

ANALYSIS OF THE STRATEGIC COUPLING OF CHINA'S MINING INVESTMENT IN UZBEKISTAN UNDER THE BELT AND ROAD INITIATIVE (BRI)

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Abstract: As the Belt and Road Initiative (BRI) progresses into a high-quality development phase, transitioning from broad-brush concepts to detailed, actionable blueprints, production capacity cooperation between China and resource-rich Central Asian countries has deepened significantly. This paper focuses on China's mining investment in Uzbekistan, systematically exploring the internal logic behind the rapid deepening of bilateral cooperation from the theoretical perspective of strategic coupling. The study finds that Sino-Uzbek mining cooperation represents a two-way convergence of strategic needs. On one hand, China faces structural challenges in securing critical mineral resources and the need to construct overland strategic pivots for the BRI. On the other hand, Uzbekistan is undergoing a strategic transformation period centered on "resource-based national development," urgently needing foreign investment to overcome long-standing bottlenecks in its mining sector, including weak infrastructure, outdated technology, and capital shortages. By analyzing the deep alignment between the two countries across three dimensions resource endowment, industrial development, and institutional transformation and examining the institutionalization process since the Samarkand Summit in 2022, this paper reveals the evolutionary path of Sino-Uzbek mining cooperation from "point-to-point trade" to "strategic coupling." The research indicates that the strategic coupling formed based on complementary needs is not only the driving force behind deepening bilateral cooperation but also a prerequisite for understanding the profound global impact of Chinese investment. This study provides a new explanatory framework for the economic logic of South-South cooperation under the Belt and Road Initiative.

Keywords: Belt and Road Initiative, Strategic Coupling, Resource Security; Uzbekistan, Mining Investment, South-South Cooperation

АНАЛИЗ СТРАТЕГИЧЕСКОЙ СВЯЗКИ ИНВЕСТИЦИЙ КИТАЯ В ГОРНОДОБЫВАЮЩУЮ ОТРАСЛЬ УЗБЕКИСТАНА В РАМКАХ ИНИЦИАТИВЫ «ОДИН ПОЯС - ОДИН ПУТЬ» (BRI)

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Аннотация: По мере того как инициатива «Один пояс - один путь» (BRI) переходит к этапу качественного развития, трансформируясь от общих концепций к детализированным и практически реализуемым стратегиям, сотрудничество в сфере производственных мощностей между Китаем и ресурсно обеспеченными странами Центральной Азии значительно углубляется. В данной статье основное внимание уделяется инвестициям Китая в горнодобывающую отрасль Узбекистана, а также системному анализу внутренней логики быстрого углубления двустороннего сотрудничества с теоретической точки зрения стратегической связки. Исследование показывает, что китайско-узбекское сотрудничество в горнодобывающей сфере представляет собой двустороннюю конвергенцию стратегических интересов. С одной стороны, Китай сталкивается со структурными вызовами в обеспечении критически важных минеральных ресурсов и необходимостью формирования сухопутных стратегических опор в рамках BRI. С другой стороны, Узбекистан переживает период стратегической трансформации, ориентированной на «ресурсно-ориентированное национальное развитие», и остро нуждается в иностранных инвестициях для преодоления накопившихся проблем в горнодобывающем секторе, включая слабую инфраструктуру, устаревшие технологии и нехватку капитала. Посредством анализа глубокой согласованности интересов двух стран по трем направлениям - ресурсная база, промышленное развитие и институциональные преобразования - а также рассмотрения процесса институционализации сотрудничества после Самаркандского саммита 2022 года, в статье раскрывается эволюция китайско-узбекского взаимодействия в горнодобывающей сфере от «точечной торговли» к «стратегической связке». Результаты исследования свидетельствуют о том, что стратегическая связка, сформированная на основе взаимодополняющих потребностей, является не только движущей силой углубления двустороннего сотрудничества, но и ключевым условием для понимания глобального

воздействия китайских инвестиций. Данное исследование предлагает новую объяснительную модель экономической логики сотрудничества стран Глобального Юга в рамках инициативы «Один пояс - один путь».

Ключевые слова: Инициатива «Один пояс - один путь», стратегическая связь, ресурсная безопасность, Узбекистан, горнодобывающие инвестиции, сотрудничество Юг–Юг.

1. Analysis of the Research Context

In October 2025, at the 27th China Mining Conference and Exhibition, the Ambassador Extraordinary and Plenipotentiary of the Republic of Uzbekistan to the People’s Republic of China, Farhod Arziev, stated: “The mining sector has become one of the key industries of our economy, a pillar of national industry, and an important source of sustainable development” [1].

This statement should be interpreted not merely as a political and economic declaration reflecting the strategic priorities of Uzbekistan, but also as an empirical indicator of the emerging model of strategic coupling between a resource-rich Central Asian state and the world’s largest industrial economy. In the context of the Belt and Road Initiative (BRI) transitioning to a phase of high-quality development characterized by institutional consolidation and the operationalization of implementation mechanisms China’s direct investment in Uzbekistan’s mining sector acquires the status of a system-forming factor in the transformation of the Eurasian resource landscape.

From a doctrinal perspective, the present research proceeds from the hypothesis that the deepening of Sino-Uzbek cooperation in the mining sector is not incidental, but rather reflects a structurally conditioned convergence of economic interests, institutional reforms, and geopolitical strategies.

1.1.1 Transformation of the Global Mining Investment Landscape and the Strategic Evolution of the BRI

Since the launch of the BRI in 2013, there has been a sustained increase in Chinese investment in the mining sectors of participating countries. According to data from the Griffith Asia Institute, overseas mining investment under the BRI framework reached USD 21.4 billion in 2024, marking a historical peak and accounting for 17.6% of total annual investment [2].

This dynamic not only demonstrates the growing engagement of Chinese enterprises in the global resource market but also reflects a structural transformation in

the architecture of global investment flows. Traditionally, global mining capital has been institutionally concentrated in the financial centers of maritime economies—Toronto, London, New York, and Sydney while resource logistics have predominantly relied on maritime transport corridors.

However, under the evolving BRI framework, an alternative configuration is emerging, wherein overland economic corridors function as a complementary component of global resource infrastructure. This transformation signifies a shift from a unipolar maritime-centric system toward a more diversified and spatially distributed model of resource circulation.

