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The Belt and Road Initiative and Kazakhstan's Economic Modernization: From Transit Hub to Regional Growth Engine

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Abstract

The launch of the Belt and Road Initiative (BRI) by China in 2013 has restructured the geography of the Eurasian economies with massive connectivity and trade projects. Being located at the intersection between the East and West, Kazakhstan is at the center of this network as a transit state and a new industrial player. The paper will discuss the role of infrastructure initiatives in the BRI and specifically the Khorgos Gateway, the Western Europe Western China (WE-WC) Corridor among other investments in logistics has played in the economic modernization and diversification of Kazakhstan. The study employs a secondary research approach and synthesizes the information on scholarly literature, institutional reports, and policy reports to evaluate the impact of the BRI on trade dynamics, industrial capacity, and regional integration. Through the modernization and dependency theories, the study concludes that although BRI improves logistics and the connectivity of the regions, the chauner of developmental advantages of the BRI is unbalanced, since there are governance constraints, external dependencies. The difficulty of Kazakhstan is the conversion of transit benefits into industrial and technological competitiveness in the long term. The paper concludes that the final success of the BRI in Kazakhstan lies in the institutional change, diversification agenda, and strategic independence in the emerging Eurasian economic order.

Keywords: *Belt and Road Initiative, Kazakhstan, economic modernization, logistics, Eurasia, diversification*

1. Introduction

Established in 2013, the Belt and Road Initiative (BRI) has become one of the most ambitious transcontinental growth initiatives of the 21st century. The BRI covers over 150 countries spread in Asia, Europe and Africa, and the objectives are to improve connectivity by building transport infrastructure, facilitating trade, and collaborating in finance (Gawer & Cusumano, 2014). Kazakhstan is strategically situated in the midst of this huge network. The country is located along the border of China, Russia, and the European Union, and it is the physical and economic linking point between the East and the West and, therefore, an essential land route of the Chinese dream of a new Silk Road (Pomfret, 2020).

Alliance with China through the BRI has introduced a considerable investment in highways, railways, pipelines and logistics centers in Kazakhstan. The development of the transport system in the country has been revolutionized by such projects as Khorgos Gateway Dry Port, the Western Europe-Western China (WE-WC) Transport Corridor, and modernization of Aktau Port. Not only have these developments enhanced internal connectivity (Tiwana, 2014), but it has also made Kazakhstan a key transit and logistics center in the Eurasian trade. The Asian Development Bank (2023) reveals that over 30 percent of trade

transit through Kazakhstan has risen since 2016 through 2022, which is a testament to the practicality of infrastructure-based development.

In addition to the infrastructural significance, the BRI also corresponds well with the domestic modernization plan of Kazakhstan. The national program of countries, Kazakhstan 2050, and the long-term plan of the government (G. G. Parker, Van Alstyne, & Jiang, 2016), Nurly Zhol (Bright Path), focus on the diversification of the economy, innovation and the modernization of the industry. These policies also aim to decrease the reliance on hydrocarbons, which previously made up more than 60 percent of export income in Kazakhstan (World Bank, 2022). The fact that the BRI is all about being connected and being an industrial nation therefore supports the internal reform agenda of the country thus the partnership can be a catalyst to structural change.

Nevertheless, the BRI can also be applied to Kazakhstan, but not only in economics, but also in the political and strategic sphere (Van Alstyne et al., 2016). Although Chinese investment introduces the badly needed capital and infrastructure, it also increases economic interdependence that could limit policy autonomy of Kazakhstan. Critics also believe that BRI involvement may cause the asymmetric dependencies- that is, the developmental path of Kazakhstan is influenced by the financial and technological hegemony of China (Staub, Haki, et al., 2022). The trade-off between the possibility of integration and the threat of dependency is one of the underlying policy issues.

Kazakhstan will also have stronger influence in the region due to its BRI participation in terms of international relations. Having turned into a transport center between China and Europe, Kazakhstan has become a regional growth driver of Central Asia. It is an active member of multilateral structures, including the Shanghai Cooperation Organization (SCO) and the Eurasian Economic Union (EAEU), which contributes to harmonization of trade and investments across the borders (Costabile, 2024). With the further expansion of the BRI westward, the influence of Kazakhstan as a bridge between major economies of the Eurasian region should increase (Laruelle, 2021).

