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CRITICAL MINERALS AND THE FUTURE OF PAKISTAN IN THE U.S.–CHINA RIVALRY

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Abstract
The intensifying U.S.–China rivalry has extended beyond military and technological domains to encompass the control and supply of critical minerals—resources essential for renewable energy, advanced manufacturing, and defense industries. Pakistan, endowed with significant deposits of copper, lithium, rare earth elements, and other strategic minerals, finds itself at the center of this emerging geoeconomic contest. This paper examines the role of critical minerals in shaping Pakistan's future amid the competing interests of Washington and Beijing. China's deep economic footprint through the China–Pakistan Economic Corridor (CPEC) has positioned it as the primary external actor in Pakistan's resource extraction and infrastructure development. Conversely, the United States, driven by concerns of overdependence on Chinese supply chains, is seeking alternative partnerships to secure access to these resources. The analysis highlights how Pakistan's mineral wealth could serve as both an opportunity and a liability. On the one hand, foreign investment promises revenue, industrial growth, and integration into global value chains. On the other, asymmetric dependencies risk deepening Pakistan's economic vulnerabilities, exacerbating governance challenges, and entangling the country in the larger U.S.–China confrontation. The study argues that Pakistan's strategic choices in managing its mineral sector will significantly influence its economic sovereignty, security posture, and regional relevance. By situating Pakistan within the broader framework of the "New Great Game," this research underscores the urgent need for balanced policy measures. Sustainable governance of critical minerals, diversification of foreign partnerships, and transparent regulatory frameworks are essential if Pakistan is to avoid becoming merely a pawn in global power politics. Ultimately, Pakistan's mineral endowment, if managed prudently, could transform it into a pivotal player in the twenty-first century's resource geopolitics.

INTRODUCTION

The twenty-first century is increasingly about the scramble for resources that are not only economically valuable but also strategically essential. Of these, key minerals such as lithium, cobalt, copper, and rare earth elements have become the backbone of modern technologies, from renewable energy systems to semiconductors and advanced

defense applications (International Energy Agency, 2021). These resources are essential inputs for digital innovation, aerospace industries, and strategic armaments, but they also provide the backbone for the transition of economies toward decarbonization. As the global order is being reshaped through multipolarity, the competition for critical minerals has evolved from a matter of industrial policy to one at the core of great power competition (Yergin, 2020). Nowhere is this dynamic more evident than in the competition between the United States and China, where access to mineral supply chains has become a critical front in what academics have referred to as the "New Great Game" (Cooley, 2012; Kleveman, 2003).

The global demand for critical minerals is growing faster than ever. According to the IEA (2021), the clean energy transition alone is expected to more than quadruple demand for lithium and more than double demand for cobalt by 2040. The U.S. Geological Survey (2022) has determined more than 50 minerals to be "critical" because of their critical importance to economic and national security and the high risk of supply chain disruption. This upsurge has forced states to reconsider their resource strategies, develop mineral security policies, and seek new partnerships for diversification of supply. China currently holds a dominant position in most upstream and midstream production processes, with an estimated 60–70 percent of rare earth processing capacity and large shares of global cobalt refining (Mancheri et al., 2019). The United States and its allies have responded by trying to minimize their vulnerability through building partnerships in resource-rich regions, investing in alternative supply routes, and promoting domestic exploration (Friedberg, 2011).

This resource-based competition mirrors the dynamics of historical great games, where powerful states competed for strategic territories and resources. However, in contrast to the imperial competition in Central Asia in the nineteenth century, the modern competition is geoeconomic rather than military competition. Minerals have become the lifeblood of emerging economies and the catalyst for renewed geopolitical maneuvering (Kaplinsky & Morris, 2016). Others have characterized the present as a transition from hydrocarbon geopolitics to mineral geopolitics, where the stakes are climate change mitigation, technological superiority, and national defense (Ali, 2017; Pitron, 2020).

Within this global context, Pakistan stands in a very sensitive and strategic position. Located at the intersection of South Asia, Central Asia, and the Middle East, Pakistan is blessed with an enormous amount of critical minerals, estimated to be worth over six trillion U.S. dollars in potential value (Humayun & Anser, 2021). Other important deposits include copper and gold in Reko Diq and Saindak mines in Balochistan, lithium in the north, and chromite in Khyber Pakhtunkhwa. These reserves put Pakistan at the center of the mineral map and make it a potential candidate for future industrial development and a target for external powers looking for resource security. Yet, Pakistan's resource endowment is not just an economic opportunity; it is also a source of geopolitical vulnerability, particularly as the U.S. and China ramp up their competition for influence in the Indo-Pacific region.