As noted by Huang Yiling, the transition of the BRI to a high-quality development phase necessitates the diversification of risk management mechanisms in China's energy and resource investments in Central Asia [3]. Similarly, Long Xiaobao emphasizes that the internationalization of Chinese enterprises under the BRI follows a progressive trajectory “from points to areas, and from shallow to deep integration,” with mining investment occupying a particularly prominent position [4].

Thus, the transformation of the investment landscape reflects not only the outward expansion of Chinese economic actors but also a broader reconfiguration of global resource allocation patterns.

Within this evolving framework, the Republic of Uzbekistan emerges as a strategically significant node. Possessing substantial mineral resource endowments and a favorable geoeconomic position, Uzbekistan ranks among the top ten countries globally in terms of mineral resource potential. Its territory contains deposits of more than 30 types of minerals, including strategically important resources such as gold, uranium, copper, and silver, as well as lithium, tungsten, molybdenum, cobalt, nickel, and graphite [5].

These resources constitute not only the material basis of Uzbekistan's national economic development but also critical inputs for the global energy transition and the advancement of green technologies. The increasing demand for strategic minerals, driven by the decarbonization of the global economy, elevates resource security to a central priority in national development strategies.

According to analytical reports by China Minmetals Securities, Central Asia and Uzbekistan in particular possesses a high concentration of globally significant metallic resources. Within the BRI framework, the region is increasingly emerging as a new focal point for international mining investment. Furthermore, research conducted by the China Geological Survey indicates geological similarities between the Central

Asian and Western Chinese metallogenic belts, thereby creating favorable conditions for bilateral cooperation in resource exploration and development [6].

1.1.2 Deepening Sino-Uzbek Strategic Cooperation and the Formation of an Investment Window of Opportunity

A qualitative turning point in Sino-Uzbek mining cooperation occurred during the Samarkand Summit in 2022, when the leaders of China and Uzbekistan signed a bilateral agreement on cooperation in the mining sector. This event can be doctrinally characterized as an institutional trigger, marking the transition to a new stage of bilateral engagement.

As Zhao Shengli observes, the conclusion of this agreement significantly accelerated investment activity by Chinese mining enterprises and reshaped the structure of Uzbekistan's mining market [7]. Subsequently, bilateral relations were elevated to the level of an "all-weather comprehensive strategic partnership," while the introduction of a mutual 30-day visa-free regime created additional legal and organizational conditions for intensifying economic cooperation.

From a geopolitical perspective, Central Asia is widely regarded as a key node in the Eurasian space. Zhu Cheng and Ni Feng emphasize its strategic importance within the broader context of global competition and cooperation among major powers [8]. Luo Yuhui and Hou Weimin, in turn, highlight that the effectiveness of China's outward foreign direct investment under the BRI largely depends on the degree of institutional coordination and legal support [9].

Domestic transformations within Uzbekistan further reinforce the investment environment. Since assuming office, President Shavkat Mirziyoyev has implemented a comprehensive reform agenda aimed at building a "New Uzbekistan" characterized by a competitive economy and a favorable investment climate. Over the past eight years, the country's GDP has doubled, while total foreign investment inflows have exceeded USD 130 billion [10].

Within this reform paradigm, the mining sector has been designated as a strategic priority. State policy is oriented toward the development of integrated value chains for critical materials, including tungsten, lithium, and molybdenum. The revised Subsoil Law, adopted in 2024, establishes principles of transparency, efficiency, and regulatory modernization, including the introduction of a "single-window" mechanism for licensing procedures.

An additional institutional innovation is the establishment of the Uzbekistan Technical Metals Complex (UzTMK) in 2024 as a national operator responsible for the development of critical mineral resources. Its activities encompass the full production cycle from exploration to final product manufacturing and include a portfolio of 109 projects aimed at upgrading the mining industry's value chain [11].

According to a legal review by Yinghe Law Firm, recent legislative reforms have significantly improved Uzbekistan's investment climate. In particular, the updated Law on Investments and Investment Activities introduces international arbitration mechanisms, thereby strengthening legal guarantees for foreign investors [12].

In summary, the interaction of external (global investment shifts, BRI evolution) and internal (institutional reforms, resource strategy) factors creates a coherent institutional and economic framework for the deepening of strategic coupling between Chinese investment and Uzbekistan's national development model in the mining sector. From a theoretical standpoint, this case exemplifies a broader pattern of South–South cooperation, wherein complementary structural needs and coordinated institutional transformations generate sustainable models of transnational economic integration.

2. The Dual Logic of Strategic Drivers

The sustained deepening of China's mining investment in Uzbekistan is обусловлено (is determined by) the structural alignment of the strategic interests of both states. As noted by Zhao Shengli, Chinese investment “has not only improved the production efficiency and technological level of Uzbekistan's mining industry but has also boosted local employment and promoted economic development” [13].

From a theoretical standpoint, the underlying driver of this mutually beneficial interaction lies in the convergence of strategic imperatives and the corresponding institutional adaptation mechanisms of the two countries. Accordingly, this chapter advances the analytical proposition that Sino-Uzbek mining cooperation represents a form of strategic coupling, grounded in complementary economic needs and reinforced through legal and institutional transformation.

To substantiate this proposition, the chapter examines the driving mechanisms of cooperation through two interrelated dimensions: (1) China's resource security constraints and the transformation of its global resource acquisition strategy within the framework of the Belt and Road Initiative (BRI); and (2) Uzbekistan's strategic shift toward a model of resource-based national development. The analysis further traces the evolutionary trajectory of bilateral cooperation from conventional trade relations to a structurally embedded form of strategic interdependence.

2.1 China's Resource Security Dilemma and Strategic Transformation

2.1.1 The Structural Dilemma of Resource Security

China occupies a dominant position in the global mineral resource system as the largest producer, consumer, and trader. Nevertheless, this quantitative dominance is accompanied by a qualitative vulnerability, namely a structural imbalance in the supply of critical mineral resources.

As emphasized by Zhao Shengli, “as the world’s largest consumer of mineral resources, China’s high dependency on overseas resources constitutes a vulnerability in its national resource security” [13]. This observation reveals a dual-layered structural challenge: not only is the overall level of external dependency significantly high, but the geographical concentration of supply sources and the limited diversification of transport routes exacerbate systemic risks.