This research discusses the complex effect of the BRI on economic modernization of Kazakhstan, with the view to three interrelated aspects, which are (1) transformation of infrastructure and logistics, (2) diversification of the economy beyond oil and gas, (3) the development of regional trade and integration. The research methodology of secondary research applies in synthesizing the findings of academic material, policy reports, and official data to assess the extent to which the BRI is affecting the path of the development of Kazakhstan (G. G. Parker, Van Alstyne, & Choudary, 2016). It is also analyzed in the light of modernization theory, which views BRI as a force of industrial transformation, and dependency theory, which points at the possible dangers of external dependence.

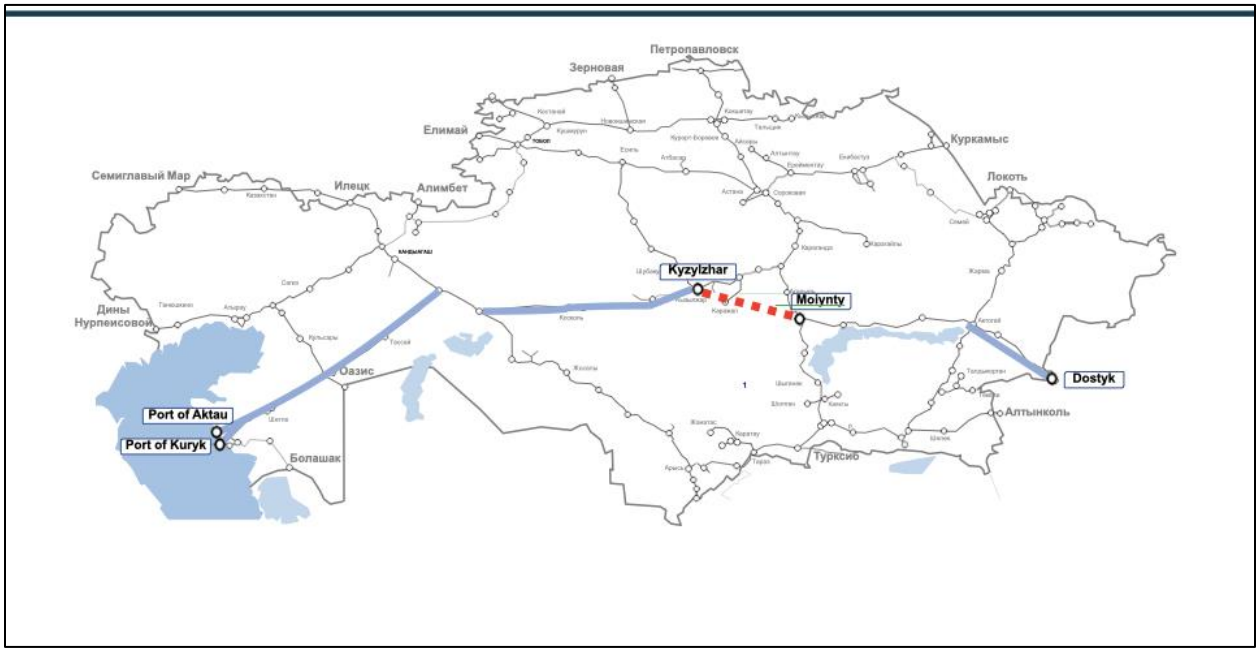


Figure 1 Map of BRI routes through Kazakhstan, showing Khorgos Gateway, WE–WC Corridor, and Aktau Port

2. Literature Review

The study of the Belt and Road Initiative (BRI) has grown exponentially since its introduction, as academics specializing in economics, political science, and regional studies assess its complex consequences. The BRI is widely perceived as an improvement system of connectivity, investment and regional integration (Ozili, 2022). Nevertheless, its application in the various national settings has produced varied economic and political results. In the example of Kazakhstan, the literature shows optimism on the modernization of its economy and its apprehension on the possibility of dependency and risks on governance.