The asymmetry between Chinese dominance and American vulnerability cannot be ignored in the context of the global race for critical minerals. China has been investing in upstream mining and downstream refining capacities, especially in Africa, Latin America, and Asia, in a systematic way since the beginning of the 2000s (Mancheri et al., 2019). Beijing has gained control over cobalt in the Democratic Republic of Congo, lithium in the Lithium Triangle of South America, and rare earths in its own domestic provinces through state-supported enterprises, preferential financing, and long-term supply contracts. Furthermore, the fact that China has almost monopolized the processing of rare earths provides it with significant bargaining power over the world industry, including electronics and defense systems (Pitron, 2020). The United States, however, continues to be heavily reliant on imports to satisfy most of their major mineral requirements. The U.S. Geological Survey (2022) states that the United States sources more than 80 percent of its rare earths and a substantial amount of its cobalt, graphite, and manganese abroad. This dependence has been considered more and more as a strategic weakness, which has led Washington to

diversify the sources of supply and minimize the use of Chinese processing plants (Friedberg, 2011; Yergin, 2020).

This uneven terrain has prompted numerous commentators to describe mineral competition as a new frontier of the New Great Game. The modern competition is characterized by geoeconomic policies, in contrast to the nineteenth-century conflict between Britain and Russia, which was based on territorial dominance in Central Asia. According to Cooley (2012), the great powers no longer have to be present in the form of military strength but rather in the form of controlling supply chains, financial leverage, and investments in infrastructure. To China, the mineral-rich province of Balochistan in Pakistan is not only a source of economic potential but also a strategic route to the Arabian Sea. Gwadar port, built with Chinese investment, is projected as a center not only of trade but also of export of mineral resources mined in the interior.

To the United States, the mineral potential of Pakistan cuts across its Indo-Pacific strategy and its efforts to limit Chinese control of global value chains. Although until recently the relations between Washington and Islamabad were characterized by security motives based on counterterrorism and military collaboration, the mineral component creates a new level of strategic interest (Siddiqa, 2020). The recent interest encompassing the geological surveys and talks of investing in the mining industry in Pakistan are indicators of a change in the bilateral interaction. According to analysts, Washington also sees Pakistan as a potential source of some of the most important minerals, as well as a partner whose geographical position can be used to counterbalance Chinese power in South Asia (Humayun & Anser, 2021). But in contrast to the state-directed strategy of China, the U.S. approach is structurally constrained, such as the lack of economic leverage in Pakistan and the large share of Islamabad relying on Chinese money.

The most eloquent example of the offer and the threat of resource politics is the mineral resources of Pakistan, and the copper and gold reserves in Reko Diq, in particular. The Reko Diq project, which is one of the biggest unexploited copper-gold deposits in the world, has turned into the center of an international arbitration, a governance crisis, and grievances among the locals (Khan, 2022). Similarly, not only is the Saindak project, also under Chinese management, a manifestation of the opportunities of foreign investment, but also the risks of asymmetric dependency. These projects are located in Balochistan a province that is marked by ethnic unrest, insurgency and political marginalization making its resources governance even harder (Humayun and Anser, 2021). The mining business of Pakistan appears as a complex land to foreign investors with diverse threats of security issues, political unrest, and domestic antagonism.

The mineral endowment of Pakistan is large, but it has been underutilized in the past because of structural and political factors. There are weak regulatory institutions, corruption, and inconsistency in policy that have taken a toll on efforts to build a sustainable resource sector (Siddiqa, 2020). Moreover, the fact that mineral deposits are concentrated in the peripheral areas (Balochistan and Gilgit-Baltistan) has increased the tension between the central government and the locals, as most people consider the extraction of resources to be exploitative and unfair (Humayun and Anser, 2021). The lack of institutions governing equitable allocation of resource rents has stoked resentment, which is usually expressed through insurgency and violence, and thus discourages long-term foreign investment. The cycle perpetuates underdevelopment whereby Pakistan cannot use the mineral wealth to become a prosperous nation.

In this regard, the U.S.-China competition presents threats as well as opportunities. As the economic power in Pakistan is established with CPEC, China will be the leading external player in the development of minerals (Wolf, 2019). Nonetheless, this hegemony would concern overdependence and lack of strategic autonomy. Opponents claim that Pakistan is at risk of becoming ensnared in unequal accords that place the interests of Chinese at the forefront, especially when Beijing offers financing, technology, and infrastructure in place of access to resources (Mancheri et al., 2019). To the United States, Pakistan will provide a platform to eliminate the influence of China in the region and diversify the key mineral supply chains. However, the

participation of Washington is still conditional, limited by the mistrust of U.S.-Pakistan relations and the lack of mechanisms for massive investment in China's state-led model (Friedberg, 2011).