The case of iron ore illustrates this structural dependency. In 2024, China imported 1.237 billion tons of iron ore, with an external dependency rate consistently exceeding 80%. Moreover, supply is highly concentrated among a limited number of transnational mining corporations in Australia and Brazil (Rio Tinto, BHP, Vale, Fortescue) [14]. Such concentration undermines China’s bargaining position in global commodity markets and increases exposure to price volatility and supply disruptions. As noted by Li Jun, the monopolistic structure of supply enables external actors to exert significant influence over pricing mechanisms, thereby constraining the profitability of domestic industries [15].

The ongoing global energy transition further intensifies these challenges. Strategic minerals—including lithium, cobalt, nickel, and copper - constitute the essential raw material base for green technologies such as electric vehicles, energy storage systems, and renewable energy generation. Demand for these resources is projected to grow exponentially. According to the International Energy Agency, by 2040, demand for lithium is expected to increase more than fortyfold, while demand for cobalt and nickel will increase more than twentyfold [16].

At the same time, the global distribution of these resources remains highly uneven: the Democratic Republic of the Congo accounts for over 70% of global cobalt production, Indonesia for more than 30% of nickel supply, and Chile and Australia for over 60% of lithium production [17]. This concentration, combined with geopolitical tensions and policy volatility in resource-rich countries, generates substantial risks for supply chain stability.

A report by China Minmetals Securities further highlights that the uneven spatial distribution of critical minerals, coupled with supply chain fragility, poses systemic risks to the development of China's new energy sector [15]. In the context of intensifying geopolitical competition, particularly between major powers, the potential "weaponization" of resource supply chains has emerged as a critical concern, necessitating a strategic recalibration of China's resource acquisition model.

2.1.2 Institutional Transformation of Resource Acquisition Strategy

The aforementioned structural constraints have catalyzed a profound transformation in China's resource acquisition strategy, encompassing legal, institutional, and industrial policy dimensions.

At the legislative level, the revised Mineral Resources Law, which entered into force in July 2025, explicitly incorporates "ensuring national mineral resource security" as a core legislative objective. This development represents a milestone in the evolution of China's mineral resource governance framework. The law establishes a hybrid governance model characterized by market-based mechanisms, state guidance, enterprise-led implementation, and an overarching emphasis on security considerations [18].

At the level of industrial policy, the "Implementation Plan for the High-Quality Development of the Gold Industry (2025–2027)" sets quantitative targets for expanding resource reserves and explicitly encourages enterprises to engage in global resource allocation through outward investment. Complementarily, the state-led "Cornerstone Plan" aims to increase overseas equity-based mineral production capacity by 220 million tons, thereby fostering a diversified and resilient supply system [19].

Most significantly, China's strategy is undergoing a paradigmatic shift from reliance on spot market transactions toward equity-based investment and production capacity cooperation. The underlying logic of this transformation lies in the internalization of external resource supply through ownership or control of overseas mining assets. This approach enhances supply chain stability, reduces exposure to market volatility, and strengthens long-term resource security.

Empirical data from the Griffith Asia Institute confirms this trend: overseas mining investment under the BRI reached a record USD 21.4 billion in 2024, with a substantial proportion allocated to equity investments [2]. As argued by Long Xiaobao et al., the internationalization of Chinese enterprises is characterized by a transition "from point-based engagement to systemic integration," with equity participation in

the mining sector playing a central role [4]. Huang Yiling further emphasizes that, in the context of high-quality BRI development, equity investment serves as a key instrument for mitigating investment risks and enhancing the resilience of overseas operations [3].

2.1.3 Uzbekistan as a Strategic Pivot

Within this reconfigured strategic framework, Uzbekistan occupies a position of particular significance. Its importance derives not only from its substantial mineral resource base but also from its geostrategic location at the center of the Eurasian continent.

From the perspective of resource endowment, Uzbekistan is among the leading countries globally in uranium production, accounting for approximately 5% of total global output. Its copper reserves exceed 30 million tons, while gold reserves surpass 6,000 tons, ranking fourth worldwide [20].

In addition to these traditional resources, Uzbekistan possesses significant reserves of critical minerals such as lithium, tungsten, molybdenum, cobalt, nickel, and graphite. These resources are of strategic importance for the development of China’s new energy industries and exhibit a high degree of complementarity with China’s resource demand structure.

Beyond its resource potential, Uzbekistan’s geographic position enables it to function as a strategic land-based hub within the BRI framework, facilitating the diversification of transport corridors and reducing dependence on maritime routes. In this sense, Uzbekistan serves not merely as a resource supplier but as a geoeconomic pivot, integrating resource flows with broader regional connectivity initiatives.

As illustrated in Table 2-1, Uzbekistan ranks prominently in global reserves of several critical minerals, thereby reinforcing its role as a key partner in China’s long-term resource security strategy and as an essential element in the formation of a Eurasian resource network.

Table 2-1: Uzbekistan's Main Mineral Resource Reserves and Global Rankings

Mineral	Reserves	Global Rank	Main Uses
Gold	> 6,000 tons	4	Reserve asset, electronics industry
Uranium	139,000 tons	7	Nuclear power generation

Copper	> 30 million tons	10	Power grid construction, electric vehicles
Silver	> 20,000 tons	5	Electronics industry, photovoltaics
Tungsten	Abundant	To be assessed	Cemented carbide

2.1.3 The Strategic Significance of the Republic of Uzbekistan as a Pivotal Node

From a geopolitical perspective, the Republic of Uzbekistan occupies a central position on the Eurasian continent, serving as a natural transport and logistics hub connecting East Asia, South Asia, West Asia, and Europe. The implementation of the China–Kyrgyzstan–Uzbekistan railway project creates the preconditions for transforming the country into a key element of the overland resource corridor within the framework of the Belt and Road Initiative.

The study by Niu Fangqu and Xuan Bingcheng, conducted from the perspective of geo-environmental assessment of transport infrastructure along BRI routes, substantiates that the development of the Central Asian transport corridor is capable of fundamentally reshaping the configuration of resource flows across Eurasia [21]. The completion of this infrastructure project will significantly reduce both the time and cost of transporting raw materials from Central Asia to China, thereby contributing to the mitigation of the so-called “Malacca Dilemma” and enhancing the strategic resilience of mineral resource supply chains.

