- "Indian media's malicious distortion over China releasing information, casualties a typical face-saving exercise" (Long 2021),

- "Anti China melodrama toxic chicken soup for India" (Global Times 2023) suggest a bellicose narrative.

Chinese media publications have also targeted Indian experts for allegedly fabricating research on Xinjiang, taking money from Taiwan, and challenging the One-China principle, among other issues. (People's Daily Online 2021; Hasija 2020; Qing qing 2020)

g) Facts with Chinese characteristics: In a bid to legitimize its narrative, the PRC, on occasion, has presented its own versions of 'facts' and 'truth' as a counter to Indian government and media literature.

On July 7, Xinhua News ranan article "demystifying the truth" about the Doklam stand-off, where it claimed that India had illegally entered Chinese territory on the pretext of protecting Bhutan–the video has recorded 84,642 views on Weibo as of January 2024 (Xinhua News Agency 2017; Ranjan 2017).However,asDr.RajivRanjan(Assistant Professor, Shanghai University) noted, it failed to inform its readers that the region was in fact disputed, as per the 1988 and 1998 agreements between the PRC and Bhutan (Ranjan 2017).

Similar 'truth seeking' documents have also been published by the Chinese embassy and consulates in India (e.g.: Foreign Ministry Spokesperson Gave a Step-by-Step Account of the Galwan Valley Incident; COVID-19, 15 Truth You Need to Know; The Facts and China's Position

Concerning the Indian Border Troops' Crossing of the China-India Boundary in the Sikkim Sector in to the Chinese Territory) which aim to 'set the record straight', albeit in Beijing's favor (Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2020; Consulate-General of the People's Republic of China in Mumbai 2017).

h) Creating deep fakes: Advances in information technology have also created new avenues for PRC information access, control, and manipulation. In late 2022, Graphika observed limited instances of so-called 'spamouflage' that included audio-visual footage of fictitious people almost certainly created using artificial intelligence techniques, like the video of an AI-create davatar 'Anna' promoting an India-based consulting company, and a 'Dr. Dass', an Indian-looking individual wearing aturban (Graphika 2023; Synthesian.d.). Graphika noted that commercially available AI products like these would allow IO actors to create Increasingly high-quality deceptive content at greater scale and speed. (Graphika 2023).

The collection of voice samples from military-sensitive regions of India, including Jammu & Kashmir and Punjab, by a Beijing-based AI company Speech Ocean, with close links to the PLA, has raised concerns that the PRC could use these to engage in "automated extra-territorial mass surveillance" and exponentially increase the spread of dis in formation (Bhardwaj 2022). Graphika added that IO

actors will continue to experiment with AI technologies, producing increasingly convincing media artifacts that are harder to detect and verify, making counter-offensive operations more difficult (Graphika 2023).

Table 1 below details various actors involved in information operations and the techniques likely to be deployed by the min an information operation based on the author's current research.

	Technique								
Actor		Useand amplification of falsely attributed, fabricated material	Using prominent thought leaders and influencers	Pro-PRCOpinion Through Indian Nationals	Disguising/ Hiding the source	Undermining India 'simage /Indian Leadership's Credibility	Targeting Indian Media	Facts with Chinese characteristics	Creating Deep fakes
	Chinese diplomatic-missions in India								
	Chinese mediaorganizations/ journalists								
	Chinese individuals/ private organizations								

Indicates use by actor

Indicates non-usage by actor

6. MessagePatterns

a) Government Messaging not a good reflector of status of bilateral ties: In his essay on 'Information Manipulation Theory', interpersonal communication scholar Steven McCornack argued that when deceiving others, people played with or "manipulated" relevant information in myriad ways with in their discourse (McCornack 2015). This deception discourse design is relevant to the PRC's government messaging against India. In the three years since the military standoff in Galwan, India has steadfastly maintained that any normalization of bilateral ties will be contingent on the restoration of peace and tranquility on the border (Ministry of External Affairs 2022), while Beijing's messaging reflects tonal in consistencies. Documents published by the Chinese embassy reveal a range of stand points, starting from "temporary difficulties" (Embassy of the People's Republic of China in India 2020), to the two sides standing at "crossroads" (Embassy of the People's Republic of China in India 2020), and calls for bringing China-relations back "on track" (Embassy of the People's Republic of China in India 2020), and finally showing "new progress", "positive momentum", "recovery momentum" (Embassy of the People's Republic of China in India 2022), and the situation at the border "over all stable" (Embassy of the People's Republic of China in India 2023). This indicates that Beijing's official messaging is not are liable indicator of its actual intent, given that son "positive momentum" or

"stability" in ties are in stark contrast with its massive troop deployment and ramping up of infrastructure a long the border. (Krishnan, View From India |Will India's frozen ties with China seeathaw? 2023)

b) Advancing sovereign claims over Indian territory: While precise intentions of opaque, authoritarian regimes are of ten difficult to discern, the PRC's information operations divulge obvious intentions at undermining India's territorial integrity (Brands and Sullivan 2020).

For instance, Chinese domestic press reportage supporting Beijing's decision to standardize names of 11 Indian cities in Arunachal Pradesh with Chinese names, and its depiction of Arunachal Pradesh and Aksai Chin as PRC territory in the 2023 edition of Chinese maps contradict its calls for improving bilateral relations (Dayal, etal. 2023; Xijin 2023; Global Times 2023; Ministry of Foreign Affairs of the People's Republic of China 2023). In government statements too, claims of the PRC's 'effective jurisdiction' over Doklam, and its portrayal of India as the aggress or in the Galwan valley stand off, and Beijing's subsequent but 'justifiable' use of force suggest that the PRC will continue to challenge India's sovereign claims over territory it deems as its own(Embassy of the People's Republic of China in India 2017; Embassy of the People's Republic of China in India 2020).

As scholars at the International Republican Institute noted, "the simple knowledge that the PRC can and does retaliate

against "enemies" is itself a form of information shaping, as punishment of one country for crossing the PRC's rhetorical red lines must be factored in to other countries' calculations" (Ohlberg, etal. 2023). Such efforts there fore reflect a strategic approach to in fluence India's behavior, while simultaneously reaffirming the PRC's resolve to protect its territorial integrity and sovereignty.

c) Protecting the PRC's 'core' interests: The PRC's information operations against India reflect its uncompromising stance on the protection of what Beijing perceives to be its 'core' interests particularly in Taiwan, Xinjiang, Hong Kong, Tibet, and the South China Sea. Embassy documents, in particular, show the PRC's unwillingness to make any concessions on its sovereign and territorial claims in the above areas, going in so far as to justify the use of force to defend them (Embassy of the People's Republic of China in India 2022).

While India has avoided references to the 'One China' policy since 2010, it has nevertheless maintained a 'studied silence' on issues pertaining to the PRC's core interests, not only to avoid directly antagonizing Beijing, but because of its own policy of non- interference (Haidar and Krishnan 2022). However, this author found that the Chinese embassy in New Delhi issued 14 press releases upholding its claim on Taiwan (Embassy of the People's Republic of China in India 2022; Embassy of the People's Republic of China in India 2022; Embassy of the People's

Republic of China in India 2022; Embassy of the People's Republic of China in India 2022; Embassy of the People's Republic of China in India 2021; Embassy of the People's Republic of China in India 2021; Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2020; The Consulate General of the People's Republic of China in Kolkata 2020; The Consulate General of the People's Republic of China in Kolkata 2020; Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2019)' 7 clarifications on Xinjiang (including propaganda videos) (Embassy of the People's Republic of China in India 2021; Embassy of the People's Republic of China in India 2021; Embassy of the People's Republic of China in India 2019; Embassy of the People's Republic of China in India 2019; Embassy of the People's Republic of China in India 2019; Embassy of the People's Republic of China in India 2019; Embassy of the People's Republic of China in India 2018), and 6 statements & interview son Hong Kong (Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2020; Embassy of the People's Republic of China in India 2019; Embassy of the People's Republic of China in India 2019; Embassy of the People's Republic of China in India 2020), 5 mentions of Tibet (Embassy of the People's

Republic of China in India 2020; Embassy of the People's Republic of China in India 2019; Embassy of the People's Republic of China in India 2018; Embassy of the People's Republic of China in India 2018; Embassy of the People's Republic of China in India 2018), and 1 on the South China Sea (Embassy of the People's Republic of China in India 2020), between 2017-August 2023. A simple search on any Chinese media out let further reflects the same undeviating, non-negotiablestance, indicating the sustained prioritization and protection of China's core interests.

d) Poor perception of India: Chinese dis information campaigns in the media of ten exhibit a perception bias against India, premised up on allegations of alleged lack of infrastructure, poor safety standards, and domestic disturbances.

In August 2023, Logically published are port explaining how the PRC's dis in formation narratives around infrastructure failures in the Odisha train crash, and the Bihar bridge collapse, coupled with domestic unrest in Manipur riots, had contributed to a negative public opinion about India (Dayal, etal. 2023). This poor perception exacerbates India's 'underdeveloped' image in Chinese discourse, deepening public impressions about the limitations of its political system, the inability of a section of its bureaucracy to match up to the pace its

polity, and Beijing's incomparability regionally (Embassy of the People's Republic of China in India 2017).

As Beijing-based journalist Mu Chunshan explained, Chinese public discourse on India's "outrageous rape statistics" and use of alternative medicine such as "cow urine to treat COVID-19" only served to magnify its back ward image, and fuel existing beliefs that India fell shortn of Chin an in nearly all aspects, except its larger population (Mu2023).In essence, a prevailing sentiment among most Chinese people is one of superiority and self- confidence in relation to India (Mu 2023).

Observers have further argued that the PRC is also increasingly assessing India through the prism of its fraught and worsening relations with the United States. (Saran 2022). FromBeijing's perspective, India's evolving relation ship with the U.S. is a significant factor in assessing India's global and regional role, and its strengthening ties with the U.S. present a potential challenge to Beijing's regional influence (Ghosal Singh, Analysing the current Chinese on India 2023). Chinese discourse on the India-U.S. partnership subsequently focuses on joint efforts by the two sides to 'contain' China, Washington's unreliability as a partner, the limited durability of ties, and even India's reluctance in siding with the U.S over Ukraine. (China Daily 2022; Qian 2023; Naderi 2020; Global Times 2022.)

e) Asserting the PRC's supremacy: The Chinese Embassy in India has strategically utilized media channels and diplomatic out reach to show case China's achievements and establish its influence in the Indian media land scape. Through cultural events, media partner ships, and active engagement on social plat forms, the embassy has aimed to present a positive image of the PRC, which includes highlighting PRC's economic growth, technological advancements, and military prowess. (Ma 2023; Embassy of the People's Republic of China in India 2017; Ministry of Foreign Affairs of the People's Republic of China 2022). However, Beijing has also employed various coercive measures, including media editorials, to exert pressure on India and caution against misjudging China's restraint as a sign of weakness (Hu 2020). These editorials, of ten found in state-controlled media, serve as a plat form for articulating China's concerns and issuing veiled warnings. They typically high light the need for India to avoid arrogance in its foreign policy decisions, especially in areas of mutual interest and/or contention, such as border disputes (Hu 2020). By adopting a coercive message frame work, Beijing essentially seeks to dissuade India from taking aggressive stances that might escalate tensions.

f) Persuasion: All states exert power through a mixture of coercion and inducement, and the PRC's information operations against India, particularly in persuading it to join the Belt and Road Initiative (BRI), reflect attempts

at gaining influence through attraction rather than by coercion alone. (Ohlberg, et al. 2023; Nye Jr. 2022). PRC government documents between 2017-19 have routinely high lighted potential benefits of participation in Beijing's ambitious infrastructure initiative, highlighting its convergences with New Delhi's 'Act East Policy', focusing on development and multi-polarity, and to integrate India further in to global industrial and value chain. (Embassy of the People's Republic of China in India 2017; Embassy of the People's Republic of China in India 2017).