The strategic challenge facing Pakistan is how to maximize its resources without losing itself to dependency. There is a channel of diversifying partnerships other than the binary decision of either the U.S. or China. It might be possible to broaden the possibilities of Pakistan and minimize the risks of asymmetric dependence by collaborating with multilateral institutions and local actors (such as Turkey or the Gulf states) as well as investors in the private sector (Kaplinsky and Morris, 2016). The other avenue is to consolidate domestic governance structures by establishing open licensing procedures, empowering local people in decision-making, and establishing sovereign wealth funds to control resource earnings.

Not only has Pakistan been affected by mineral wealth in terms of geopolitical interests, but also regional stability. The mineral-rich areas of Balochistan are also insurgent areas where external investments cross with local wars. If we fail to address the underlying causes of marginalization and inequality, mineral projects could turn into hotbeds of violence (Humayun and Anser, 2021). Resource governance thus cannot be discussed without more general issues of political inclusion, federalism, and social justice. The history of the world has demonstrated that resource riches can be used to either integrate the country or to divide it further, depending on how they are handled.

Finally, critical minerals in Pakistan place the nation at the center of the twenty-first-century great power war between the U.S. and China. These resources reflect the dual nature of opportunity and vulnerability; they can either drive economic change and positionality or they can promote dependency and instability. It will be determined by the success of Pakistan in its attempts to reform its governance, diversify its partnerships, and control its resource endowment through asserting sovereignty. In an era where technological dominance and national security depend on sharp minerals, the mineral endowment of Pakistan can probably decide its future in the realm of world politics. The decisions Pakistan makes today will determine whether it becomes a key player in the New Great Game or merely a minor player in others' plans.

1. Problem Statement

Pakistan has enormous deposits of essential minerals, including copper, lithium, and rare earth elements, but the nation has traditionally been unable to use them to develop its economy in a sustainable manner. The mineral industry has not been able to make any significant contribution to the development of nations due to weak institutions, corruption, and uneven policy frameworks (Siddiqa, 2020). The instability in the region caused by areas with abundant resources, like Balochistan, where there is a perception of marginalization and unfair sharing of benefits, has contributed to this underutilization. The paradox of plenty demonstrates the phenomenon of the resource curse that afflicts most developing nations.

The urgency of this problem is heightened by the global shift toward renewable energy and technological advancement, which has dramatically increased the demand for critical minerals. At the same time, the intensifying U.S.–China rivalry has transformed minerals into strategic assets. China's dominant role in Pakistan through the China–Pakistan Economic Corridor (CPEC) ensures access to these resources, but it also risks creating asymmetric dependency (Wolf, 2019). Meanwhile, the United States seeks to diversify global supply chains to reduce its reliance on Chinese-controlled minerals, bringing Pakistan into sharper focus as a potential partner (Friedberg, 2011).

Despite these dynamics, scholarly attention to Pakistan's role in the geopolitics of critical minerals remains limited. Most existing research has focused on hydrocarbons, terrorism, and traditional security issues, leaving a gap in understanding how Pakistan's mineral wealth interacts with great power competition (Ali, 2017). This lack of analysis prevents policymakers and academics from fully grasping the opportunities and vulnerabilities Pakistan faces in the twenty-first-century resource competition. Addressing this gap is essential for designing strategies that enhance national sovereignty, economic growth, and regional stability.

2. Research Objectives

- To analyze Pakistan's critical mineral resources in the context of global demand and their relevance to U.S.–China strategic competition.
- To examine the impact of Chinese investment and U.S. strategic interests on Pakistan's mineral governance, sovereignty, and development prospects.
- To propose policy options for Pakistan to harness its mineral wealth effectively while mitigating dependency and avoiding the resource curse.

3. Methodology of the Study

The paper uses a qualitative and exploratory research design to determine the consequences of U.S. investment in Pakistan on the critical minerals industry and insurgency relationships on the U.S.-China competition. The study uses mainly secondary sources such as scholarly literature, policy reports, analyses by think-tanks, government documents, and publications of international agencies. Thematic content analysis is used to analyze data on four central themes: U.S. strategic investment, the mineral footprint of China, insurgency and security challenges, and the Pakistan strategic agency.