From the standpoint of political and legal relations, it should be noted that in 2024 bilateral relations between China and Uzbekistan were elevated to the level of an “all-weather comprehensive strategic partnership,” alongside the introduction of a 30-day mutual visa-free regime, which has provided additional institutional guarantees for deepening cooperation.

Scholarly literature emphasizes that Central Asia, as a transit and resource hub of Eurasia, occupies a special place in the system of geopolitical interaction among major powers. In particular, Zhu Cheng and Ni Feng argue that the region simultaneously functions as a space of both strategic competition and cooperation [8]. In this context, the elevation of Sino-Uzbek relations indicates a transition beyond purely trade and economic interaction toward a phase of strategic coordination.

A landmark stage in the institutionalization of cooperation was the signing of agreements in the mining sector during the Samarkand Summit of 2022. As rightly noted by Zhao Shengli, these agreements marked the transition of Sino-Uzbek mining

cooperation from the project level to the strategic level [7]. This assessment underscores the decisive role of political and institutional factors in the evolution of bilateral cooperation.

2.2 Strategic Transformation of the Republic of Uzbekistan within the Model of “Resource-Based National Development”

2.2.1 Reforms, Openness, and the Formation of a Mining Strategy

Since 2016, following the rise to power of President Shavkat Mirziyoyev, the Republic of Uzbekistan has been implementing a comprehensive reform program aimed at building a “New Uzbekistan” characterized by a stable economy, a competitive industrial sector, and a favorable investment climate. These transformations encompass political, economic, and legal spheres and are unprecedented in both scale and depth within Central Asia.

During this period, the country’s gross domestic product has doubled, while total attracted foreign investment has exceeded USD 130 billion [10].

Within the framework of these reforms, the mining sector has been institutionally established as one of the key strategic sectors of the national economy. As noted by Zhao Shengli, despite significant resource potential, the development of the sector had long been constrained by structural factors, including underdeveloped infrastructure, technological backwardness, and capital shortages [13].

The adoption of a “resource-based national development” model is driven by a dual logic: on the one hand, the presence of abundant natural resources that form a competitive advantage; on the other hand, the high multiplier effect of the mining sector, which is capable of serving as a driver of industrialization.

State policy is aimed at transitioning from a raw-material export model to the creation of a full value-added chain based on the principle “extraction – processing – market.” A significant institutional step in this direction was the establishment in 2024 of the Uzbekistan Technological Metals Complex (UzTMK), functioning as a national operator of critical mineral resources.

According to research by Wang Ke, this structure covers the entire production cycle—from geological exploration to final product manufacturing and manages 109 projects, ensuring systemic modernization of the sector [11]. Thus, UzTMK represents not merely an economic entity but also an instrument of state industrial policy aimed at resource integration and value addition.

2.2.2 Resource Base and Development Potential

The Republic of Uzbekistan possesses a substantial and diversified mineral resource base. According to the State Register of Mineral Reserves, more than 2,537 deposits have been identified across the country, encompassing a wide range of resources from radioactive and non-ferrous metals to rare and precious elements [22].

Gold represents one of the country's key competitive advantages. According to the World Gold Council, in June 2025 global central banks increased their gold reserves by 22 tons, with Uzbekistan being the largest purchaser, adding 9 tons [23].

Among the largest deposits is the Muruntau gold mine, one of the world's largest open-pit gold mines, with reserves exceeding 4,500 tons and annual production surpassing 60 tons.

Uranium resources are also significant: Uzbekistan is among the world's leading uranium producers, with deposits primarily located in the Kyzylkum region and suitable for low-cost in-situ leaching extraction methods [24].

The copper resource base is concentrated, inter alia, in the Almalyk mining and metallurgical complex, where copper reserves exceed 30 million tons and are associated with valuable by-products such as gold, silver, and molybdenum, enhancing overall investment attractiveness [25].

In addition, the country possesses considerable reserves of strategically important minerals including lithium, tungsten, molybdenum, cobalt, nickel, and graphite the importance of which is steadily increasing in the context of the global energy transition [26].

2.2.3 Institutional Innovation and Improvement of the Investment Climate

In order to implement its industrialization strategy and enhance investment attractiveness, the Republic of Uzbekistan has undertaken large-scale institutional reforms aimed at creating a transparent and predictable legal environment.

As emphasized by Zhao Shengli, the reforms adopted in recent years are unparalleled in Central Asia, while the updated versions of the Law "On Subsoil" and the Law "On Investments and Investment Activities" provide a high level of legal certainty for foreign investors [13].

The new version of the Law "On Subsoil," adopted in 2024, establishes a modern regulatory framework based on the principles of transparency and efficiency [27]. In particular, it introduces a "single-window" mechanism for licensing procedures,

clearly defines the rights and obligations of subsoil users, and enables the transferability of subsoil use rights in accordance with international standards.

In the field of investment regulation, particular importance is attached to the new version of the Law “On Investments and Investment Activities,” approved by the Senate in January 2025. According to legal analysis, this law provides for the possibility of submitting investment disputes to international arbitration, incorporates internationally recognized standards such as “fair and equitable treatment” and “full protection and security,” and reduces the minimum equity participation requirement for foreign investors from 15% to 10% [12].

Institutional reforms also include the establishment of a specialized public authority the Ministry of Mining and Geology responsible for coordinating activities in the field of mineral exploration and development. Simultaneously, national platforms such as UzTMK are being developed to consolidate resources and strengthen the state’s bargaining position in cooperation with foreign investors.