Furthermore, the PRC has also attempted to assuage India's concerns over the BRI's infringement of Indian territory, by underlining its openness to cooperation and collaboration with India, including joint projects and initiatives that align with India's connectivity needs (Embassy of the People's Republic of China in India 2017). (Albeit, this runs counter to their claims of Pakistan's sovereignty over Kashmir as stipulated in Article 6 of the China-Pakistan agreement. (Embassy of the People's Republic of China in India 2017)

7. Impact and Success

The efficacy of an information operation hinges up on its ability to effect perceptual shifts amongst its target audience. While recent opinion polls underscore a decline in public sentiment towards the PRC in India (67% asper the 2023 Pew Survey (Silver, Huang and Clancy 2023)and India in China (50.6% totally, i.e. 25.4% very unfavorable

views towards India and 25.2% some what unfavorable views, as per the 2023 Tsinghua University survey (Center for International Security and Strategy, Tsinghua University 2023), attributing these adverse sentiments solely to a specific in formation operation presents a form idable challenge, given that these sentiments are deeply embedded within the broader framework of bilateral relations and lack granularity pertaining to any singular occurrence.

Conversely, it would be an over simplification to dismiss these information operations as unsuccessful, given that they generated vigorous public discourse with in India concerning its military readiness and political credibility. Therefore, while they may not qualify as unqualified triumphs, one cannot wholly discount their influence in the orchestration and propagation of deceptive narratives.

Acknowledging these methodological constraints in tracing the precise causal links between information operations and shifting perceptions, this paper has there fore intentionally adopted a diagnostic approach by attempting to provide a comprehensive overview of the constituent elements comprising information operations directed against India.

However, the potential impact of in formation operations still war rant a further examination.

a) Social Impact: Sophisticated information operations often make it difficult to differentiate between actual propaganda and factual information, leading to confusion amongst its intended audience. In India's case, its existing socioeconomic and political fault-lines leave New Delhi susceptible to information exploitation and further religious & regional divide. This was evidenced in Meta's 2023 Adversarial Threat report (Q3) which stated that that the company had removed 13 accounts and 7 groups on Face book and Instagram, that originated in China, for in authentic behavior targeted at India (Nimmo, etal. 2023). Some of these accounts / groups had accused the Indian government of corruption and supporting ethnic violence in the Indian state of Manipur, while others accused the Dalai Lama of corruption and pedophilia (Nimmo, etal. 2023).

b) Political Impact: Information operations also have a political impact. The absence of accurate, reliable information has the potential to exacerbate societal polarization, deepen ideological rifts between the Right and the Left, raise questions over the government's credibility and even the election process. For instance, in their examination of Chinese proliferation in India's digital and political spaces, authors Arun Mohan Sukumar and Akhil Deo have argued that while there is little evidence of China's interference in Indian elections, there are never the less pre- conditions to suggest how Chinese state-based actors appear emboldened to facilitate

dis information campaigns that could compromise public discourse and potentially the integrity of future elections (Mohan Sukumar and Deo 2021).

c) Strategic Impact: From a foreign policy perspective as well, Chinese in formation operations directed at India carry the potential to significantly under mine the existing bilateral relations between the two nations. The dissemination of distorted narratives by these operations has the capacity to erode trust and deter political leaders from addressing fault-lines in the relationship. Beijing's rhetoric has also compelled India to recalibrate its diplomatic strategies, and pursue a closer relationship with the United States and its allies over shared concerns over the PRC's increasing assertiveness, weaving a complex web of alliances and impacting power dynamics.

d) Military Impact: Disinformation campaigns also serve to heighten the PRC's threat perception militarily, increasing chances of altercation. In his essay on 'China's Three War fares and India', defense expert Abhijit Singh noted that Beijing's strategy went "beyond mere propaganda wars and misinformation campaigns," to target military morale, and "plant anxiety" by playing on there aders' worst apprehensions, in this case a full-scale military confrontation (Singh 2013). As noted above, information operations have the ability to impact the psyche and morale of the military community by eliciting an emotional response, primarily fear and anxiety (Krull 2018). This

could potentially distract personnel from military missions, undermine morale, impact readiness, and cause concerns over personnel safety and family, with out imposing heavy costs on the Chinese side (Krull 2018). As Singh noted, they could" subdue India with out even needing to fight" (Singh 2013).

8. Conclusion

a) The PRC possesses extensive financial and technological resources and human capital to target India's information ecosystem & infrastructure. Advances in technology, coupled with the rapidpace of information sharing & dissemination and the sheer volume of information, often make it challenging for Indian authorities to promptly identify and counteract dis information. This leaves substantial room for false narratives to take root and influence public opinion before corrective action can be taken. Further, the lack of effective regulatory frame works and technological countermeasures have also left India susceptible to external influence. Addressing these vulnerabilities is crucial for safeguarding the democratic foundations of the nation against the insidious impact of foreign dis information campaigns.

To build its deterrence capacity against Chinese dis information campaigns, India should prioritize a multifaceted approach. Firstly, investing in robust cyber security measures is essential to safeguard critical

information infrastructure and counter the spread of false narratives. Strengthening intelligence capabilities to identify and counter dis in formation campaigns swiftly is crucial (Yadav 2021; Ahuja and Diwan 2023).

Additionally, enhancing media literacy among the public can empower in dividual stodiscern between accurate and misleading information, reducing the effectiveness of disinformation. (Blanchette, etal. 2021). Collaboration with international partners to share intelligence and best practices is also vital, as disinformation is a global challenge that requires a coordinated response. For instance, in January 2021, the Center for Strategic & International Studies in Washington D.C. had detailed how Taiwan had responded to Chinese disinformation campaigns by deploying a range of tools like 'meme engineering' teams in government departments, strengthening legal prohibitions, and coordinating with civil society organizations to empower citizens–models that can be adapted in the Indian context as well. (Blanchette, etal. 2021).

By developing a comprehensive strategy that combines technological resilience, intelligence capabilities, public awareness, and international cooperation, India can build a more effective deterrence against Chinese disinformation campaigns, safeguarding its domestic stability and strengthening its position in the international arena.

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Soft Power and Great Power Ambition: China's Global Influence in the Xi Jinping Era

Dr Saurav Sarmah*

Introduction

The rise of China is an important phenomenon of the 21st century. Led by the Communist Party of China (CCP), it has achieved unprecedented economic growth in the last four decades. The Communist Party has provided a stable government, discarding Mao Zedong's doctrine of continuous revolution that was evident in the Great Proletarian Cultural Revolution (1966-76). It has focused on Four Modernisations – agriculture, industry, national defence and science and technology, first articulated by First Premier Zhou Enlai in 1963 and reasserted by Deng Xiaoping in the Third Plenum of the 11th Central Committee of the CCP in 1978. For maintaining the stability of the one-party government, it has avoided any serious movement towards the Fifth Modernisation – democracy and cracked down on the pro-democracy movement in 1989. Perhaps, it avoided the fate of the erstwhile Soviet Union that adopted perestroika and glasnost, both economic and political reforms, unleashing forces that led to the Soviet disintegration. Since 1992, China has accelerated the pace of economic development, and it emerged as the second largest economy in 2009.

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After Xi Jinping's ascendence to power in 2012-2013, China's national ambitions have increased, substantiated by the announcements of Chinese Dream for the great rejuvenation of the Chinese Nation in 2012, Belt and Road Initiative for international infrastructure projects led by Chinese investments in 2013 and Great Power Diplomacy (大国外交dà guó wàijiāo) in 2018, replacing Keeping a Low Profile (韬光养晦tāoguāng ynǎnghuì) advocated by Deng Xiaoping.

Keeping in mind the future trends, China is investing in research and innovation in critical sectors such as AI, robotics, 5G+ telecommunications, space exploration, high-speed rail, electric vehicles, renewable energy, digital payments, e-commerce, and social media. These developments have significantly contributed to China's Comprehensive National Power (CNP), consisting of both hard and soft power components. Nevertheless, it has been observed that in many instances, the reliance on soft power has been replaced by power projection abroad and application of hard power to achieve foreign policy goals (Economy 2012).

This paper examines the theoretical framework of soft power, resources and strategies of Chinese soft power and the indicators of China's global influence. It analyses them in the context of the external and internal conditions prevalent in the Xi Jinping era from 2012 to 2023. It also explores the reasons behind the relative decline of the importance of soft power in China's foreign policy under Xi.

Theoretical Framework

National power can be defined in two ways. The materialist definition considers national power to be an aggregate of population, territory, natural resources, technological progress, military strength and political stability (Waltz, 1979). It is very useful in the measurement of national power because its components are tangible and quantifiable. Then, based on relative power, nations can be ranked. The CINC, developed by David Singer for the COW (Correlates of War) project, is an example of quantifying national power (Singer, Bremer and Stuckey, 1972).

> CINC = (TPR + UPR + ISPR + ECR + MER + MPR) * / 6
> *TPR = Total Population of Country Ratio. UPR = Urban Population of Country Ratio. ISPR = Iron and Steel Production of Country Ratio. ECR = Primary Energy Consumption Ratio. MER = Military Expenditure Ratio. MPR = Military Personnel Ratio.

The ratio of each component is calculated by dividing the national value of the component by the world total. For instance, the TPR is calculated by dividing the population of a country by the total world population. The latest CINC dataset on national material capabilities ranks China, the United States (US), India, Russia and Japan (in this order) as the five most powerful countries in the world (COW 2021). When the historical CINC values of these major powers are compared, it shows that power exists within a temporal context, i.e., nations rise and fall in history. China, India and Russia had more material power than the US or Japan before the Second

Industrial Revolution (mid-19th century) due to the vastness of their population and resources. However, the US and Japan emerged as Great Powers in the late 19th century through industrialisation. After victories in the two World Wars (1914-18 and 1939-45) and the development of the atom bomb in 1945, the US became the first Superpower. The other Superpower (from 1949), the erstwhile USSR (Union of Soviet Socialist Republics), overtook the US in 1971 and remained the No. 1 Superpower until 1989; then, it disintegrated in 1991 to be succeeded by a weaker Russian Federation. The People's Republic of China overtook the US in 1995 in material power (CINC), after only 17 years of capitalistic industrialisation. At present, the total CINC of the five major powers is greater than that of the rest of the world.

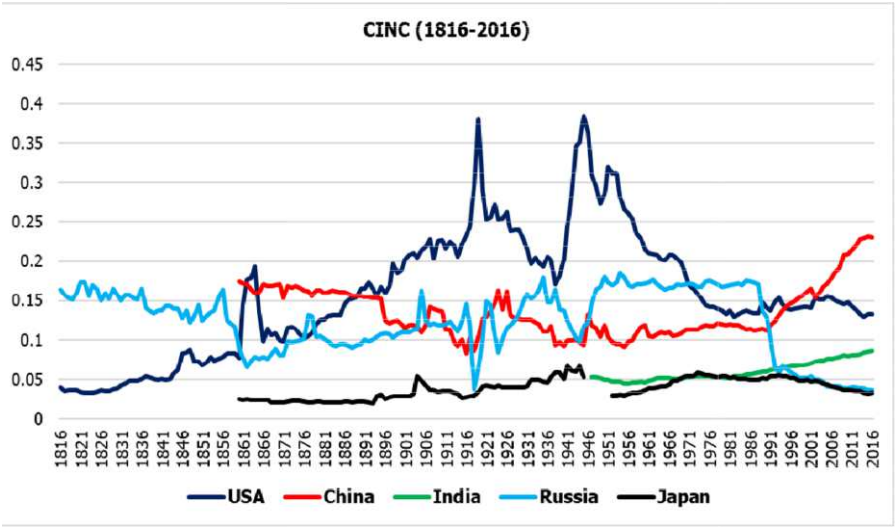


Figure 1: CINC of China 1840-2016, USA 1816-2016, India 1947-2016, Russia 1816-2016 and Japan 1840-1945; 1952-2016 (COW, 2021)