2.1 The BRI and Eurasian Connectivity

The academic literature places Kazakhstan in the context of the Eurasian connectivity agenda to a large extent. According to Pomfret (2020), Kazakhstan is geographically located to be an essential part of the overland silkways Economic Belt. New rail corridors that connect China to Europe through Kazakhstan have greatly shortened freight times, up to 50 percent shorter than transportation by sea (Chen & Lin, 2020). The Khorgos Gateway which is commonly referred to as the dry port of the steppe is also a symbol of this change which enables the transfer of China-Europe goods within rail systems to be done with efficiency (Demir, 2024). Such infrastructural developments have taken Kazakhstan above a landlocked country to a land-linked transit center (Laruelle, 2021).

Some studies however argue that connectivity in itself does not guarantee sustainable development. According to Zhao (2019), transport corridors are usually pass-through spaces that are not significantly served except by external parties, unless under the assistance of industrial and logistic ecosystems (Kopperapu, 2025). Equally, Cooley (2019) cautions that in the absence of domestic value addition, the economic multiplier effects of BRI infrastructure is not much. The same issue is reflected in the opinions of the Asian Development Bank (2023), which states that Kazakhstan needs to consolidate its own industries in order to use the new transport routes to their advantage.

2.2 Economic Diversification and Industrial Transformation

The problem of resource dependency has always been mentioned in the literature on the economic modernization of Kazakhstan. Ever since gaining independence, Kazakhistan has been depending on oil, gas and mineral exports, which means that it is prone to the outside shocks. According to scholars like Kalyuzhnova (2020), diversification into manufacturing, agriculture, and logistics is the key to the long-term resilience (Chhabra, 2025). The BRI provides a chance to facilitate this transition through the investments in industrial parks and modernization of infrastructure. In the case of the Khorgos-Eastern Gate Special Economic Zone (SEZ), it has received interest in manufacturing and warehousing companies in China, Europe, and Russia (ADB, 2022).

However, studies point out that the results of industrialization are still unequal. Dave (2021) also notes that in Kazakhstan, a majority of BRI-related investments continue to focus on transport and energy industries but not high-value manufacturing (Abdo, 2025). The dependence on Chinese financing and technology is very high thus constraining the capacity building at local level and the fact that they employ imported labor slows down the spillovers in employment. Consequently, the contribution of the BRI towards structural diversification has been small to date. According to the scholars, effective modernization will rely on institutional reforms, the improvement of investment climate, and the mechanisms of technological transfer that will lead to the increase in local productivity (World Bank, 2022).

2.3 Governance, Transparency, and Debt Concerns

There is another body of literature that looks at the aspect of governance of the BRI. Hurley et al. (2019) dispute by stating that although Chinese development financing addresses the dire needs in the infrastructure, it might also create the vulnerability of debts and decrease fiscal transparency (Tkacz, 2019). The debt exposure of Kazakhstan to China is moderate, being estimated as approximately 6 percent of total external debt in 2023, though there are fears that the nature of loan agreements and ownership of projects is obscuro (Eurasian Development Bank, 2024). According to Transparency International (2023), accountability is complicated by the lack of transparency in large-scale infrastructure projects through disclosure of the partnership between a business and a government (Liu, 2019).

Meanwhile, the comparatively strong institutional system of Kazakhstan makes it stand out of weaker economies. Kassenova (2019) claims that the program Nurly Zhol by the government has enabled the country to bargain more power over the selection and implementation of the projects. This two-track system, that is implementing the domestic policy of modernization along with BRI investing, is the practical mitigation of the external financing of the national priorities (Huh & others, 2017a). The question has been to make sure that infrastructure projects do not become instruments of exclusive and localized growth and development, but become the instruments of inclusive growth and development.