Table 2-2: Progress of Reforms in Uzbekistan's Mining Investment Environmen

Time	Reform Measure	Main Content	Impact on Investors
2024	New Version of Subsoil Law	Single window, simplified licensing, clarified rights	Reduces institutional costs, enhances predictability
2025	New Version of Law on Investments and Investment Activities	International arbitration, fair treatment, reduced equity ratio	Strengthens legal protection, improves investment facilitation
2024	Establishment of UzTMK	Full-chain integration, national-level platform	Provides unified point of contact, reduces coordination costs
2023	Establishment of Ministry of Mining and Geology	Coordinated management, professional supervision	Standardizes management, improves efficiency

A World Bank report indicates that Uzbekistan's reform measures have significantly improved its business environment, particularly in the mining sector, where increased policy transparency and predictability have attracted attention from more international investors.[29] A report by the Economist Intelligence Unit also

affirms the effectiveness of Uzbekistan's reforms, suggesting it is becoming one of the most attractive investment destinations in Central Asia.[30]

3. From Bilateral Cooperation to Strategic Coupling

The strategic coupling of Sino-Uzbek mining cooperation was not achieved overnight but underwent an evolutionary process from shallow to deep, from points to areas. Research by Zhao Shengli indicates that this process was a dynamic one of mutual recognition and adaptation of the strategic needs of both sides.[7] This chapter will systematically analyze how Sino-Uzbek mining cooperation gradually evolved from general bilateral economic and trade exchanges into a deeply coupled relationship of strategic significance, examining it from three levels: the division of evolutionary stages, multi-dimensional strategic adaptation, and institutionalized guarantee mechanisms.

3.1 The Evolutionary Path of Cooperation Stages

Based on differences in cooperation depth and models, Sino-Uzbek mining cooperation can be divided into three stages (Table 3-1). This division reflects not only changes in investment scale but also a structural transformation of cooperation models from simple to complex and from unitary to diverse.

Table 3-1: Stages in the Evolution of Sino-Uzbek Mining Cooperation

Stage	Time frame	Main Characteristics	Investment Entities	Cooperation Model
Trade-Dominated Stage	2000 to 2013	Point-to-point contact, trade-dominated	Medium-sized mining enterprises, research institutions	Technical cooperation + exploration permits
Investment Initiation Stage	2013 to 2022	Investment initiated, projects first	Large SOEs, multinational groups	Equity cooperation + long-term supply
Strategic Coupling Stage	2022 to present	Strategically guided,	SOE consortia, comprehensive groups	Full-chain integration +

		systematic promotion		strategic coordination
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3.1 Evolutionary Stages of Sino-Uzbek Mining Cooperation

3.1.1 Stage One: Trade-Dominated Phase (2000–2013)

During the initial stage, cooperation between China and Uzbekistan in the mining sector was predominantly characterized by primary commodity trade. China imported mineral resources such as copper and uranium from Uzbekistan, while the scale of direct investment remained limited.

As noted by Zhao Shengli, early-stage investments “were mostly concentrated in geological exploration and resource reserve assessment, with investment entities primarily consisting of medium-sized mining enterprises and geological research institutions” [7]. Chinese participation in Uzbekistan’s mining sector was largely confined to equipment exports and engineering contracting, with minimal involvement in equity-based investment.

A representative example of cooperation during this period was the scientific collaboration between the Xi’an Center of the China Geological Survey and the Institute of Mineral Resources of Uzbekistan. According to reports from the China Geological Survey, both parties conducted joint exploration activities, including sample analysis and geophysical surveys, enabling preliminary assessments of mineral potential. This cooperation not only reduced investment risks but also facilitated the accumulation of technical trust between the parties [31].

Although the overall investment scale remained modest, such forms of scientific collaboration provided Chinese enterprises with essential “first-hand experience” for subsequent entry into the Uzbek mining market. Research by Ma Qiao further confirms that during this stage, bilateral cooperation was predominantly trade-oriented, with limited levels of direct investment and an absence of large-scale capital engagement [32].

Thus, this phase can be characterized as “point-to-point interaction with trade dominance,” lacking systemic industrial integration.

3.1.2 Stage Two: Investment Initiation Phase (2013–2022)

Following the launch of the Belt and Road Initiative, Sino-Uzbek mining cooperation entered a qualitatively new phase marked by the gradual expansion of investment activities.

According to Zhao Shengli, during this period, “large state-owned enterprises and multinational mining groups began to dominate investment activities. The scope of cooperation expanded to include the extraction and preliminary processing of copper, uranium, potash, and rare metals, while investment volumes increased significantly, forming a pattern of multi-project development” [7].

Data from the Griffith Asia Institute indicates that overseas mining investment under the BRI framework experienced rapid growth during this stage [2]. In Uzbekistan, Chinese enterprises became actively involved in large-scale mining projects, including uranium development initiatives associated with China National Uranium Corporation and copper projects involving Zijin Mining Group. These projects typically adopted equity-based cooperation models, with joint ventures established to distribute risks and benefits between partners.

Research by Xu Xiaotong et al. demonstrates that Chinese mining investment during this phase evolved “from points to areas, and from shallow to deep,” gradually expanding from isolated pilot projects to a broader portfolio of mining areas and mineral categories [24].

Nevertheless, investment remained spatially fragmented and had not yet formed a coherent systemic structure. This stage is therefore best described as “investment initiation with project prioritization,” laying the groundwork for deeper and more integrated cooperation.

3.1.3 Stage Three: Strategic Coupling Phase (2022–present)

A decisive turning point in Sino-Uzbek mining cooperation occurred during the Samarkand Summit 2022, when the leaders of the two countries signed key agreements in the mining sector, marking the transition toward a systemic and strategic phase of cooperation.

As emphasized by Zhao Shengli, this event “significantly reshaped the landscape of the country’s mining market” [7]. Uzbekistan has explicitly identified China as its “most important partner” in the sector. According to statements by Uzbek Ambassador to China Farhod Arziev at the 2025 China Mining Conference, more than 4,500 Chinese enterprises are currently operating in Uzbekistan across sectors including mining, infrastructure, and industrial production [1].

In the gold sector alone, 26 large-scale deposits were auctioned in September 2025, with the majority acquired by Chinese companies [33].

Cooperation at this stage is characterized by “strategic guidance and systematic promotion,” with mining collaboration elevated from the level of individual projects to that of national strategic coordination. Research by Luo Yuhui and Hou Weimin indicates that within the BRI framework, Chinese enterprises’ “going global” strategy is shifting from a project-oriented approach toward a comprehensive strategic layout [9], with Sino-Uzbek mining cooperation representing a typical manifestation of this transformation.

From a geopolitical perspective, Zhu Chenge and Ni Feng highlight that Central Asia occupies a pivotal position in the strategic interactions of major powers, and the upgrading of Sino-Uzbek relations reflects deeper strategic coordination in response to global systemic changes [8].

Zhao Shengli further underscores that the Samarkand agreements not only accelerated Chinese investment inflows but also catalyzed a structural transformation of Uzbekistan’s mining sector from a relatively closed and fragmented system toward an open and integrated market structure [7].