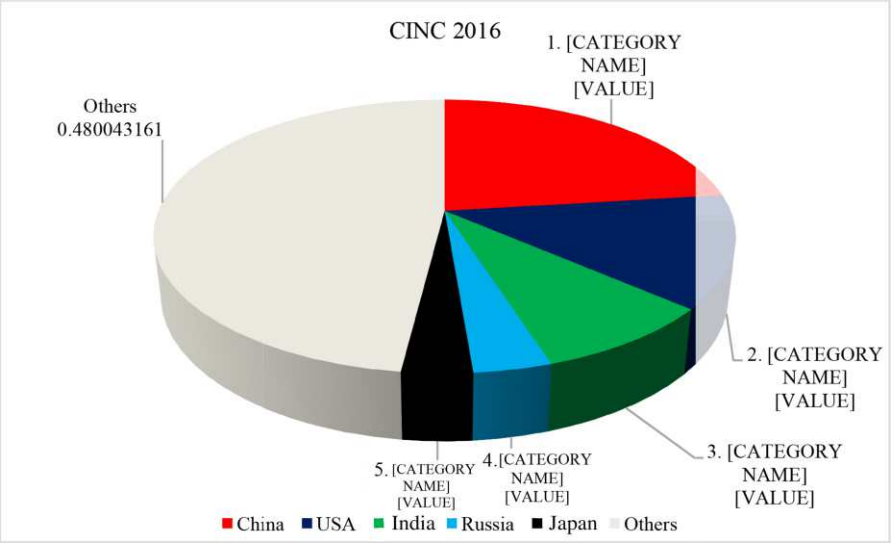


Figure 2: CINC of China, USA, India, Russia, Japan and the rest of the world in 2016 (COW, 2021)

However, power potential does not always result in favourable outcomes. The US, for example, was overwhelmingly more powerful than North Vietnam in 1973 or the Taliban in 2021, yet it failed to achieve its desired outcomes in Indochina or Afghanistan, despite deploying its military strength for multiple years. Japan had significantly less material power than China in 1895 and Russia in 1905 yet defeated them in war. Therefore, it is necessary to consider "outcome" in the definition of power. The behavioural definition takes that into consideration (Nye, 2011). It defines national power as the ability of a nation to make other nations do what they would otherwise not do. "A has power over B to the extent that he can get B to do something that B would not otherwise do" (Dahl, 1957, pp. 202-203). Therefore, if

A's intended outcome is X and B's intended outcome is Y, then A's relative power over B is X-Y. Indeed, this definition can be expanded into four different faces of power (Digeser, 1992). The behavioural or decision-making definition is labelled as the first face of power.

The second face of power asserts the ability to produce norms and institutions that prevent others from doing anything that a nation does not want (Bachrach and Baratz 1962). In other words, A wants X and B wants Y, but A is so dominant, and B is so irrelevant to the power structure that X happens without any need for A to exercise direct power.

The third face of power means "A exercises power over B when A affects B in a manner contrary to B's interests" (Lukes 1974). Thus, A wants X and B also wants X due to the influence of A over B, despite X not being in B's interest.

Finally, the fourth face of power is derived from the writings of Michel Foucault (Digeser 1992; Barnett and Duvall 2005). It considers that every power relation comes from a knowledge field and every knowledge field depends on a power relation. Power produces the relation between A and B and their wants, X and Y. Hence, power is ubiquitous.

The first face of power can be exercised using a range of instruments from persuasion to coercion, while the second and third faces are not exercised directly. The second face, which can be also termed as legitimation, comes from the dominant norms and institutions that determine the legitimacy or illegitimacy of

particular actions, thus encouraging or preventing certain behaviours. It is prevalent in society and also in the international system. On the other hand, the third face, or socialisation, has its origin in the dominant culture and ideology that frame the preferences of people and nations, even if those preferences harm their interests. The fourth face is knowledge that informs all the stages and levels of power, from resource mobilisation to outcome realisation (stages) and from personal friendship to international organisation (levels).

Figure 3 encapsulates the range of possibilities for exercising power from intangibility to tangibility, the most intangible being the deepest mental process of absorbing information and the most tangible the actual use of physical violence:

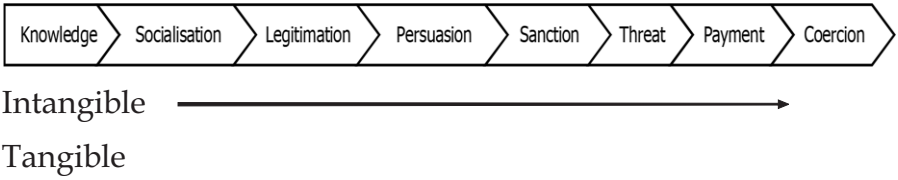


Figure 3: Means of influencing behaviour

From this, two means of influencing the behaviour of other nations can be derived — voluntary and involuntary. Hard power is involuntary, i.e., the other nations are made to do what they would otherwise not do by applying economic or military pressure; while soft power is voluntary, i.e. the other nations want to do what is expected from them, because of some means of attraction (Nye, 1990). The judicious combination of both is termed smart power (Nye, 2004).

The four intangible means constitute soft power, and the four tangible means constitute hard power. The first face of power can be either hard power (sanction, threat, payment and coercion) or soft power (persuasion); while the remaining three faces come under soft power. Hence, the concept of soft power is very important to understand the behaviour of nations. Table 1 analyses the four categories of soft power in terms of their nature, means, ends, sources and agents.

Table 1: Four categories of soft power updated (Sarmah, 2022)

	Persuasion	Legitimation	Socialisation	Knowledge
1. Nature	Interstate and tactical	Supra-state and strategic	Multistate and structural	Trans-state and post-structural
2. Means	Decision-making	Agenda setting	Preference framing	Knowledge production and distribution
3. Ends	Influence the behaviour of other governments	Make alternative preferences appear illegitimate or unfeasible	Mould the preferences of other societies	Control the perception of reality
4. Sources	(a) Traditional diplomacy (b) Moral and charismatic influence	(a) Norms (b) Institutions (that are internationally recognised)	(a) NGOs (b) MNCs (c) Cultural brands and habits	(a) Religion (b) Universities and think tanks (c) News and entertainment (d) Social media
5. Agents	e.g. US State Department and Ministries of Foreign Affairs	e.g. UN and Bretton Woods Institutions	e.g. Ford Foundation, Apple, McDonald's, yoga, Olympics, soccer, Chinese food, and English language	e.g. Christianity, Ivy League, Hollywood, pop music, Facebook and Twitter

This table presents an analysis of four categories of soft power: persuasion, legitimation, socialisation and knowledge. Each category is examined across five dimensions: nature, means, ends, sources and agents. Persuasion operates at an interstate level, using decision-making to influence other governments' behaviour through traditional diplomacy and moral influence. Legitimation functions at a supra-state level, setting agendas to make alternative preferences seem illegitimate, through international norms and institutions. Socialisation works at a multistate level, framing preferences to shape other societies' inclinations through entities like NGOs, MNCs and cultural brands. Lastly, knowledge operates at a trans-state level, controlling reality perception through knowledge production and distribution, with sources including religion, academia, media and social platforms. This framework provides a comprehensive understanding of how soft power manifests in international relations, highlighting the diverse mechanisms through which nations can exert influence without resorting to hard power tactics like coercion or economic pressure.

Chinese Soft Power Resources and Strategies

The importance of soft power dawned upon the Chinese scholars in the aftermath of the 1989 Tiananmen Square incident and the fall of Berlin Wall, followed by the disintegration of the Soviet Union. Although the Soviet Union was the second superpower with formidable military strength, vast natural resources and advanced capital industries, it relied overly on coercion to maintain domestic stability and international

influence. Even at the height of its dominance, it failed to provide its citizens with a high standard of living, civil and political rights and freedom to pursue their individual and national aspirations.

The legitimacy of the Soviet state based on egalitarianism, socio-economic and cultural rights and availability of free public goods eroded, when Western popular culture and political values penetrated into its society. The threat and use of military force frequently used by the Soviet leadership within its sphere of influence weakened its appeal in the neutral countries and more critically, in other socialist countries. The same problem existed in all socialist countries, styled after the Soviet Union, including the PRC, exemplified by the Tiananmen Square unrest. The triumph of the American Dream of democracy, equal opportunity and freedom to pursue material happiness over the Marxian Dream of proletarian government, voluntary labour and free public goods worried the CCP leadership, which feared that the Tiananmen Square unrest reflected the American strategy of peaceful evolution (和平演变hépíng yǎnbiàn) to transform China into a capitalist democracy.

At the same time, there was a vibrant debate on whether China should continue the path of reform and opening up or revert to the planned economy model. In his famous Southern Tour (1992), Deng Xiaoping, who wanted to avoid Cold War II and to ensure comprehensive modernisation of China, supported the former path (改革开放gǎigé kāifàng). As a result, China developed a heavy foreign investment and export-based

manufacturing sector and continued to grow at over 10% and accumulated unprecedented foreign currency reserves. But this phenomenon of China's rise aroused suspicion in its neighbourhood and in the West as they feared that China might behave like rising Germany and Japan in the first half of the 20th century to challenge the existing international order leading to catastrophic war. This proposition was called China Threat Theory. In other words, they meant that China is a revisionist power that has accumulated immense power and become a challenger to the US-led liberal international order. China's rise threatens peace, stability and security in Asia, thus threatening the US interests in the region. Eventually, it would ignite a hegemonic war between the US and China.

Another theory, named China Collapse Theory, proposed the opposite that the contradictions within the socialist market economy, internal discontent within marginalised sections like ethnic minorities, peasantry and migrant labourers and geostrategic encirclement of China by America and its allies would lead to the disintegration of PRC.

After decades of rapid economic growth, China is gradually reaching a plateau. The CCP has derived legitimacy for its authoritarian regime since 1978 from its ability to provide people with economic opportunities. Once the Chinese growth plateaus, the CCP regime would collapse due to economic stagnation, public unrest and political infighting. Thus, China had many incentives to develop a soft power strategy — to balance its rising hard power, to ensure domestic stability, to

improve relations with other countries, to reverse peaceful evolution tendencies, to counter threat and collapse theories, but its poor image in the neighbourhood jettisoned any attempts at diplomatic make over until a timely crisis.

Through the 1992 Chinese publication of Joseph Nye's Bound to Lead (1990), the concept of soft power was first popularised in China. The chief advisor to President Jiang Zemin at the CCP's Policy Research Office, Wang Huning, wrote in the Fudan University Journal in 1993 that, "If a country has an admirable culture and ideological system, other countries will tend to follow it... it does not have to use its hard power, which is expensive and less effective." In 1997, Pang Zhongying of Nankai University wrote an article for Strategy and Management that "introduced Nye's soft power theory in greater detail." Shen Jiru, a specialist in American studies at the Chinese Academy of Social Sciences, published another paper in Outlook Weekly in support of China's strong soft power (1999: 12–13). The Soviet Union had more strategic weapons and natural resources than the US, but he blamed its downfall on a lack of soft power. A conference on "The Importance and Influence of Soft Power in US Foreign Policy" was held in August 2002 by the CIIS. In this way, the idea was first developed in the 1990s during the first wave of intellectual debate in Chinese academic and policy circles (Glaser and Murphy 2009: 11). The theory received the respect it deserved, even though there was disagreement over the precise translation of the term (Cho and Jeong 2008: 456; Glaser and Murphy 2009: 11–13). A

consensus opinion on the importance of soft power to China developed during the second wave of intellectual debate in the middle of the 2000s, which permeated all aspects of society, including the political establishment. Chinese leaders and academics realised that soft power could be used to uphold political stability in their country and enhance its standing abroad, and that Chinese civilisation itself was a vast repository of soft power resources. The ancient Chinese political philosophy, which can be applied to modern international relations, included soft power strategies.

As a result, discussions about soft power's potential to strengthen China's CNP, its components, how it can support China's culture and political system, whether China should try to expand its influence internationally, and whether it has a comprehensive soft power strategy have taken place in academia and in policy circles. The political establishment was also inspired by these discussions and embraced soft power as a national strategy. To counter the China threat and collapse theories, alternative theories have been proposed (Jin Canrong 2011: 270). China Opportunity Theory states that China's rise is an opportunity for the world, as it fuels the international economic engine. Trading with China is a winning situation for other countries, as it provides cheap consumer goods to their people. The trade surplus that China enjoys has been used to invest in international projects for connectivity, energy supply, extraction of minerals, etc., thus pushing growth everywhere. Besides, the China Responsibility Theory proposes that as China

becomes powerful in the international order, it would realise that its rise is enabled by the principles of the liberal international order. In the absence of that order, Chinese power would be threatened, leading to a catastrophic situation (hegemonic war, economic collapse, etc.). Hence, China has a responsibility towards the stability of the international order that may be fulfilled by perhaps forming a G2 with the US.