2.4 Theoretical Perspectives: Modernization vs. Dependency

The literature demonstrates that there are two prevailing theoretical prismatic perspectives of understanding the experience of BRI in Kazakhstan (Arkadan, 2023). The modernization approach considers the BRI to have a structural change by investment, industrialization and transfer of technology. It hypothesizes that the exposure to foreign capital and the foreign markets hastens the process of modernization and institutional reform (Rostow, 1960). In this perspective, the entry of Kazakhstan into trans-Eurasian supply chains is a good step towards the middle-income industrialization.

Dependency theorists, in contrast, put an emphasis on asymmetrical relationships between capital-exporting and capital-importing states (De Reuver et al., 2018). Using the works of Frank (1967) and Prebisch (1950), the authors state that infrastructure-based integration could recreate the hierarchical relationships in which the peripheral economies continue to be reliant on outside funding, markets, and technologies. With the example of Kazakhstan, it comes in the form of dependence on Chinese

investments and lack of diversification in value-added industries (Kassenova, 2020). Other analysts opine that in case Kazakhstan fails to rise up to its own technological level, it may end up being a transit organ of the greater Chinese economy.

2.5 Research Gaps

Although there has been much commentary, much of the literature has not been integrated to estimate the effect of BRI projects on the combination of logistics, trade and industrial diversification of Kazakhstan (Gießmann, 2018). Most of the current studies are sectoral, i.e., on transport or energy, without relating such transformations to the larger-scale effects of modernization. Furthermore, comparative studies of the experience of Kazakhstan with other Central Asian countries, including Uzbekistan or Kyrgyzstan, that may place the regional trends in dependency and cooperation into perspective are absent. The given work addresses these gaps by evaluating the changing role of Kazakhstan within the BRI through the synthesis of the secondary data and theoretical understanding whether this process is sustainable modernization or a new identity of dependency.

Table 1: Major BRI Projects in Kazakhstan (as of 2024)

Project Name	Sector	Estimated Investment (USD billion)	Primary Partners	Current Status (2024)	Key Benefits / Impact
Khorgos Gateway Dry Port	Logistics / Trade	1.9	Kazakhstan Temir Zholy, COSCO Shipping Lines	Operational since 2017	Reduces China–EU freight time by ~50%; facilitates multimodal transport; creates ~4,000 jobs locally.
Western Europe–Western China (WE–WC) Highway	Transport Infrastructure	6.5	Kazakh Govt., China Exim Bank, ADB	Completed 2022 (phase I); phase II upgrading underway	Shortens freight transit by 10 days; boosts intra-regional trade flows and connectivity.
Aktau Port Modernization	Maritime Transport / Logistics	0.7	Kazakhstan Temir Zholy, China Communications Construction Co.	Completed 2021	Expands Caspian Sea export capacity by 40%; links BRI to Trans-Caspian Corridor.
Zhezkazgan–Beineu Railway Link	Rail Connectivity	1.5	Kazakh Govt., China Development Bank	Operational since 2016	Cuts east-west rail distance by 1,000 km; supports mineral exports and passenger mobility.
Khorgos–Eastern Gate SEZ	Industrial & Manufacturing Zone	0.6	Kazakhstan Invest Fund, Chinese Private Consortiums	Operational since 2019 (expanding)	Attracts light manufacturing and warehousing; promotes industrial diversification.
Almaty Ring Road (BAKAD)	Urban Transport / PPP Project	1.1	Kazakh PPP Center, China Civil Engineering Construction Corp.	Operational 2023	Reduces urban congestion by 40%; enhances logistics efficiency around Almaty hub.
Energy Pipeline Upgrades (Atyrau–Kenkiyak section)	Oil & Gas Transport	1.2	CNPC, KazMunayGas	Ongoing (2020–2025)	Improves pipeline capacity and safety; supports regional energy exports to China.

Source: Compiled from Asian Development Bank (2023), World Bank (2022), Eurasian Development Bank (2024), and Kazakh Ministry of Industry and Infrastructure Development (2024).

3. Theoretical Framework

This research study is analytically based on two theoretical perspectives known to be complementary and opposing to each other (Al-Qudah & others, 2022b): modernization theory and dependency theory. These frameworks offer a multidimensional view through which one can analyze the role of Kazakhstan in the Belt and Road Initiative (BRI) the balance between hope in modernization and the potential issue of structural dependency.