3.2 Multi-Dimensional Strategic Adaptation

The strategic coupling of Sino-Uzbek mining cooperation has been achieved through a set of interrelated mechanisms operating at multiple levels. These include macro-level strategic alignment, meso-level industrial complementarity, and micro-level interactions among economic actors.

Such multi-dimensional adaptation has enabled bilateral cooperation to evolve beyond simple resource exchange and to form a deeply integrated and symbiotic relationship.

3.2.1 Complementarity of Resource Endowment and Industrial Capacity

The complementarity between Uzbekistan’s resource endowment and China’s industrial capacity constitutes the fundamental basis for strategic coupling.

According to Zhao Shengli, “the entry of Chinese capital into Uzbekistan’s mining industry is not merely a process of capital injection; alongside capital flows, it introduces technological diffusion, management expertise, and optimization of production processes” [13].

As reflected in Table 3-2, the two countries demonstrate significant complementarity across the entire mining value chain. China possesses advanced capabilities in geological exploration, extraction technologies, beneficiation and

processing, smelting and refining, as well as equipment manufacturing precisely the areas where Uzbekistan faces structural constraints.

Research by He Zixin et al. identifies key challenges within Uzbekistan’s mining sector, including “low levels of geological exploration and shortage of skilled personnel,” “outdated equipment and technological backwardness,” and “limited processing capacity with low recovery rates” [26]. These deficiencies create a structural niche that Chinese enterprises are well-positioned to address, thereby reinforcing the logic of mutually beneficial cooperation.

Table 3-2: Analysis of Complementarity in the Sino-Uzbek Mining Industry Chain

Industry Chain Link	China's Advantage	Uzbekistan's Need	Degree of Complementarity
Geological Exploration	Advanced technology, rich experience	Low exploration degree, lack of talent	Highly Complementary
Mining	Equipment manufacturing, engineering capability	Outdated equipment, backward technology	Highly Complementary
Beneficiation & Processing	Process technology, complete equipment	Weak processing capacity, low recovery rate	Highly Complementary
Smelting & Refining	Excess capacity, mature technology	Missing industry chain links	Highly Complementary
Equipment Manufacturing	Complete system, good value for money	Relies on imports	Highly Complementary

The practice of China Coal Technology & Engineering Group (CCTEG) in Uzbekistan is a typical case of industrial complementarity. According to reports, CCTEG undertook the equipment transformation project for the Angren open-pit coal mine and the Shargun underground coal mine workforce, significantly improving the safety and production efficiency of local mines. It was awarded the "Outstanding Contribution Award for Sino-Uzbek Friendship," becoming a benchmark case of production capacity cooperation between China and Uzbekistan.[34] This case demonstrates that the technology, equipment, and management experience of Chinese

enterprises can effectively respond to the actual needs of Uzbekistan's mining development.

3.2.2 Alignment of Institutional Reform and Investment Demand

The alignment of institutional reform and investment demand is the guarantee of strategic coupling. Uzbekistan's legal reforms in recent years directly respond to Chinese enterprises' demand for a law-based business environment.

Analyzing Uzbekistan's mining investment environment, Zhao Shengli points out: "The intensity of Uzbekistan's reforms in recent years is unparalleled in Central Asia. The introduction of the new versions of the Subsoil Law and the Law on Investments and Investment Activities provides a more stable and transparent legal environment for foreign investors." [13]

In October 2024, Uzbekistan officially adopted the new version of the Subsoil Law. According to reports from the official website of Uzbekistan's Ministry of Mining and Geology, the law's drafting process studied the experiences of countries such as Australia, Canada, the USA, Russia, Turkey, South Africa, Indonesia, Azerbaijan, and Kazakhstan, aiming to "create mutually beneficial conditions for foreign investors and the state." [35] The new law established a one-stop single window, simplifying the application process for mining licenses and the procedure for transferring subsoil use rights, promoting the alignment of domestic standards with international norms.

A legal guide by Jincheng Tongda & Neal Law Firm further points out that the new version of the Law on Investments and Investment Activities explicitly allows investors to submit disputes to international arbitration, incorporates common clauses found in international investment agreements such as "fair and equitable treatment" and "full protection and security," and reduces the equity participation requirement for foreign investors in enterprises from 15% to 10%. [36] These reforms directly respond to Chinese enterprises' demand for a law-based business environment, removing institutional obstacles for deeper cooperation.

World Bank reports also affirm the effectiveness of Uzbekistan's reforms, suggesting it is becoming one of the most attractive investment destinations in Central Asia. [29]

The resonance of development strategies serves as the spiritual bond of strategic coupling. China's Belt and Road Initiative and Uzbekistan's "New Uzbekistan" strategy exhibit a high degree of conceptual alignment.

Uzbek Ambassador to China Farhod Arziev explicitly stated at the 2025 China Mining Conference that under the leadership of President Mirziyoyev, Uzbekistan is committed to building a "New Uzbekistan with a strong economy, competitive industry, and favorable investment environment." [1] This strategic goal is highly consistent with the principles of "extensive consultation, joint contribution, and shared benefits" advocated by the Belt and Road Initiative.

The cooperation between China National Gold Group and Uzbekistan is a typical case of conceptual resonance. In June 2025, when China National Gold Group General Manager Yin Changbo met with Uzbek Deputy Prime Minister Khojaev, the two sides reached a consensus on establishing a strategic cooperation mechanism. Khojaev expressed hope that China National Gold Group would "fully leverage its advantages in technology, talent, and the entire industry chain, increase investment layout in Uzbekistan," and promote more practical outcomes in bilateral cooperation. [37] Such high-level exchanges and policy coordination provide sustained momentum for strategic coupling.

3.3 Institutionalized Guarantees of Strategic Coupling

Strategic coupling is not only reflected at the macro-policy level but also implemented in specific institutional arrangements. Research by Zhao Shengli reveals the multi-dimensional characteristics of this institutionalization process. [1] These institutional arrangements provide stable expectations and risk buffer mechanisms for the continuous deepening of bilateral cooperation.

The long-term collaboration between the two countries within multilateral frameworks such as the Shanghai Cooperation Organization, coupled with policy coordination and strategic consensus accumulated through high-level exchanges, has laid a solid institutional foundation for mining cooperation.