4. Conceptual and Theoretical Framework

4.1. Defining "critical minerals" and their strategic importance

The term "critical minerals" typically refers to mineral commodities that are not fuel and that are crucial to economic security and national security, possess a supply chain that is susceptible to disruption, and have no feasible alternatives (U.S. Geological Survey [USGS], 2022). The International Energy Agency (IEA) broadens this definition to include their core contribution to low-carbon technologies, particularly batteries (lithium, nickel, cobalt, graphite), wind turbines (rare earth elements), solar PV (silicon, silver), and the grid (copper, aluminum), and by stating that they must be resilient throughout extraction, processing, and recycling (International Energy Agency [IEA], 2021). These minerals are considered strategic due to two key characteristics. Originally, technological indispensability refers to the fact that these minerals are entrenched in high-value industries such as semiconductors, aerospace, defense, electric vehicles (EVs), and renewables; furthermore, their indispensability can rapidly spread throughout entire value chains. Second, focus on risk: concentration. Geology, geologic timelines, environmental limitations, and industrial capacities provide a concentration of bottlenecks. As one case, a long history of investment in midstream refining has given China dominant positions in processing rare earths and various battery inputs, despite extraction elsewhere (Mancheri, Sprecher, Bailey, Ge, & Tukker, 2019).

These characteristics give rise to strategic importance. To states, the assurance of access is a goal for energy transition, industrial competitiveness, and military preparedness (Blackwill and Harris, 2016; Yergin, 2020). To companies, input assurance allows long-term capital planning and innovation. To producers of the developing category, such as Pakistan, the point of salience is opportunity upgrading: a shift in the export of raw ore to beneficiation, processing, and component manufacturing will provide a larger portion of the value added, spur the formation of skills, and intensify connections with domestic industry (Kaplinsky and Morris, 2016). With the increased demand on clean-energy minerals, those countries that can match geoscience, environmental stewardship, benefits to communities, and guaranteed investment could become stable nodes in reshaped global supply chains (IEA, 2021).

4.2. Resource geopolitics and geoeconomics (theories of dependency, realism, and critical political economy)

A robust framework for analyzing critical minerals blends dependency theory, neorealist insights, and critical political economy, synthesized under the umbrella of geoeconomics.

Based on dependency theory, world mineral trade tends to recreate core-periphery processes: the peripheral economies sell primary commodities and purchase advanced goods and technology, restricting any nation's industrialization (Cardoso and Faletto, 1979; Frank, 1967). For minerals, value is concentrated in processing, design, and branding. It is not the fatalism of the policy implication but

strategic upgrading of local content policies, joint ventures, technology transfer, and sovereign development funds, which direct rents to diversification (Kaplinsky and Morris, 2016). To Pakistan, this lens lays emphasis on the need to develop downstream capacity and conclude equitable contracts to ensure that mineral development fortifies, not marginalizes, but builds up on national capabilities.

Minerals are reformulated as security externalities of realism (Waltz, 1979; Mearsheimer, 2001). States compensate for the risks of being coerced or conflicted by accumulating stocks, diversifying suppliers, or reshoring some of the chain. Supply security instruments have been in the form of alliances, port access, and infrastructure corridors. This is one of the reasons why the United States, China, and regional powers spend diplomatic capital in mining jurisdictions and chokepoints. In the case of Pakistan, a read on realism points to its strategic location between the Arabian Sea, West China, and Central Asia, and the ability to pursue hedging and multi-vector diplomacy without losing national independence.

Critical political economy (Cox, 1981; Strange, 1988) looks at structural power: who defines norms, funds projects, insures, and regulates ESG norms. Domination of the price information and intellectual property in the field of metallurgy and environmental standards can be as material as the actual deposits. This perception predestines the contribution of developing states, state-owned corporations as well as transnational corporations to the creation. It will force producer countries to institutionalize transparency, community benefit-sharing, and environmental protection not as externality, but as a means of authenticating projects and alleviating the risk of conflict, and, therefore as a means of lowering the cost of capital and attracting long-term investment. Under the control of geoeconomics (Luttwak, 1990; Blackwill Harris, 2016), it is through clinging to these strands that critical minerals are perceived as economic instruments used to reach geopolitical objectives.

Statecraft is used through export control and investment screenings, strategic warehousing, and financing consortia. According to the producer, the resource endowments of producer states can be converted in bargaining power by predictable regulatory regimes and plausible dispute-resolution channels which guarantee infrastructure, technology, and market-access on terms that are favorable. The framework facilitates a positive interpretation of the options of Pakistan: by prioritizing regulatory reform over specific industrial policy, Pakistan will be able to engage widely without compromising sovereignty.

5. Critical Minerals in Pakistan: Potential and Challenges

5.1. Overview of Pakistan's critical mineral reserves

Pakistan boasts of a rich and largely untapped endowment of critical minerals that makes it a potentially strong competitor in future international supply chains. Deposits of copper, gold, lithium, chromite, rare earth elements (REEs), and other strategic minerals are located in Balochistan, Gilgit-Baltistan, and Khyber Pakhtunkhwa, according to the Geological Survey of Pakistan (GSP) and other foreign research (Khan, 2022; Ali, 2017). The most prominent of these include the Saindak and Reko Diq copper-gold deposits, portions of which are being deemed globally important, with the reserves of Reko Diq being estimated to hold over 5.9 billion tonnes of ore (World Bank, 2020).