3.1 Modernization Theory

The modernization theory holds that economic and social development occurs in a linear path of the traditional to industrial to post-industrial (Yoo et al., 2010). The model, akin to the one pioneered by Rostow (1960) proposes that national development can be fast-tracked by infrastructure investment, technological transfer, and integration into the global markets. In this paradigm, BRI is a revolutionary process that provides developing nations with material and institutional preconditions of modernization (Tiwana et al., 2010).

In the case of Kazakhstan, the modernization theory explains the BRI engagement as a strategic chance to break its out of the resource trap situation through diversifying its economy and intensifying connectivity. Better logistics, industrial capacities, and foreign investment, especially via projects, including the Western Europe-Western China Corridor and Khorgos Gateway are regarded as stimulus growth, innovation, and urbanization (Pomfret, 2020). The theory therefore helps in the concept that the involvement of the BRI helps to make Kazakhstan more diversified and globally connected economy (Cusumano et al., 2019).

3.2 Dependency Theory

On the other hand, dependency theory developed by Frank (1967) and Prebisch (1950) perceives development as being limited by structural imbalances between the core (the industrialized countries) and the periphery (the developing countries). In that regard, foreign investment and trade may permanently enshrine economic subordination as opposed to independence (Staub, Aier, et al., 2022). As utilized to the BRI, dependency theory has raised issues that Kazakhstan will end up being dependent on Chinese financing, technology, and markets leading to low local empowerment.

A number of articles (e.g., Hurley et al., 2019; Kassenova, 2020) warn that asymmetrical relationships may be strengthened by unequal bargaining power and obscure debt arrangements (Huh & others, 2017b). The transit position of Kazakhstan can bring about the short run benefits to the economy but restrain the formation of internal values, exposing the country to the external shocks and impact of a strategy.

3.3 Integrative Perspective

The research is integrative in nature whereby modernization theory would be used to evaluate the developmental potential of Kazakhstan and dependency theory to underscore structural risks. Such directions, combined, enable a subtle judgment (Demir & others, 2024): does an infrastructure led by BRI serve as a contribution to sustainable modernization or replicate dependencies patterns? The integrated framework therefore becomes the balance of analysis between optimism and criticism--recognizing both the agency of Kazakhstan in determining its modernization path but also the systemic forces of asymmetry in the region.

4. Methodology

This paper will utilize the qualitative secondary research approach in an attempt to assess how the Belt and Road Initiative (BRI) impacted economic modernization in Kazakhstan (G. Parker et al., 2017). The international development issues are especially suitable to the secondary research because there is no feasibility of a large-scale fieldwork over transnational settings due to the constraints imposed by logistical, financial, and access challenges. It enables the researcher to integrate and decode the available knowledge to come up with novel analytical perspectives in a theoretical context.

4.1 Research Design and Rationale

The study is an exploratory-descriptive study that incorporates both content analysis and thematic synthesis. The research is not based on primary data collection but incorporates data of various reliable secondary sources such as:

- Peer-reviewed academic articles from journals such as *Eurasian Geography and Economics* and *Central Asian Survey*
- Institutional and policy reports from the **Asian Development Bank (ADB)**, **World Bank**, and **Eurasian Development Bank**
- Government publications from Kazakhstan's **Ministry of Industry and Infrastructure Development**
- Statistical datasets from the **World Trade Organization (WTO)** and the **National Statistics Committee of Kazakhstan**

The design will provide an overall view of the impact of the BRI on trade, logistics, and economic diversification. It is an interpretive approach; it does not attempt to make causal measurements but seeks to appreciate the patterns, relationships, and implications (Hein & others, 2019).

4.2 Data Collection and Analysis

The data collection process involved three systematic steps.

1. **Identification:** The references were located using academic databases (Scopus, JSTOR, Google Scholar) published in 2013 (launch of BRI) to 2024.
2. **Categorization:** Sources were grouped under thematic-based categories- (a) infrastructure and logistics, (b) economic diversification, (c) governance and policy and (d) regional trade.
3. **Interpretation:** The thematic content analysis was used to determine convergent and divergent results among studies. Such a qualitative synthesis made cross-validation of trends possible as well as policy implications to modernize Kazakhstan.