According to a compilation by Jincheng Tongda & Neal Law Firm, major intergovernmental cooperation agreements signed between China and Uzbekistan in recent years include: the Agreement on the Establishment of an Intergovernmental Cooperation Committee (2011), the Agreement on the Promotion and Protection of Investments (2011), and the Development Plan for Economic, Trade, and Investment Cooperation (2022-2026) (2022). [36] Cooperation agreements signed between government departments include: the Memorandum of Understanding on Promoting Green Field Investment Cooperation (2022) and the Memorandum of Understanding on Strengthening Cooperation in the Field of Mineral Resources (2022) signed between China's Ministry of Commerce and the former Uzbek Ministry of Investment and

Foreign Trade; and the Memorandum of Understanding on Strengthening Economic and Trade Cooperation (2023), the Memorandum of Understanding on Cooperation in the Field of Digital Trade (2023), and the Memorandum of Understanding on Promoting Cooperation in Infrastructure and Engineering Construction Development (2023) signed with the Uzbek Ministry of Investment, Industry, and Trade.[36]

In October 2025, Cheng Liwei, President of the China Mining Association, held talks with Uzbek Ambassador Farhod Arziev. The two sides reached a consensus on Uzbekistan's participation in the China Mining Conference and deepening cooperation in the mining sector. Cheng emphasized "always adhering to the cooperation principle of win-win cooperation, drawing on each other's strengths, and mutual promotion," expressing willingness to carry out pragmatic cooperation with Uzbekistan across the entire mining industry chain.[1] This kind of exchange mechanism at the industry association level provides a useful supplement to intergovernmental cooperation.

Uzbekistan has gradually improved its mining legal system at the legislative level, providing property rights protection and tax incentives for the entry of foreign capital. Relevant regulations clarify the rights and obligations of foreign-invested enterprises in areas such as mining rights applications, environmental assessments, and labor employment, helping to reduce institutional friction.

According to the introduction by the Uzbek Ambassador, the new version of the Subsoil Law establishes a one-stop single window, simplifying the application process for mining licenses and the procedure for transferring subsoil use rights. Regarding specific incentives, "During the geological exploration stage, investors can enjoy reductions in corporate income tax, land tax, and property tax. At the same time, imported equipment and materials are also exempt from customs duties."⁹¹ Furthermore, Uzbekistan is promoting a "competitive royalty rate for mineral resources use" and places high importance on international ESG standards. VAT on mining has been reduced from 20% to 15%, and resource taxes have also been lowered concurrently. Investors can enjoy a ten-year exemption from lease tax across the entire industry chain.[39]

An annual review report by the American Bar Association also notes that in 2024, Uzbekistan continued its efforts to attract foreign direct investment, passing several new laws related to privatization, capital markets, and subsoil use, providing a more favorable legal environment for foreign investors.[31]

The advanced technology and management standards introduced by Chinese enterprises are promoting the modernization of Uzbekistan's mining standards system.

Zhao Shengli points out that Chinese enterprises, "by introducing advanced mining and beneficiation technologies, establishing training mechanisms, and raising environmental standards, have propelled the local mining industry to achieve a leap in production efficiency and sustainable development." [7]

In terms of technical standard alignment, the Xi'an Center of China Geological Survey established a scientific research cooperation mechanism with the Institute of Mineral Resources of Uzbekistan, jointly training personnel and unifying geological mapping standards, providing a scientific basis for Chinese enterprises to select priority investment areas. [31]

Regarding environmental standards, Uzbekistan places high importance on international ESG standards. According to officials from the Uzbek Embassy in China, the country is promoting the alignment of domestic standards with international norms, particularly in environmental protection and sustainable development. [1]

In terms of industry standards, the establishment of the UzTMK reflects the country's strategic intent to modernize its mining standards system and align it with international practices. As representatives of UzTMK have stated, the organization's operations cover the entire chain from exploration and beneficiation to end-product manufacturing, managing 109 projects with the aim of promoting systematic upgrades in the mining value chain. [40]

Strategic coupling is also reflected in the innovation of investment and financing mechanisms. Chinese enterprises' investments often adopt a comprehensive "Resources + Infrastructure + Financing" model, packaging mining projects with supporting infrastructure to form systematic development plans.

Research by Wang Lei and Su Hao analyzes the model innovation in China-Central Asia mining cooperation from the perspective of international production capacity cooperation, pointing out that the "Resources for Projects" model achieves mutual benefit and win-win results while respecting the host country's sovereignty. [41] This model uses resource development revenues as credit basis, bundling financing with infrastructure construction and industrial development, providing development funds while respecting the host country's policy autonomy.

The participation of financial institutions such as the Silk Road Fund and the Asian Infrastructure Investment Bank also provides diversified financial support for Sino-Uzbek mining cooperation. Models like "Resources for Loans" and project financing offered by these institutions effectively lower the capital threshold and financing costs for large-scale projects.

3.4 Structural Characteristics of Strategic Coupling

The strategic coupling of Sino-Uzbek mining cooperation exhibits the following structural characteristics:

First, Multi-level Coupling. Strategic coupling is reflected not only at the central government level but also at multiple levels including local governments, enterprises, and research institutions. The scientific research cooperation between the Xi'an Center of China Geological Survey and the Institute of Mineral Resources of Uzbekistan is a typical case of cooperation at the local and research levels. Additionally, provinces like Xinjiang and Shaanxi, which are geographically close to Uzbekistan, are also actively participating in mining cooperation, forming a multi-level cooperation pattern with central and local linkage, and government-market synergy.

Second, Comprehensive Integration. Strategic coupling has transcended pure resource development, extending to fields such as infrastructure construction, financial cooperation, and talent cultivation. As mentioned, Chinese enterprises' investments often adopt a comprehensive "Resources + Infrastructure + Financing" model, packaging mining projects with supporting infrastructure to form systematic development plans. This comprehensive integration makes mining cooperation an engine driving the overall deepening of bilateral relations.