China is an ancient civilisation with more than four millennia of recorded history and it has made important contributions to humanity like the four great inventions (paper, printing, gunpowder, and mariner's compass) and 'hundred schools of thought' (Confucianism, Daoism, Legalism, Mohism, etc.). China's claim of Middle Kingdom status was recognised by many of its neighbours including Korea, Japan and Vietnam and Zheng He's voyages extended the status to the Horn of Africa.

This civilisational legacy has created abundant reserve of soft power for contemporary use (Gill and Huang 2006: 18). Besides, music, dance, cuisine, embroidery, acupuncture, herbal medicine, martial arts, and 'fengshui' are important assets of China's traditional culture. Another important source of cultural soft power is Buddhism, an imported Indian religion, enriched by Chinese conditions (Hunter 2009: 384). Chinese variations like Pure Land Buddhism and Chan (Zen) Buddhism were exported to Korea, Japan and Vietnam, and have contributed to the New Age Movement in the West. During the revolutionary period, Buddhism, along with many other traditional cultural products, were neglected and even mutilated, but have been

gradually revived since 1978. The World Buddhist Forum organised in 2006 was the first major religious event organised in post-revolution China, with the theme: 'A harmonious world begins in the mind' (Scott 2016). It has been followed by two other forums in 2009 and 2012.

These meetings have the agenda to enhance Chinese soft power within the Buddhist communities, get recognition for the Chinese-appointed 11th Panchen Lama and isolate the spiritual and temporal leader of the Tibetans, the 14th Dalai Lama (BBC 2006; China Daily 2012; Xinhua 2012; The Diplomat 2018). The CCP leadership is determined to address the loopholes and transform China into a cultural superpower. Several improvements have been noted over the last decade in the fields of education, media, tourism, sports, image projection and relationship with the diaspora.

China's smart power strategies have evolved significantly over the past decades, reflecting its changing position on the global stage. The development of these strategies demonstrates China's nuanced approach to balancing soft and hard power in its quest for global influence.

The 新安全观 (xīn ān quán guān) or New Security Concept, introduced in the early 21st century, marked a pivotal shift in China's approach to international relations. This concept, rooted in the Theories of China Opportunity and China Responsibility (or China Contribution Theory), emphasized a diverse perspective on security. It gave more weight to non-traditional

threats and advocated for multilateral responses to global challenges. The New Security Concept borrowed from the strategy of 'keeping a low profile' and the measurement of Comprehensive National Power (CNP). As outlined by Zhu Mingquan in 2005, it supported adherence to a rule-based international order and relied more on soft power than hard power to achieve desired outcomes.

This shift towards a more cooperative international stance was further exemplified by China's embrace of 多边主义 (duō biān zh yì) or multilateralism. The transformation in China's approach to international organizations is striking when compared to the Maoist era (1949-76). During that period, China distrusted international bodies due to its non-recognition by many countries (stemming from the one China principle) and its antagonism towards the two superpowers – the US and the USSR. However, this stance changed dramatically post-1970s, particularly after the Sino-US Rapprochement and the Sino-Soviet Split.

China's integration into the global community accelerated with its joining of the UN in 1971 and later the Bretton Woods Institutions. It became a member of APEC in 1991 and the WTO in 2001. In the 2000s, China intensified its efforts in multilateral diplomacy, co-founding the Shanghai Cooperation Organisation (SCO) in 2001 and BRICS in 2010. This multilateral approach leverages the soft power of persuasion and legitimation to ensure cooperation among nations, although the hard power elements of security and economic interests remain relevant.

Complementing its multilateral efforts, China also pursued a policy of 睦邻友好 (mù lín yǒu hǎo) or Good Neighbourliness. This was exemplified by the 2001 Treaty of Good Neighbourliness and Friendly Cooperation signed with Russia. The policy aimed at the peaceful resolution of border disputes, economic cooperation, and facilitation of cross-border movement. It was based on fostering positive bilateral relations with countries sharing boundaries with China. However, in recent years, China's aggressive postures in the Himalayas and the South China Sea have increased the threat perception among its neighbours, potentially eroding its soft power in the region.

The concept of 和平崛起 (hé píng jué qǐ) or Peaceful Rise, introduced by Zheng Bijian in 2003, was another significant development in China's smart power strategy. This concept aimed to portray China's economic development as non-threatening to the liberal international order, positioning it as a process of undoing the injustices China suffered due to colonialism. However, the term 'rise' raised concerns among international scholars due to historical comparisons with the rise of Germany, Japan, and the Soviet Union in the 20th century. Consequently, the Chinese government adopted the less menacing construct of 和平发展 (hé píng fā zhǎn)or Peaceful Development in its official discourse, as evidenced in a 2005 State Council document.

Under the leadership of Hu Jintao, China intrăoduced two interconnected concepts: 'socialist harmonious society' (社会主

义和谐社会 shè huì zhǔ yì hé xié shè huì) and 'harmonious world' (和谐世界 hé xié shì jiè). Both concepts draw from Confucian philosophy, particularly the ancient concept of harmony (和 hé). Through these ideas, China sought to present itself as a responsible power with an ancient tradition of non-confrontational approaches to economic development and foreign policy. As Hu Jintao emphasized in 2011, this strategy relied more on soft power than hard power to reform both society and the world.

The ascension of Xi Jinping to the leadership of the Chinese Communist Party in 2012 brought about the concept of the Chinese Dream (中国梦 Zhōng guó mèng) for the great rejuvenation of the Chinese nation (中华民族伟大复兴 zhōng huá mín zú wěi dà fù xīng). While drawing parallels with the American Dream, the Chinese Dream focuses more on national ambition and becoming a great power. It set aspirational goals of achieving a moderately well-off society by 2021 (the centenary of the CCP's formation) and becoming a developed nation by 2049 (the centenary of the PRC's foundation). The soft power aspect of the Chinese Dream lies in its potential to inspire other nations to achieve their potential, much like how the American Dream inspired millions to immigrate to the US.

A concrete manifestation of China's evolving smart power strategy is the Belt and Road Initiative (BRI), also known as One Belt, One Road (OBOR). Officially called the Silk Road Economic Belt and 21st Century Maritime Silk Road (丝绸之路经济带和

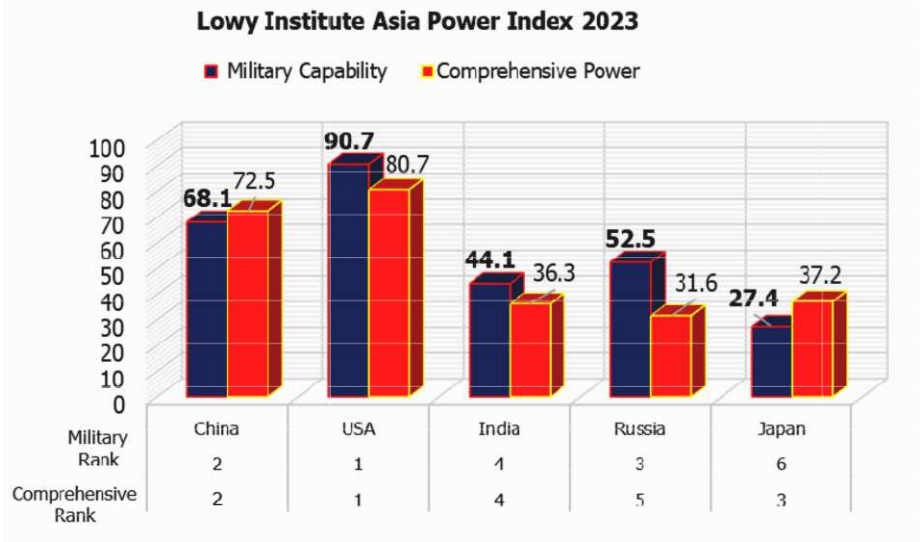
21世纪海上丝绸之路sī chóu zhī lù jīng jì dài hé 21 shì jì hǎi shàng sī chóu zhī lù), this ambitious international development strategy was announced by Xi Jinping in 2013. The BRI encompasses various components including the Silk Road Economic Belt, Maritime Silk Road, Ice Silk Road, Asian Infrastructure Investment Bank (AIIB), and Silk Road Fund. With an estimated investment of around US$1 trillion, the BRI aims to utilize China's surplus funds to increase its international influence, effectively using economic power to enhance soft power.

However, recent years have seen a shift in China's diplomatic approach, exemplified by what has been termed 战狼外交 (zhàn láng wài jiāo) or Wolf Warrior Diplomacy. This represents a departure from the earlier principle of 韬光养晦 (tāo guāng yǎng huì) or keeping a low profile, towards a more assertive 大国外交 (dà guó wài jiāo) or great power diplomacy under Xi Jinping. Diplomats of the new generation have adopted a more assertive tone in their interactions with foreign media, using strong rhetoric to defend Chinese positions on territorial disputes, human rights issues, and the COVID-19 pandemic. While this approach projects a strong image of China, potentially strengthening its soft power in some respects, it also risks alienating people in countries that have disputes with China, potentially weakening its soft power in those regions.

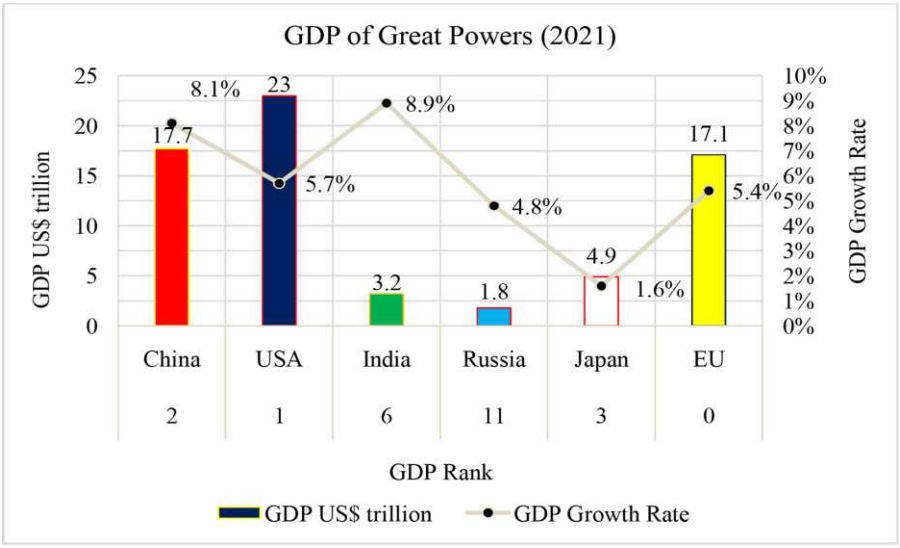
The evolution of China’s smart power strategies demonstrates a complex interplay between soft and hard power elements. As

China continues to navigate its role as a rising global power in the 21st century, the effectiveness of these strategies in shaping international perceptions and relationships remains a subject of ongoing observation and analysis.