In Gilgit-Baltistan and northern Pakistan, potential has been reported to exist in lithium and in REE, but due to capacity and infrastructure issues, systematic exploration has not been undertaken much (Pakistan Mineral Development Corporation [PMDC], 2021). In addition to these headline deposits, barite, antimony, bauxite, and large deposits of iron ore can be found in the geology of Pakistan, as well as strategic industrial minerals. Such resources open up opportunities for Pakistan to satisfy domestic industry demand and at the same time enter into international markets that have a growing demand for minerals in the renewable energy sector and electric cars, as well as in defense technologies (International Energy Agency [IEA], 2021). The question is how to tap into this potential effectively because much of the mineral wealth has not been exploited because of the bottlenecks in infrastructure, uncertainty regarding regulations, and lack of technological capacity.

5.2. Governance issues: corruption, weak institutions, and regulatory gaps

Although such opportunities are present, challenges to governance have traditionally hampered the realization of the full potential of Pakistan with respect to its mineral resources. The literature on the resource curse focuses on the role of corruption, weak institutions, and lack of regulatory certainty in diluting the developmental potential of resource endowments (Ross, 2012; Auty, 1993). In Pakistan, provincial and federal authority overlap, transparency in licensing is lacking, and projects take a long time to start, which discourages foreign investors and sets back projects (Siddiqa, 2020).

The regulatory systems are still disjointed, and mining regulations are different in the various provinces and lack the enforcement capacity. It has occasionally led to underreporting of production, smuggling, and revenue losses. Although reforms are underway—e.g., an attempt to modernize mining legislation and establish a better dispute resolution framework—there are still major loopholes in terms of environmental compliance, community involvement, and stable taxation systems (Ali, 2017). Governance weaknesses do not mean that there is no potential but highlight the need to institutionalize, be transparent, and build capacity to ensure that mineral wealth is translated into sustainable economic development.

6. China's Role in Pakistan's Mineral Sector

6.1. CPEC and resource-driven infrastructure development

China-Pakistan Economic Corridor (CPEC) is a landmark project of the Belt and Road Initiative (BRI), which has become one of the pillars of the Pakistan economic development strategy. Although CPEC is mostly related to transport, energy, and industrial infrastructure, its long-term perspective is to assist the Pakistani natural resources sector, especially mining and minerals (Wolf, 2019). Gwadar port, a hub of CPEC, does not only offer China direct access to the Arabian Sea, but it also gives Pakistan access to its mineral resources of Balochistan and Gilkit-Baltistan through export routes. CPEC roads, railways, and energy projects directly improve the viability of the development of remote mineral-rich regions previously inaccessible (Small, 2015).

Resource development in terms of infrastructure is essential in the mineral industry in Pakistan since mineral deposits like Reko Diq, Saindak, and Thar coalfields have high logistical and energy requirements. The use of Chinese-made roads and power plants minimizes transportation bottlenecks and energy crises, and extraction of minerals becomes a more profitable option (Kugelman, 2017). Furthermore, special economic zones (SEZs) established within the framework of CPEC offer a chance to combine the mineral processing and value-added sector with a much wider industrialization. This interconnection of infrastructure and resource building can be viewed as the geoeconomic rationality of the BRI, in which connectivity allows trade and resource exploitation (Ferdinand, 2016).

Nonetheless, the development of CPEC based on the resources also brings up critical issues of sustainability in the long term and the distribution of local benefits. Mining potential is boosted by better infrastructure, but to make sure that mineral wealth is converted into fair economic growth, targeted policies are necessary. In the absence of vigorous governance, resource corridors have the potential to solidify uneven development, especially in places such as Balochistan where social grievances are already high (Siddiqa, 2020). Therefore, even though CPEC is providing enabling environment to the exploitation of the minerals, Pakistan needs to supplement the infrastructure investments with inclusive development policies so that locals can enjoy the growth of the national economy.

6.2. Chinese investment strategies and long-term vision

China's investment strategy in Pakistan's mineral sector reflects its broader global approach: securing long-term access to strategic resources through infrastructure, joint ventures, and concessions. The Saindak copper-gold project is one of the earliest examples, where the Metallurgical Corporation of China (MCC) has operated the mine under a lease agreement since the 1990s, exporting copper to China (Ali, 2017). Although the revenues generated have provided some benefits to Pakistan, critics argue that the limited technology transfer and low

local value addition have constrained developmental impact (Siddiqa, 2020). This pattern aligns with China's global strategy of integrating upstream mining with its downstream processing industries, ensuring control over supply chains (Mancheri et al., 2019).