The theoretical framework that was used in the analysis would be as discussed above (Hurley et al., 2019). The modernization theory was used to know the progress in diversification and infrastructure based growth and the dependency theory to determine the debt, governance and external influence. This two lens deepened analytical intensity and provided rigor of concept.

4.3 Limitations

Although the secondary research has its strengths, the research has limitations. The use of prior data may bring publication bias and controls little about the quality of data. Chinese and Kazakh official reports might have political bias or wishful forecasting. Besides, there are also independent project evaluations that are not accessible and are out of date. Nevertheless, triangulation using various sources and a focus on peer-reviewed materials reduce bias and increases reliability as much as possible (Leong et al., 2020).

In the end, this methodological construction provides a good basis of evaluation of the changing economic transformation in Kazakhstan in the framework of the BRI, and at the same time gives a balance between the depth of analysis and the credibility of the findings.

5. Findings and Analysis

5.1 Overview of Kazakhstan's BRI Engagement

Kazakhstan has become one of the most strategic participants in the Belt and Road Initiative (BRI) since it became part of the Initiative in 2013. Geographically situated at the center of the Eurasia, the country is the border of China and Russia (Zott et al., 2011), which is why it is the center of the overland corridors of the BRI. The main overland routes that connect Western China to Europe are approximately 3,000 km and pass over Kazakhstan (Pomfret, 2020). According to the government, transport, logistics, and industrial cooperation projects implemented within the framework of the BRI have reported an investment of more than USD 24 billion between 2015 and 2023 (ADB, 2023).

The BRI projects in which Kazakhstan is involved can be related to its national development strategy called Nurly Zhol (Bright Path), focusing on modernization of the infrastructure, diversification of the economy, and more advanced connectivity. The strategic combination of these initiatives indicates the effort of Kazakhstan to become a transformed country, which is no longer reliant on resources but a regional logistics and industrial center (Gawer, 2022).

5.2 Infrastructure and Connectivity

The main pillar of the BRI engagement of Kazakhstan is infrastructure. The significant projects like the Khorgos Gateway and the Aktau Port expansion and Western Europe-Western China (WE-WC) highway corridor have significantly minimized freight time and costs (Sanner, 2025). As it is stated by the World Bank (2023), the time taken by freight transport traveling through Kazakhstan between Lianyungang (China) and Duisburg (Germany) through the sea route made 45 days and carried out using the land path made 15 days. This has made Kazakhstan one of the crucial transit points between the Asian and European market.