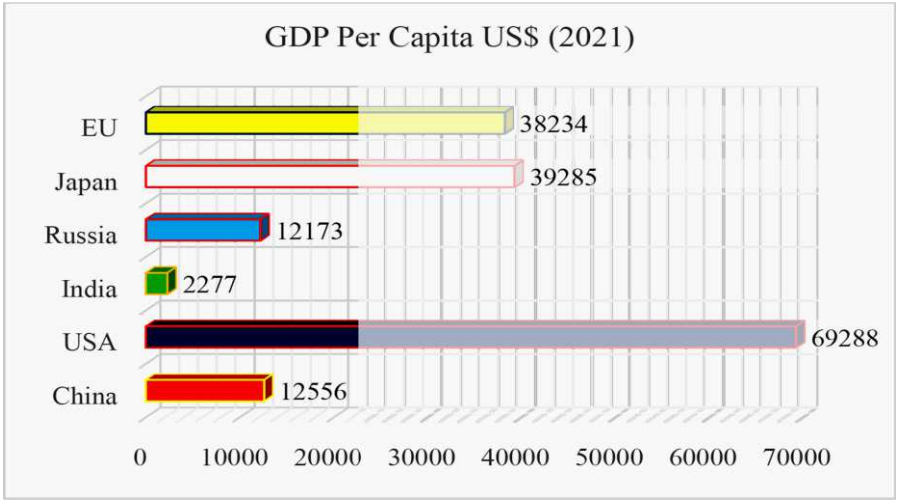
Indicators of China's Global Influence



Military capability and comprehensive power scores and ranks of China, USA, India, Russia and Japan in 2021. The Lowy Institute Asia Power Index comprehensive power ranking sequence differs from the CINC ranking sequence, e.g. the Lowy Institute ranks USA as no. 1 and China as no. 2, while in CINC, it is the reverse (Lemahieu and Leng 2021)



GDP in current US$ with ranks and GDP growth rate of China, USA, India, Russia, Japan and EU in 2021 (World Bank, 2022a; 2022b)

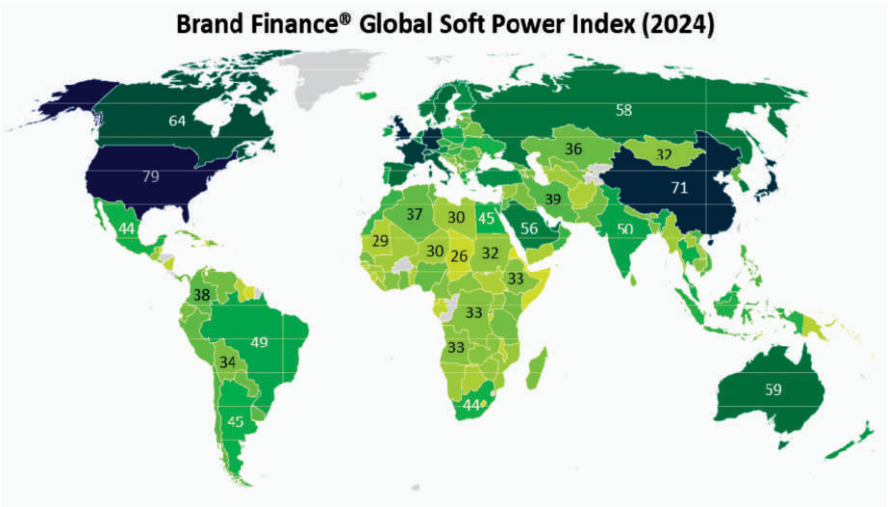


GDP per capita in current US$ of the five CINC major powers and EU for 2021 (World Bank, 2022c)

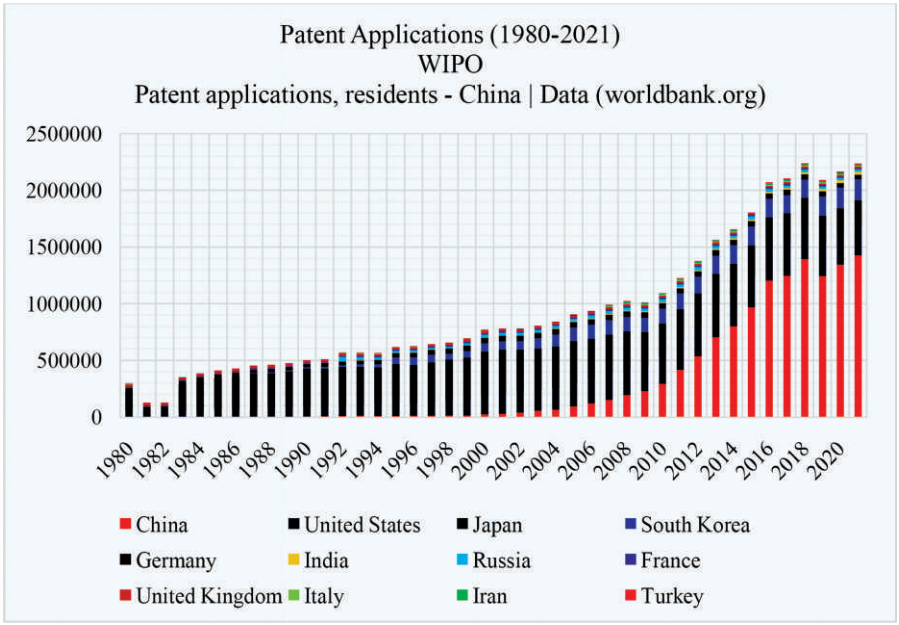
China's rank in international soft power indices

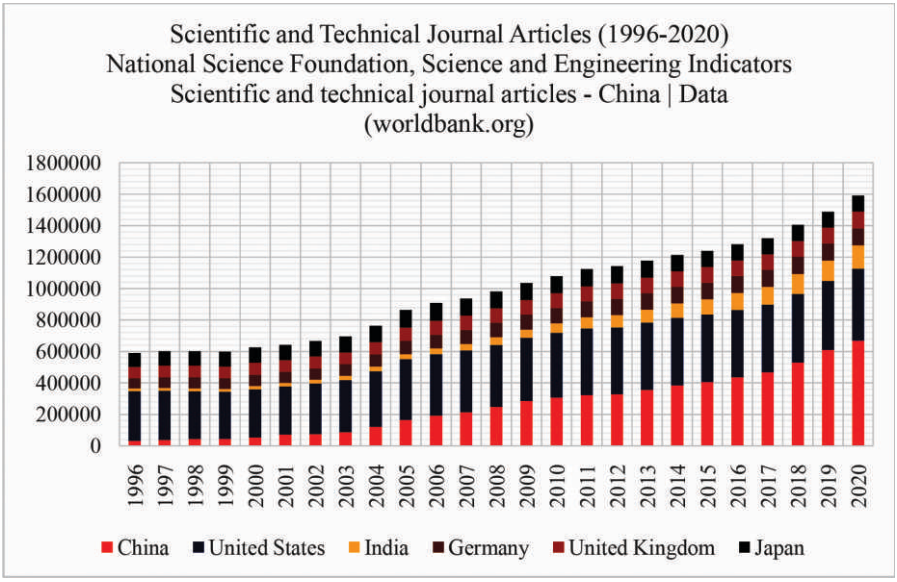
(McClory 2010; 2011; 2012; 2015; 2016; 2017; 2018; 2019; Brand Finance 2020; 2021; 2022)

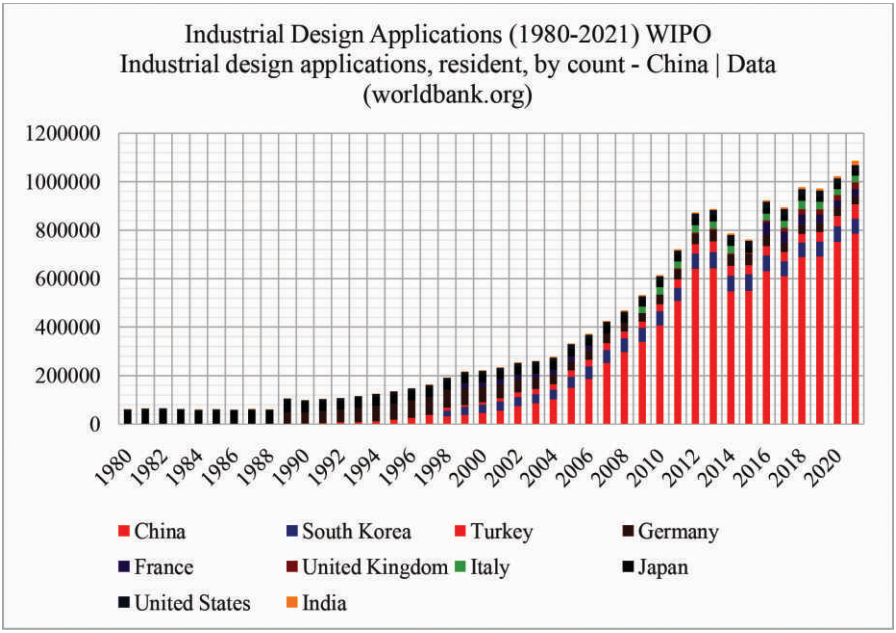
Year	China's Rank	US Rank
Soft Power 30		
2010	17	3
2011	20	1
2013	22	2
Soft Power 30		
2015	30	3
2016	26	1
2017	25	3
2018	27	4
2019	27	5
Brand Finance® Global Soft Power Index		
2020	5	1
2021	8	6
2022	4	1
2023	5	1
2024	3	1

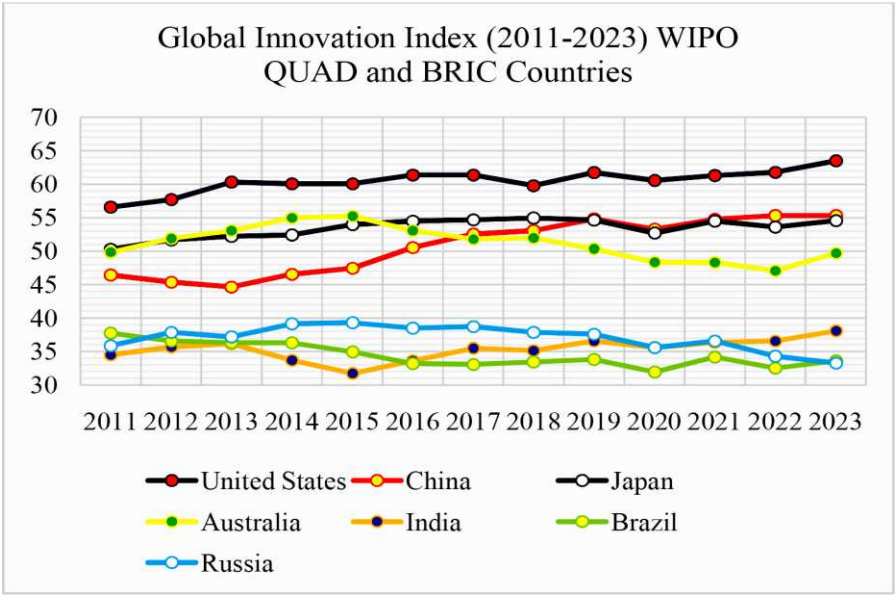


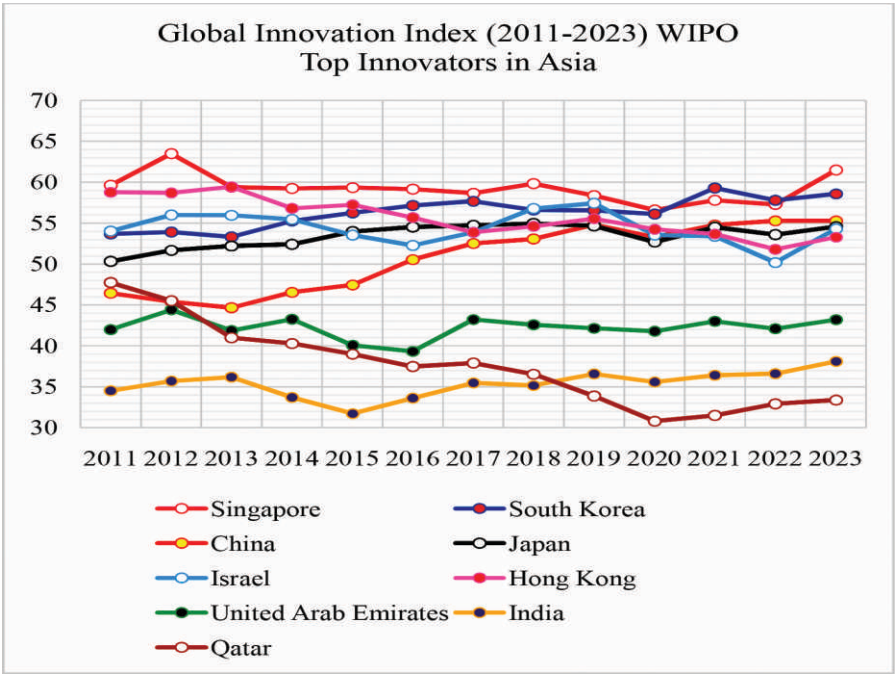
Global Soft Power Index scores in 2024 (Brand Finance, 2024)