Chinese firms have also expressed interest in the Reko Diq project, one of the world's largest untapped copper-gold deposits, although its development has primarily involved Western companies. Through CPEC, China has sought to establish an enabling framework for resource-based projects by financing energy, transport, and industrial infrastructure (Wolf, 2019). This long-term vision aims not only at securing access to resources but also embedding Pakistan into China's economic orbit, where minerals flow to Chinese industries and processed goods return to Pakistani and global markets. Such an integrated model demonstrates China's strategic foresight in linking minerals with manufacturing and global trade.

At the same time, China's approach in Pakistan reflects pragmatism, as investments are calibrated to geopolitical realities and domestic stability. Unlike Western firms that emphasize legal safeguards and arbitration, Chinese firms often rely on state-to-state agreements and political relationships, allowing them to operate in riskier environments (Bräutigam, 2009). This flexibility provides Pakistan with capital and expertise that might not otherwise be available, but it also underscores the need for robust domestic governance to ensure that agreements serve national interests. Thus, China's long-term strategy in Pakistan's mineral sector presents both opportunities for growth and challenges of dependency.

6.3. Implications for Pakistan's economic dependency and sovereignty

The central position of China in the Pakistani mineral industry has a high consequence of economic dependency and sovereignty. On the one hand, Chinese investment addresses serious shortfalls in finance, technology, and infrastructure that Pakistan would not easily access elsewhere. Examples such as Saindak and the prospective collaboration on Reko Diq show that Chinese companies can offer operational experience and long-term funding where other investors are reluctant (Ali, 2017). Besides, the integrated infrastructure network asset available in CPEC makes Pakistan a significant resource route, enhancing its accessibility to international markets. In this view, the Chinese presence reinforces the economic development interests of Pakistan.

Conversely, overdependence on China is a threat as it may breed unbalanced dependencies. In case the country shipments of the minerals produced in Pakistan are sold majorly to China, and the development of the infrastructure is supported mainly by the Chinese loans, the possibilities of Islamabad may become limited (Kugelman, 2017). This dependency may decrease the bargaining power of Pakistan, reduce diversification, and expose Pakistan to external shocks. Moreover, the debt burden associated with infrastructure projects can limit fiscal freedom, casting doubt on long-term sovereignty and autonomy when making decisions (Siddiqa, 2020). These dangers do not suggest that Chinese intervention is necessarily bad, but they indicate the necessity of Pakistan to have a diversified portfolio of partnerships.

To ensure that dependence does not take hold, Pakistan should seek policies that balance Chinese participation with other state and institutions associations. Being an active participant in any multilateral initiative, including the Minerals Security Partnership or the Extractive Industries Transparency Initiative, might increase credibility and appeal to other investors. Strategic independence will allow Pakistan to enjoy Chinese experience and infrastructure without locking mineral wealth to dependency. By doing so, the influence of China in the mineral sector in Pakistan might be handled as an addition to other diversified economic interactions but not as an alternative to it.

8. The U.S. Perspective and Strategic Interests

8.1. U.S. concerns over China's mineral dominance

The excessive control of China over important mineral supply chains is seen as a strategic weakness by the United States. China refines approximately 60 per cent of lithium, 70 per cent of cobalt, and almost 90 per cent of rare earths, having high leverage in any clean energy, high-tech

manufacturing and defense sector (Mancheri et al., 2019; U.S. Geological Survey [USGS], 2022). Washington is also seeking to worry that geopolitical tensions might be translated into supply disruptions because China has already blocked rare earth exports to nations involved in political conflict, with Japan being the biggest target in 2010 (Humphries, 2013). Such a precedent has escalated the concern that U.S. technology and defense sectors may be at the expense of being overly reliant on Chinese processing capacity.

Pakistan becomes a possible alternative strategic mineral source. Having copper, lithium and rare earth reserves, Pakistan can be part of the U.S. diversification strategies provided the right investment systems are put in place. The U.S is however wary of this considering that Pakistan is highly tied to China in form of CPEC and BRI (Small, 2015). Nonetheless, American policymakers have acknowledged that achieving access to mineral-rich states out of the Chinese orbit is crucial to alleviating vulnerability and competitiveness in the energy transition and the technological competition (Blackwill and Harris, 2016).

Therefore, the issue of Chinese mineral dominance as a factor that worries Washington is a direct influence on its Pakistan opinion. Although not a major supplier at the present, the untapped mineral resources in Pakistan make it a strategically competitive participant in the larger supply chain contest. To the U.S., involving Pakistan in this does not revolve around imminent extraction so much as it is about conditioning long-term supply options and also making sure that Chinese influence does not run wild in a country of such geostrategic value.