Third, Dynamic Adaptation. Strategic coupling is a dynamic evolutionary process. Both sides continuously adjust strategies and improve institutions based on cooperation practices. Research by Zhang Lei analyzes the social risk prevention and control of China's mining investment in Central Asia from the perspective of resource nationalism, emphasizing that enterprises need to continuously adapt their business strategies based on local feedback.[42] Chinese enterprises have gradually shifted from initial individual efforts to cooperation with national platforms like UzTMK; Uzbekistan has shifted from passively providing resources to actively planning industrial development. This dynamic adaptation allows cooperation to continuously deepen and resilience to strengthen.

Fourth, Risk Sharing. Strategic coupling implies that both sides face and mitigate risks together. Research by Li Qiang and Zhang Hua analyzes the risks and responses of mining investment in countries along the BRI from the perspective of institutional complexity, pointing out that the risk-sharing mechanisms formed in Sino-Uzbek cooperation effectively reduce investment uncertainty.[43] Whether dealing with policy change risks, market volatility risks, or community relations risks, both sides

have established communication and coordination mechanisms to jointly seek solutions.

3.5 Research Conclusions and Implications

Through a systematic analysis of the strategic coupling of Sino-Uzbek mining cooperation, this paper draws the following core conclusions:

First, the deepening of Sino-Uzbek mining cooperation is rooted in the profound alignment of the two countries' strategic needs. China's resource security dilemma and Uzbekistan's "resource-based national development" strategy constitute the dual logic of strategic drivers. Research by Zhao Shengli shows that "Chinese investment has not only improved the production efficiency and technological level of Uzbekistan's mining industry but has also boosted local employment and promoted economic development"[13]- the formation of this mutually beneficial situation is precisely the result of strategic coupling. China's need for stable overseas resource supply to ensure national resource security and Uzbekistan's need for capital and technology to maximize resource value and drive industrialization-the mutual recognition of these two strategic needs constitutes the fundamental driving force for cooperation.

Second, Sino-Uzbek mining cooperation has undergone an evolutionary process from trade-dominated to investment initiation to strategic coupling**. This evolutionary process exhibits characteristics of expanding "from points to areas, from shallow to deep": from early technical cooperation and trade exchanges, to project investment after the BRI, to strategic coordination after the Samarkand Summit-the level of cooperation has continuously risen, the fields of cooperation have continuously expanded, and cooperation mechanisms have continuously improved. The 2022 Samarkand Summit is a historic node in this process, marking the elevation of Sino-Uzbek mining cooperation from the project level to the strategic level, evolving from bilateral cooperation into a strategic coupling with global significance.

Third, the strategic coupling of Sino-Uzbek mining cooperation was achieved through multiple mechanisms. The complementarity of resource endowment and industrial capacity, the alignment of institutional reform and investment demand, and the resonance of development strategies and conceptual consensus together constitute the multi-dimensional mechanisms of strategic adaptation. These mechanisms include macro-level strategic alignment, meso-level industrial complementarity, and micro-level interaction between actors, forming a cooperation network covering the entire industry chain and multiple levels.

Fourth, the institutionalized guarantees of strategic coupling are multi-dimensional. The improvement of intergovernmental cooperation mechanisms, mutual legal adaptation, integration of standards systems, and innovation in investment and financing mechanisms jointly provide the institutional foundation for strategic coupling. These institutional arrangements provide stable expectations and risk buffer mechanisms for the continuous deepening of bilateral cooperation, making the cooperation more resilient and sustainable.

Fifth, the strategic coupling of Sino-Uzbek mining cooperation exhibits structural characteristics of multi-level, comprehensive, dynamic, and risk-sharing. These structural characteristics enable cooperation to transcend simple resource transactions and form a deeply coupled symbiotic relationship. Chinese enterprises have gradually shifted from initial individual efforts to cooperation with national platforms like UzTMK. Uzbekistan has shifted from passively providing resources to actively planning industrial development-this dynamic adaptation allows cooperation to continuously deepen and resilience to strengthen.

This study makes the following contributions to existing theory: First, it extends strategic coupling theory to the field of South-South resource cooperation, constructing a theoretical framework applicable to analyzing resource cooperation among emerging economies. Second, it reveals the evolutionary path from strategic need identification to institutional adaptation to deep coupling, providing a new analytical perspective for understanding international cooperation under the BRI framework. Third, through the Sino-Uzbek case, it provides empirical evidence for the economic logic of South-South cooperation under the Belt and Road Initiative.

At the policy level, this study has implications for relevant actors: For Chinese enterprises, attention should be paid to the construction of strategic coupling, combining short-term commercial interests with long-term strategic layout. For Uzbekistan, efforts should continue to improve the legal system, strengthen infrastructure construction, and enhance local capacity building. For the international community, the global effects of Chinese investment should be viewed with an open and inclusive attitude, working towards a fairer, more inclusive, and sustainable global resource governance system through dialogue and cooperation.

This study has several limitations: First, due to data availability constraints, the quantitative measurement of investment scale and economic benefits is not precise enough. Second, the research is primarily based on publicly available literature and policy texts, with insufficient field research and in-depth interviews. Third, the analysis

of the long-term effects and potential risks of strategic coupling needs further deepening. Future research could expand in directions such as multi-country comparative studies, analysis of model diffusion mechanisms, and the impact of the energy transition.

Conclusion

The strategic coupling of Sino-Uzbek mining cooperation is rooted in the profound alignment of the two countries' strategic needs and has undergone an evolutionary process from trade-dominated to investment initiation to strategic coupling. The 2022 Samarkand Summit is a historic node in this process, marking the elevation of Sino-Uzbek mining cooperation from the project level to the strategic level, evolving from bilateral cooperation into a strategic coupling with global significance. This strategic coupling, through multi-dimensional strategic adaptation and multi-level institutionalized guarantees, has laid the institutional foundation for subsequent industrial cooperation and provided political guarantees for the deep embedding of Chinese investment in Uzbekistan's mining market.

From a broader perspective, the strategic coupling of Sino-Uzbek mining cooperation is not only a deepening of bilateral relations but also an important window for observing the trend towards "multi-polarization" in globalization. It demonstrates a new path for emerging economies to participate in global governance and provides a vivid case for understanding the economic logic of South-South cooperation under the Belt and Road Initiative. In the future, whether this strategic coupling can continue to deepen depends on whether both sides can achieve a more delicate balance between commercial interests, technological empowerment, and social responsibility, and whether they can effectively transform the momentum of bilateral cooperation into institutional innovation and development dividends at the regional and even global levels.

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