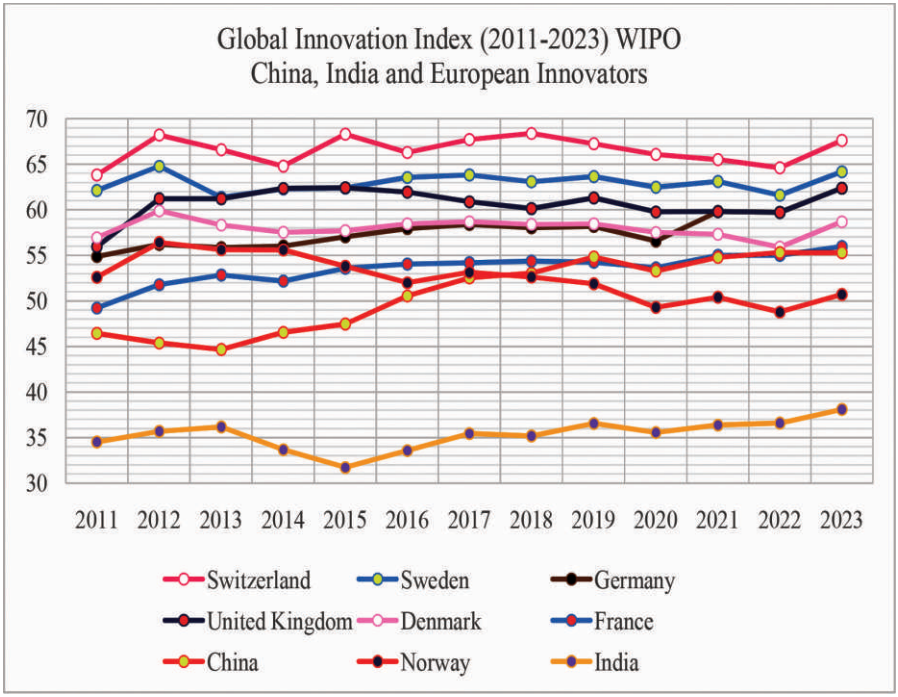


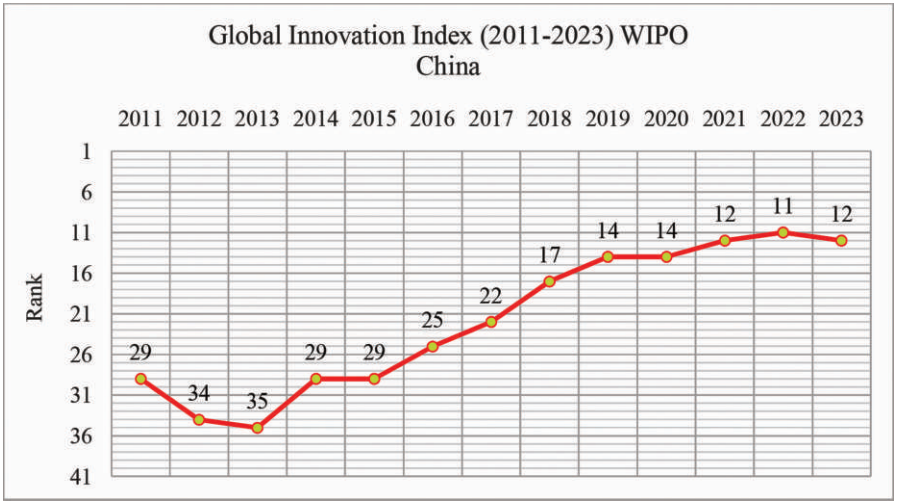

Scientific and Technical Journal Articles (1996-2020)
National Science Foundation, Science and Engineering Indicators
Scientific and technical journal articles - China | Data
(worldbank.org)
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
China
United States
India
Germany
United Kingdom
Japan

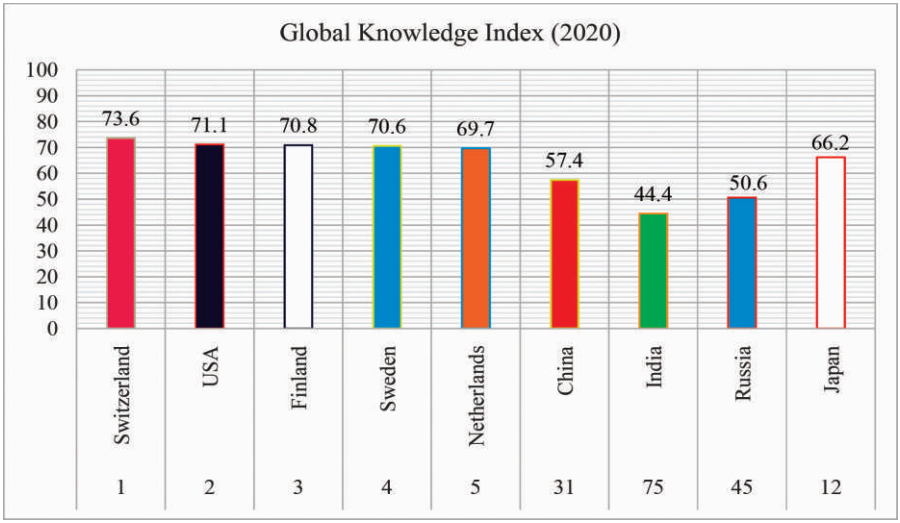

Industrial Design Applications (1980-2021) WIPO
Industrial design applications, resident, by count - China | Data
(worldbank.org)
1200000
1000000
800000
600000
400000
200000
0
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020
China
South Korea
Turkey
Germany
France
United Kingdom
Italy
Japan
United States
India


Global Innovation Index (2011-2023) WIPO
QUAD and BRIC Countries
70
65
60
55
50
45
40
35
30
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
United States
China
Japan
Australia
India
Brazil
Russia

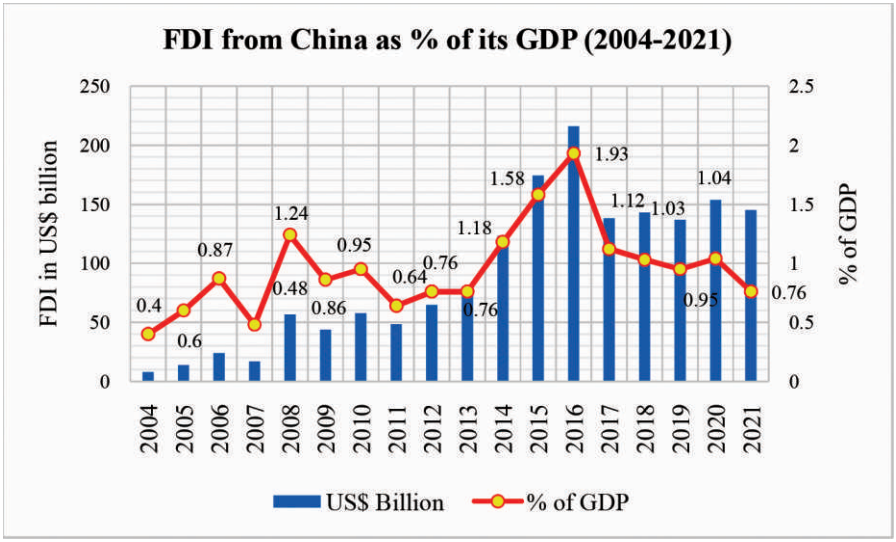

Global Innovation Index (2011-2023) WIPO
Top Innovators in Asia
70
65
60
55
50
45
40
35
30
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
Singapore
South Korea
China
Japan
Israel
Hong Kong
United Arab Emirates
India
Qatar

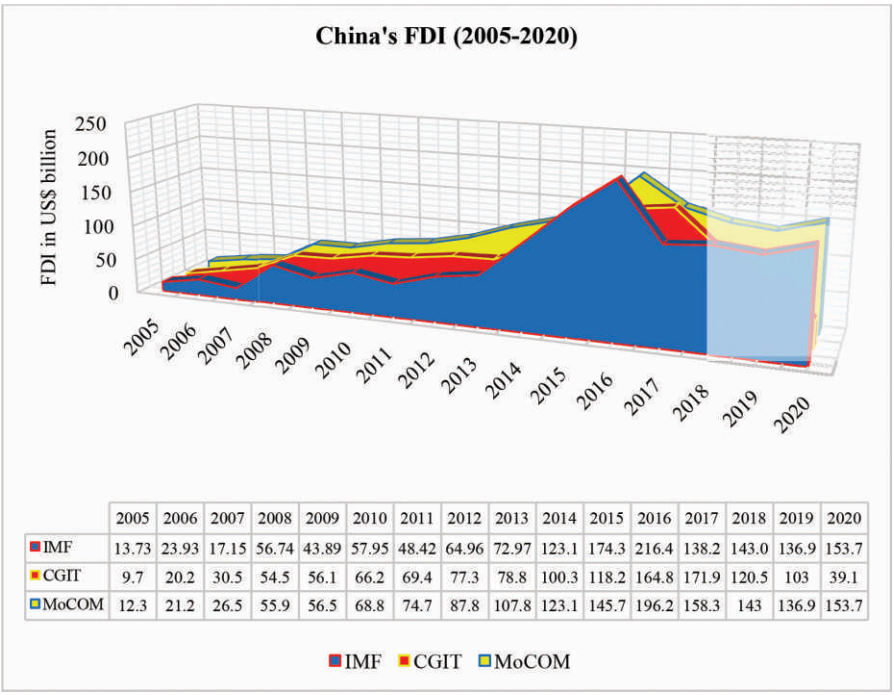

Global Innovation Index (2011-2023) WIPO
China, India and European Innovators
70
65
60
55
50
45
40
35
30
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
Switzerland
Sweden
Germany
United Kingdom
Denmark
France
China
Norway
India


Global Innovation Index (2011-2023) WIPO
China
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
Rank
1
6
11
16
21
26
31
36
41
29
34
35
29
29
25
22
17
14
14
12
11
12

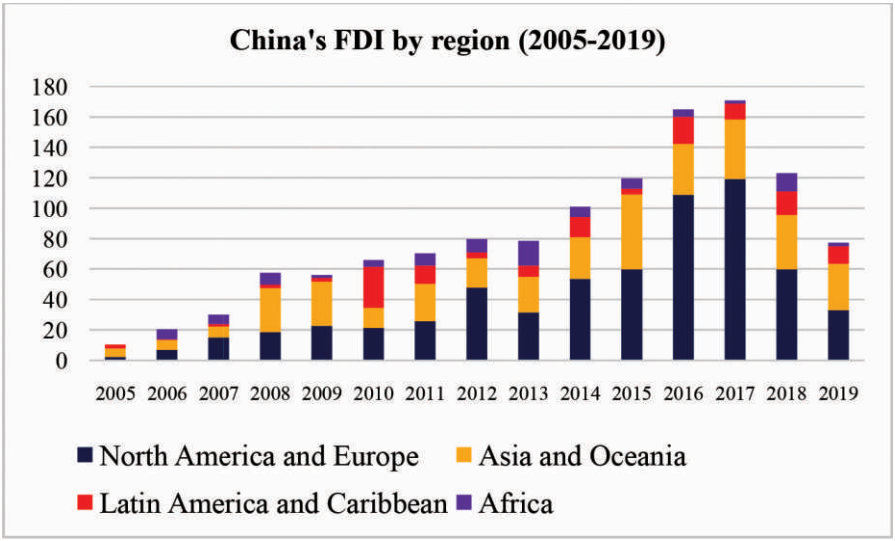


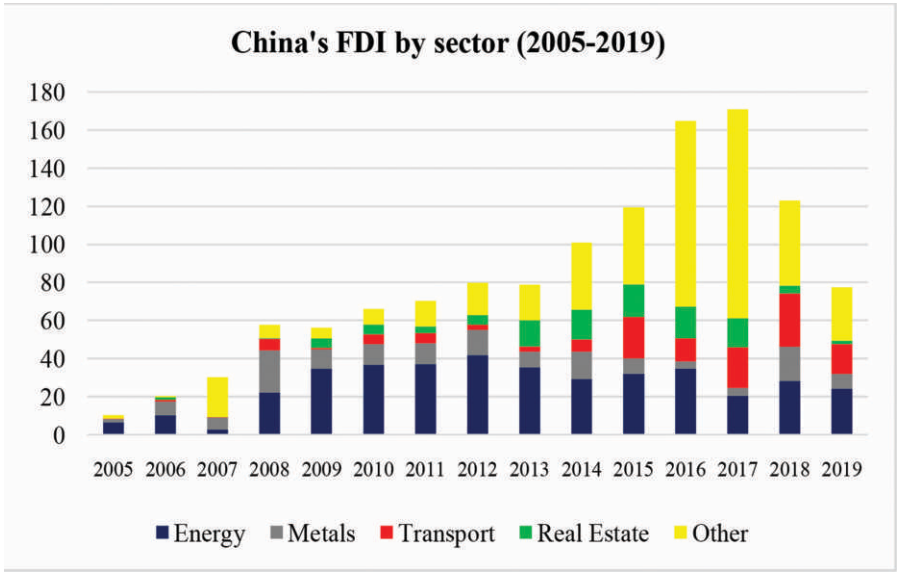
Global Knowledge Index scores and rankings in 2020 of Switzerland, USA, Finland, Sweden and Netherlands (top five in Global Knowledge Index 2020) and other major powers – China, India, Russia and Japan (Ghriss 2020)