8.2. Opportunities and limitations of U.S.–Pakistan cooperation

The U.S-Pakistan relations in the mineral sector are great opportunities but limited due to political, economic and institutional facts. On the positive dimension, the American companies will introduce high-technology in mining, environmental practices and capitals which would enable Pakistan to escape the traps of unchecked mining. The U. S. development institutions, including the International Development Finance Corporation (DFC), might finance sustainable mining projects and American universities and think tanks might become the partners of Pakistani institutions in terms of capacity building (Kaplinsky and Morris, 2016). These efforts would not only favor the economy of Pakistan but also the bilateral relationship.

Nevertheless, the limitations are significant. The economy has been discouraged by the history of wavering U.S.-Pakistan relations, influenced by security issues and each other's suspicions (Haqqani, 2013). The American investors are also cautious of regulatory risks, political instability, and judicial conflicts including the Reko Diq dispute, which undermined investor confidence (World Bank, 2020). Furthermore, the high level of integration of Pakistan with China in terms of CPEC poses organizational problems to U.S. intervention since Washington is not likely to invest heavily in the area where Chinese control is already established (Small, 2015).

Notwithstanding these difficulties, there is a practical way ahead. Pakistan will be able to view mineral relations with the U.S. as a complement to China but not as an alternative and focus on the diversification and resilience. Joint ventures, green ventures and capacity-building projects may offer a way into U.S. engagement without compelling Pakistan to take sides. Through this moderate stance, Pakistan would be able to utilize the U.S. experience and funding and keep their strategic alliance with China and transform the great power rivalry into a prospect of their own economic sovereignty.

8.3. Pakistan as a “geopolitical battleground” in the U.S.–China rivalry

The geography of Pakistan, the endowment of its resources, and the strategic relationships that exist in the country are the elements that have seen the U.S. and Chinese interests meet in the country in a competitive manner. In this case, Pakistan can be discussed as a geopolitical battlefield not due to the inevitability of its coercion, but because both powers deem it worthwhile to gain access to ports, corridors, or mineral streams, which will strengthen their world policies (Cooley, 2012; Small, 2015).

Islamabad benefits from this foreign interest, as successful maneuvering can bring infrastructure,

technology, and investment. However, failure to moderate these interests may lead to pressure to choose sides. However, it is risky to believe that Pakistan is only a battlefield at the cost of domestic agency. Institutional design, contract terms, and multilateral activity are the three strategies that Pakistan can use to influence the situation. The feasibility of the nation in converting the foreign rate of interest into growth-creating benefits depends on plausibility of the government, openness of the long-term industrial policy and equity of the benefits-sharing systems, which must embrace provincial partners and communities (Ali, 2017). Practically, the external competition offers leverage that can be translated into domestic value--provided that Islamabad sets its priorities and can negotiate based on policy coherence.

Finally, one more sign of the potential spillovers to regional dynamics is the battleground metaphor. The third parties-regional states, multilateral institutions and the investors in Pakistan monitor how Pakistan will manage the competing offers. The actions followed (or not followed) have the ability to redefine the perceptions in the region, and this determines the larger diplomatic capital of Pakistan. Hence, the administration of the mineral projects not only influences the domestic development but also the regional status and the possibility of affiliation of Pakistan (Yergin, 2020).

8.5. Balancing strategies: hedging, diversification, and multi-vector diplomacy

Hedging presents a cost-effective way in which Pakistan can remain strategically free and take advantage of the many partners. Hedging is identified to mean building parallel relationship with different actors-in the form of investing in Chinese infrastructure, exploring the American technology projects, and introducing European or Gulf capital into the down stream processing- in such a manner that none of the relationships is dominant (Friedberg, 2011).In practice, this will entail clear procurement procedures, standardized contract forms, and sunset provisions that restrict long-run lock-ins. These prevent negotiating leverage and limit susceptibility to one-party leverage. Economics and the diversification of partners as well as the diversification of economic activities are also significant.

Pakistan can earn more at home and lessen the significance of a single export market by fostering local beneficiation, supporting the development of public-private relationships, and creating sovereign or stabilization funds to control the revenues of resources (Kaplinsky and Morris, 2016). Participation in multilateral development banks and international programs on critical-mineral governance (e.g., EITI-type transparency systems) may also bring in a more diverse range of investors and other governance best practices that can raise the credibility of a project. Multi-vector diplomacy is utilized as a supplement to economic measures to entrench Pakistan in various security and economic frameworks that cushion the external pressures.

It can be achieved by participating actively in regional forums, having bilateral relations with the U.S., China, and other partners at the same time, and communicating publicly on a neutral investment policy so that Pakistan can be projected as a reliable and non-aligned partner. The diplomacy must be supported by domestic institutional reforms—transparent licensing, environmental regulations, and community-benefit models—which can make Pakistan a location to invest in and discuss. Hedging, diversification, and multi-vector diplomacy have together given the world a menu of actions to maintain sovereignty and exploit the strategic interests of foreign powers.