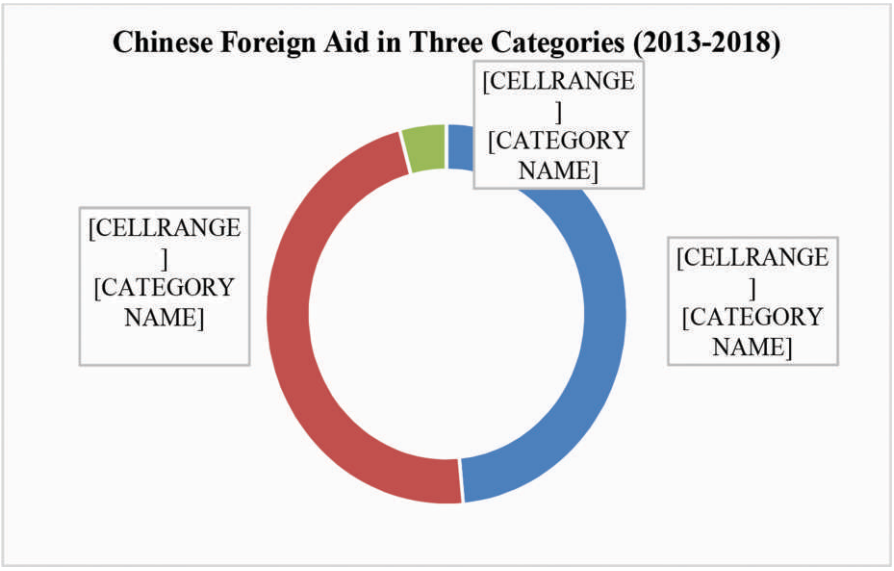


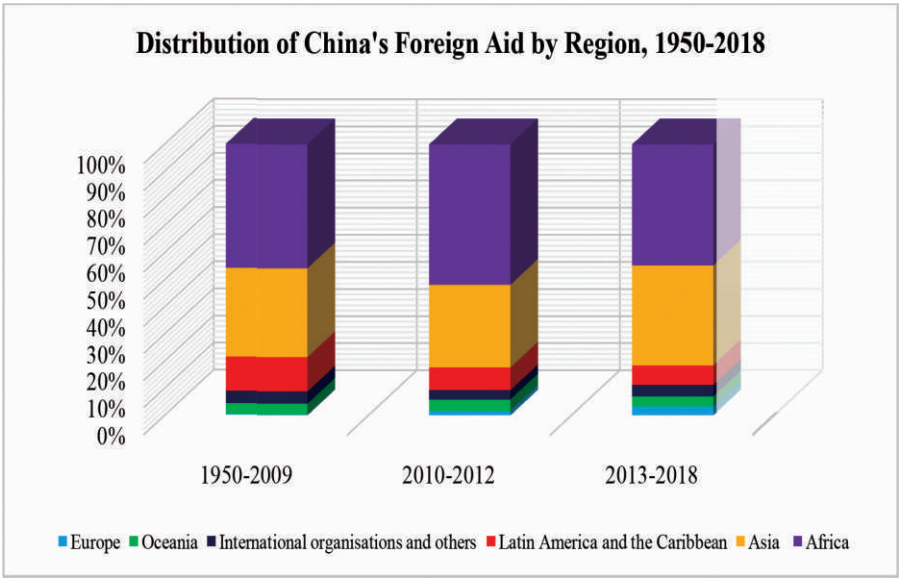


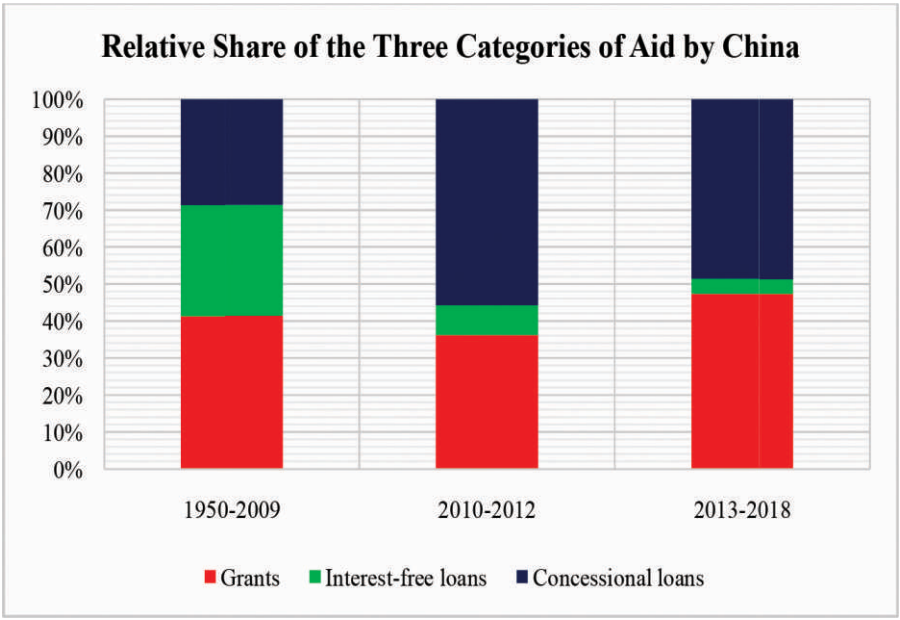
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
IMF	13.73	23.93	17.15	56.74	43.89	57.95	48.42	64.96	72.97	123.1	174.3	216.4	138.2	143.0	136.9	153.7
CGIT	9.7	20.2	30.5	54.5	56.1	66.2	69.4	77.3	78.8	100.3	118.2	164.8	171.9	120.5	103	39.1
MoCOM	12.3	21.2	26.5	55.9	56.5	68.8	74.7	87.8	107.8	123.1	145.7	196.2	158.3	143	136.9	153.7



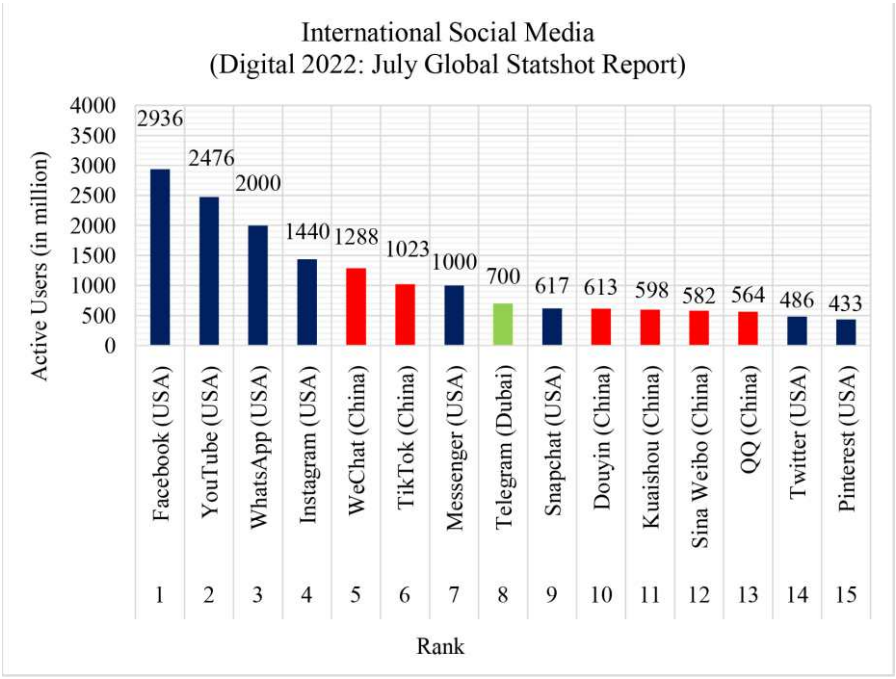

China's FDI by sector (2005-2019)
180
160
140
120
100
80
60
40
20
0
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Energy
Metals
Transport
Real Estate
Other


Chinese Foreign Aid in Three Categories (2013-2018)
[CELLRANGE]
[CATEGORY NAME]
[CELLRANGE]
[CATEGORY NAME]
[CELLRANGE]
[CATEGORY NAME]


Distribution of China's Foreign Aid by Region, 1950-2018
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1950-2009
2010-2012
2013-2018
Europe
Oceania
International organisations and others
Latin America and the Caribbean
Asia
Africa


Relative Share of the Three Categories of Aid by China
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1950-2009
2010-2012
2013-2018
Grants
Interest-free loans
Concessional loans

China-Funded Complete Projects by Sector, 2013-2018			
Public Facilities	Hospitals	58	306
	Schools	86	
	Civil Construction	19	
	Well-drilling and Water supply	20	
	Public Infrastructure	60	
	Others	63	
Economic Infrastructure	Transport	56	19
	Broadcast and Telecommunications	13	
	Electricity	6	
	Others	5	
Agriculture			19
	Agricultural pilot centres	5	
	Farmland Water Conservancy	2	
	Agricultural processing	6	
	Others	6	
Industry		5	5
Climate Change Programme	Wind and Solar Energy	5	13
	Biogas	5	
	Small Hydropower		
Total			404

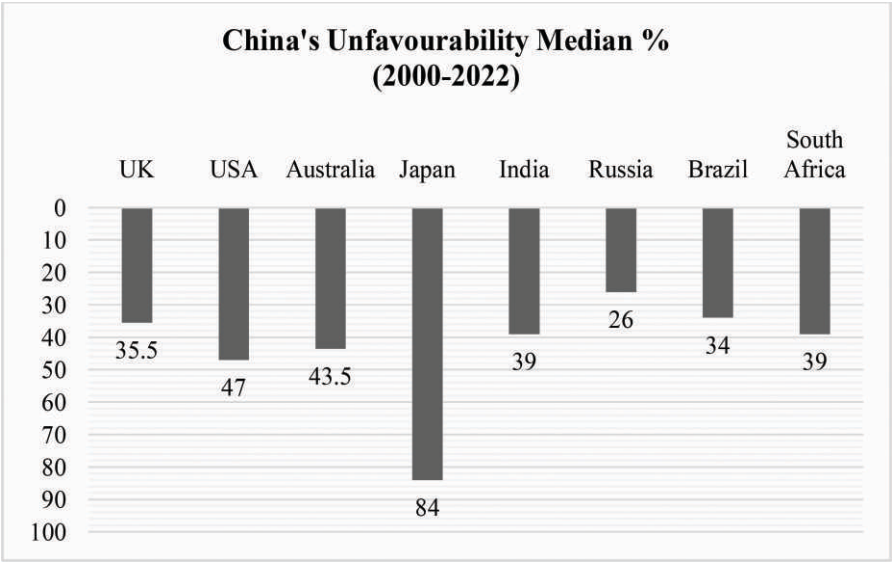


Top 15 social media platforms based on number of active users and their home country in 2022 (Kemp 2022)

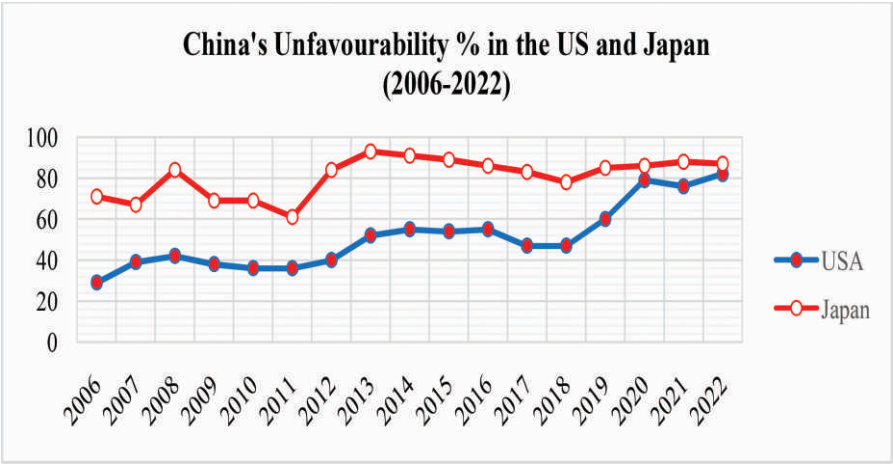
Unfavourability % of China in other countries (Pew 2022b)

Chinese President	Year of the survery	Important powers that are members of the Indo-Pacific groupings – AUKUS and QUAD and the emerging power grouping – BRICS							
		UK	**USA**	**Austr alia**	**Japan**	**India**	**Russia**	**Brazil**	**South africa**
Jiang Zemin	2002				42		18		

Hu Jintao	2005	16	35				29		
	2006	14	29		71		27		
	2007	27	39		67		26		
	2008	36	42	40	84		30		51
	2009	29	38		69		29		
	2010	35	36		69		29	34	
	2011	26	36		61		25	37	
	2012	35	40		84		25	39	
	2013	31	52	35	93	41	29	28	43
	2014	38	55		91	39	28	44	40
	2015	37	54	33	89	32	14	36	34
	2016	44	55	39	86	36			43
	2017	37	47	32	83	41	24	25	32
	2018	35	47	47	78	37	21	33	38
	2019	55	60	57	85	46	18	27	35
	2020	74	79	87	86				
	2021	63	76	85	88				
	2022	69	82	86	87				
Median		35.5	47	43.5	84	39	26	34	39



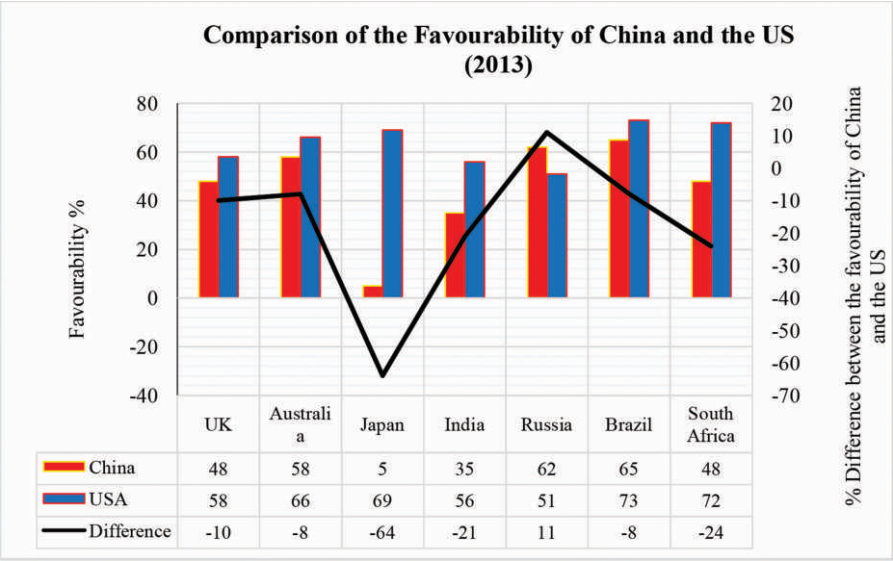
China's unfavourability median % (2000-2022) (Pew 2022b)



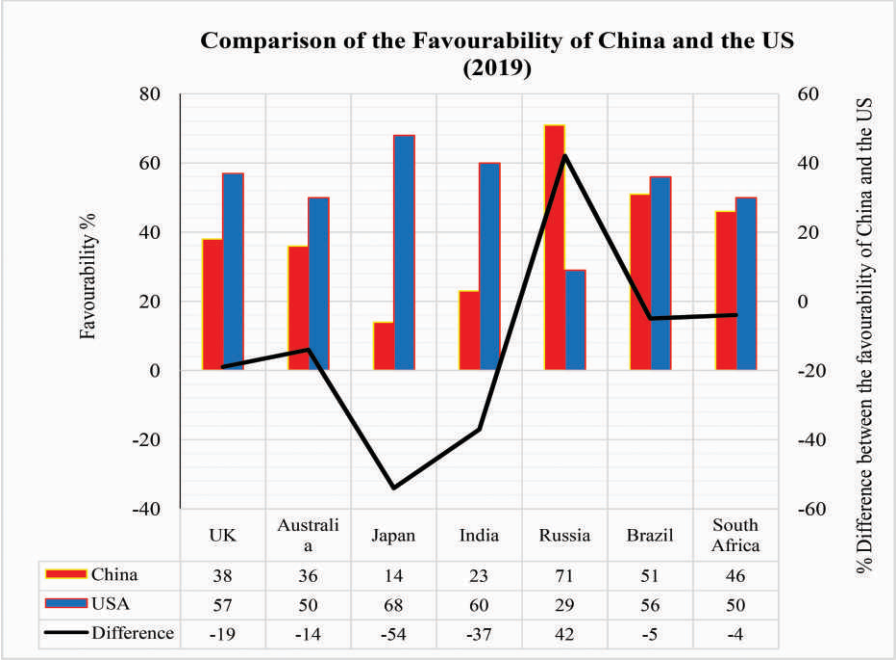
China's unfavourability % in the US and Japan (2006-2022) (Pew 2022b).

Comparison of favourability of China and the US in other countries (members of AUKUS, Quad and BRICS)

Countries surveyed	2013			2019		
	China	USA	Difference	China	USA	Difference
UK	48	58	-10	38	57	-19
Australia	58	66	-8	36	50	-14
Japan	5	69	-64	14	68	-54
India	35	56	-21	23	60	-37
Russia	62	51	11	71	29	42
Brazil	65	73	-8	51	56	-5
South Africa	48	72	-24	46	50	-4



Comparison of the Favourability of China and the US (2013)



Comparison of the Favourability of China and the US (2019)

Soft power analysis between the US and China (Pew 2013)

American vs. Chinese Soft Power (2013)				
	In Latin America		In Africa	
	American Soft Power	Chinese Soft Power	American Soft Power	Chinese Soft Power
Scientific and technological advances	74	72	83	75
Music, movies and television	63	25	58	34
Ways of doing business	50	40	73	59
Ideas about democracy	43	0	73	0
Ideas and customs spreading	32	30	56	46

Approval of Global Leadership (Gallup)

Approval of Global Leadership				
	USA	Germany	Russia	China
2007	38	41	25	36
2008	34	42	30	37
2009	49	41	27	35
2010	47	40	27	31
2011	46	47	28	32
2012	41	41	23	29
2013	46	42	24	29
2014	45	41	22	29
2015	45	43	24	30
2016	48	41	26	31
2017	30	41	27	31
2018	31	39	30	34
2019	33	44	30	32
2020	30	52	34	30
2021	45	50	33	30

Percentage Median Approval of job performance of the leadership of different countries (Gallup 2022)

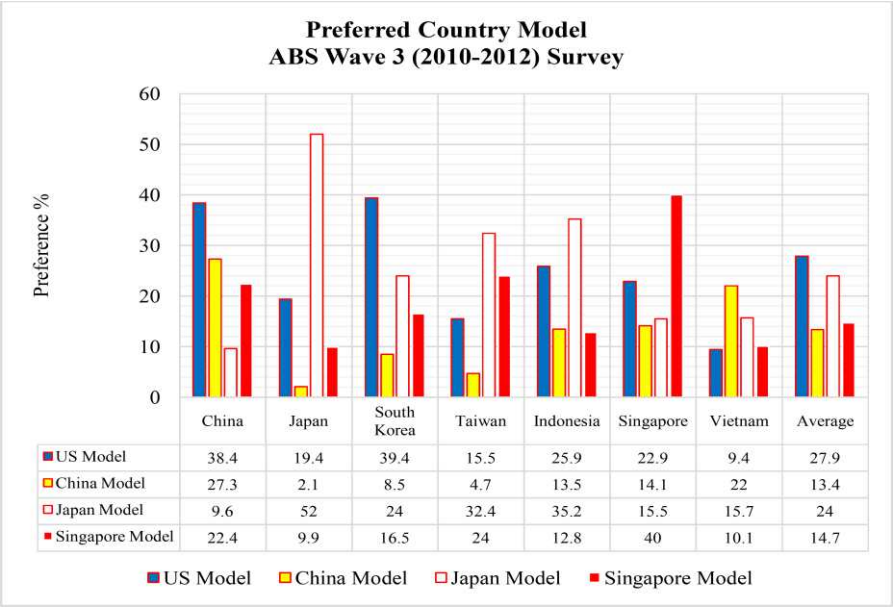
ABS Wave 3 Preferred Country Model

	USA	China	Self-Model	Japan	Singapore	India
Northeast Asia						
China	38.4	27.3	27.3	9.6	22.4	1.6
Japan	19.4	2.1	52.0	52.0	9.9	6.1
South Korea	39.4	8.5	10.1	24.0	16.5	1.2
Mongolia	26.9	10.9	29.2	19.3	8.4	1.1
Taiwan	15.5	4.7	22.2	32.4	24.0	0.4
Southeast Asia						
Cambodia	43.8	20.3	5.1	23.1	6.3	1.2
Indonesia	25.9	13.5	8.2	35.2	12.8	1.3
Malaysia	8.0	13.9	33.9	31.1	11.4	0.9

Philippines	69.1	7.3	0.0	17.2	5.8	0.7
Singapore	22.9	14.1	40.0	15.5	40.0	1.9
Thailand	15.5	16.2	46.0	12.4	8.4	0.3
Vietnam	9.4	22.0	41.5	15.7	10.1	0.7
Average	**27.9**	**13.4**	**26.3**	**24.0**	**14.7**	**1.4**

Overview of Security Relationships with the US and China
ABS Wave 3

	USA	China	Tensions in the Security Relationship with China	Security Alliance with US
Northeast Asia				
China	38.4	27.3	N/A	No
Japan	19.4	2.1	High	Yes
South Korea	39.4	8.5	Moderate	Yes
Mongolia	26.9	10.9	Low	No
Taiwan	15.5	4.7	Moderate	Yes
Southeast Asia				
Cambodia	43.8	20.3	Low	No
Indonesia	25.9	13.5	Low	No
Malaysia	8.0	13.9	Low	No
Philippines	69.1	7.3	Moderate	Yes
Singapore	22.9	14.1	Low	Yes
Thailand	15.5	16.2	Low	Yes
Vietnam	9.4	22.0	Moderate	No



Preferred Country model ABS Wave 3 (2010-2012) survey

Countries recognising the Republic of China (Taiwan)

Countries recognising the Republic of China (Taiwan)
1. Belize
2. Eswatini
3. Guatemala
4. Haiti
5. Marshall Islands
6. Palau
7. Paraguay
8. Saint Kitts and Nevis
9. Saint Lucia
10. Saint Vincent and the Grenadines

11. Tuvalu
12. Vatican City

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The Takshashila Institution is an independent centre for research and education in public policy. It is a non-partisan, non-profit organisation that advocates the values of freedom, openness, tolerance, pluralism, and responsible citizenship. It seeks to transform India through better public policies, bridging the governance gap by developing better public servants, civil society leaders, professionals, and informed citizens.

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