7. Recommendations

Based on above discussion and analysis the following recommendations be considered.

Strengthening Governance and Regulatory Frameworks

To curb corruption, Pakistan needs to deal with governance shortfalls in the mineral sector by ensuring transparent licensing, regulatory autonomy, and digitalizing royalty collection. Investor confidence can be boosted by adopting global best practices such as the Extractive Industries Transparency Initiative (EITI), and the levels of revenue will be directed to other areas of sustainable development.

Diversifying Partnerships and Avoiding Overdependence

China-Pakistan Economic Corridor (CPEC) is one of the most critical elements of the Pakistan development strategy, there are the strategic risks of a one-sided dependence on a particular partner. Pakistan ought to thus aim at expanding and diversifying its alliances through getting more involved in the United States, the European Union, Japan, South Korea and the Gulf states.

Promoting Value Addition and Industrial Upgrading

Exporting raw minerals is not very fruitful, but by building refining and beneficiation capacity, it is possible to integrate Pakistan into the global value chains. Pakistan can connect its mineral resources with the wider industrial objectives of renewable energy, electric mobility, and digital industries by investing in refining copper, lithium, and rare earths, which will help it to secure economic transformation and technological modernization.

Leveraging Regional Connectivity for Geoeconomic Advantage

The geographic location of Pakistan can enable it to become a connector between South, Central and West Asia. By using CPEC and its cooperation with Central Asian countries, Pakistan will be able to transform Gwadar into a mineral export center and increase its involvement in multilateral organizations such as SCO and ECO, which will strengthen its leadership in the regional trade and energy complex.

Strategic Vision for a Multipolar World

The mineral policy in Pakistan should be informed by a long-term vision to consider the critical minerals as instruments of economic independence and power politics. Through not taking sides in the U.S-China competition, Pakistan can become a dependable ally to various powers, making mineral resources a source of strength, independence, and international significance in a multipolar world.

Investing in Research, Skills, and Technology Transfer

Competitiveness requires the development of human capital and technological capacity. Pakistan needs to enhance the academic-industrial partnership, vocational education in the field of mining and metallurgy, and facilitate the joint ventures which will lead to the transfer of the technology, so that the nation becomes self-sufficient and no longer relies on foreign influence.

Prioritizing Security and Stability

The concept of sustainable development of minerals needs to deal with the threat of insurgency, particularly in Balochistan. Instead of a purely militarized approach to security, Pakistan needs to implement a hybrid approach of protecting infrastructure, dialogue, community policing and creation of local jobs. Making local stakeholders feel that they own projects will minimize the resistance and protect long-term investment.

Diplomatic Balancing and Global Partnerships

Pakistan must carefully manage its engagement with both Washington and Beijing, leveraging competition without alienating either. Transparent agreements, adherence to national priorities, and outreach to regional and global actors can strengthen autonomy while attracting sustainable investment, allowing Pakistan to navigate the "New Great Game" with strategic flexibility.

8. Conclusion

The geopolitics of critical minerals has placed Pakistan at the center of a rapidly evolving global contest where resource security, great power competition, and internal stability converge. The country's mineral wealth—particularly in copper, lithium, gold, and rare earth elements—offers a historic opportunity to reposition itself as a pivotal actor in the twenty-first century. However, as this paper has demonstrated, these opportunities cannot be discussed without serious challenges. The 2025 U.S. investment transaction is an indication of a new era in the Washington policy of diversifying the supply chains and leveraging against the domination of China, and in the process exerting another influence in South Asia. In the case of Pakistan, this has both material advantages in terms of revenue, industrial development and global integration and serious risks of over dependence, mismanagement of governance, and asymmetric vulnerability.

The study also confirms that Pakistan does not merely have a passive role in the U.S.-China rivalry, but it is structurally confined. New Great Game's mineral politics leave Pakistan in a crossroad: it has to juggle between rival alignments without losing strategic independence. Although Pakistan must engage with both Washington and Beijing, the true key to the future of Pakistan is its capacity to develop a sovereign, rule-based mineral governance architecture that cannot be dominated by the elites, insurgent spoilers, or power brokers. Institutional reform, local empowerment and multilateralizing partnerships in order to decrease reliance on any given bloc are only possible in order to achieve strategic autonomy.

In essence, the future of Pakistan in the U.S.–China rivalry will not be determined solely by great powers but by the country's own capacity to manage its mineral wealth wisely, inclusively, and strategically. Critical minerals provide a window of opportunity, but whether this becomes a driver of national strength or a new fault line of vulnerability will depend on Pakistan's political will, institutional reforms, and ability to strike a balance in the emerging global order.

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