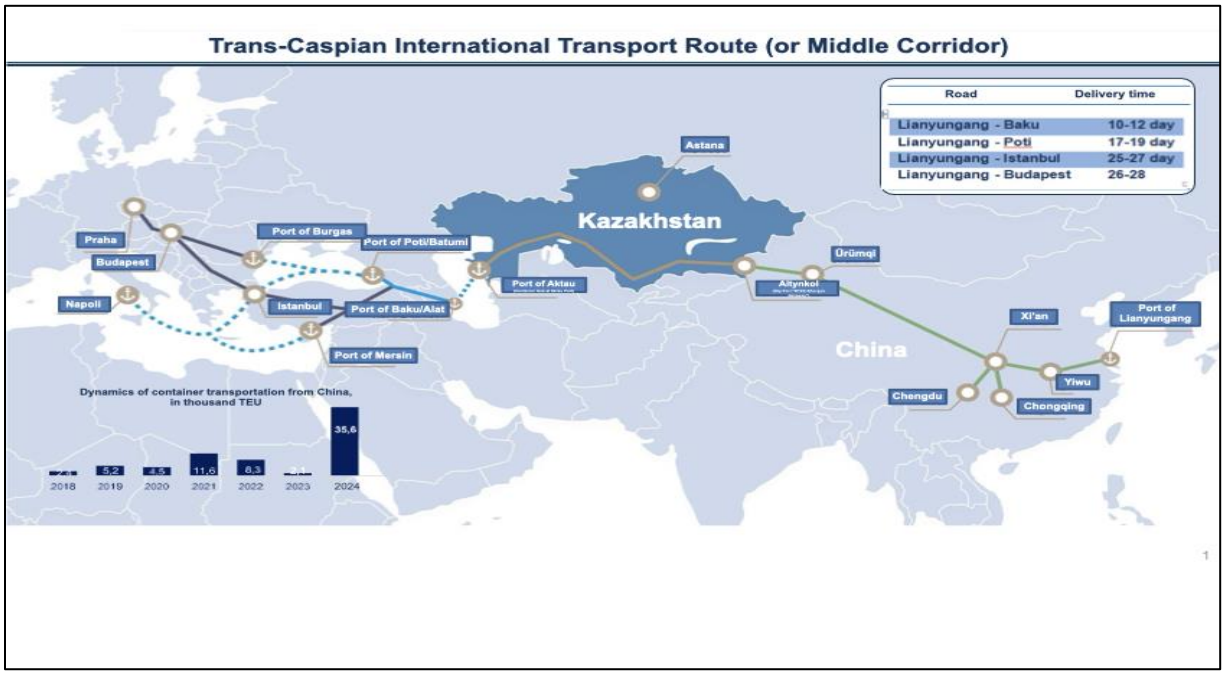


Figure 2 "Map of BRI Corridors Across Kazakhstan"

Transport efficiency benefits are not the only infrastructural advantages (Huh & others, 2017c). The development of industrial regions like Pavlodar, Karaganda and Almaty by BRI projects has promoted the setting up of industries in and around the logistics corridors by both domestic and foreign companies. These changes have been in tandem with the premise of modernization theory that infrastructural growth causes industrial spillovers and city expansion.

Nevertheless, the issue of dependency is of concern - a large number of BRI projects are funded by Chinese loans or completed by Chinese contractors, which results in the establishment of long-term financial responsibilities. China holds almost 15 percent of external debt of Kazakhstan by 2022, and this becomes controversial on the subject of debt sustainability (Eurasian Development Bank, 2022).

5.3 Economic Diversification and Industrial Modernization

One of the objectives of BRI participation in Kazakhstan has been to diversify the economy, that is, to stop relying on hydrocarbons and to diversify into manufacturing (Lee et al., 2017), logistics and services. The proportion of non-oil in the GDP of the Kazakhstan grew by 41 percent compared to 32 percent between 2014 and 2023, partly owing to the infrastructure-led industrialization and integration of logistics (World Bank, 2023).

Table 2: Sectoral Contribution to Kazakhstan's GDP, 2014–2023

Sector	2014	2018	2023	% Change
Oil & Gas	45%	41%	37%	-8%
Manufacturing	10%	13%	15%	+5%
Transport & Logistics	6%	9%	11%	+5%
Agriculture	5%	6%	7%	+2%
Services	34%	36%	39%	+5%

Source: Compiled from World Bank, ADB, and Kazakhstan National Statistics (2023).

This diversification helps the modernization theory on the assumption that infrastructural investment increases industrial transformation. Multinational corporations in warehousing, e-commerce, and distribution have also been attracted to the logistics hubs like Khorgos - Eastern Gate. The free economic zones have seen the co-investment of Chinese and European companies that have boosted the supply chain integration and export capabilities (Al-Qudah & others, 2022a).

However, dependency theory has a retort: a good part of the manufacturing growth is assembly-oriented, and it utilizes imported technology and components. The local innovation and the ability to conduct research and development are also low and that presents a challenge to sustainable modernization. In addition, a high concentration of Chinese state-owned enterprises in the ownership of projects decreases the control of Kazakhstan on revenues and technological transfer.

5.4 Trade Dynamics and Regional Integration

The trade system of Kazakhstan has been greatly transformed in the BRI system. The amount of transport through Kazakhstan to Europe via rail expanded by a sixfold between 2013 and 2023 (Kazakhstan Railways, 2023). The export to China became diversified (metals, chemicals, agricultural products) which is the sign of the gradual transition to non-energy exports.

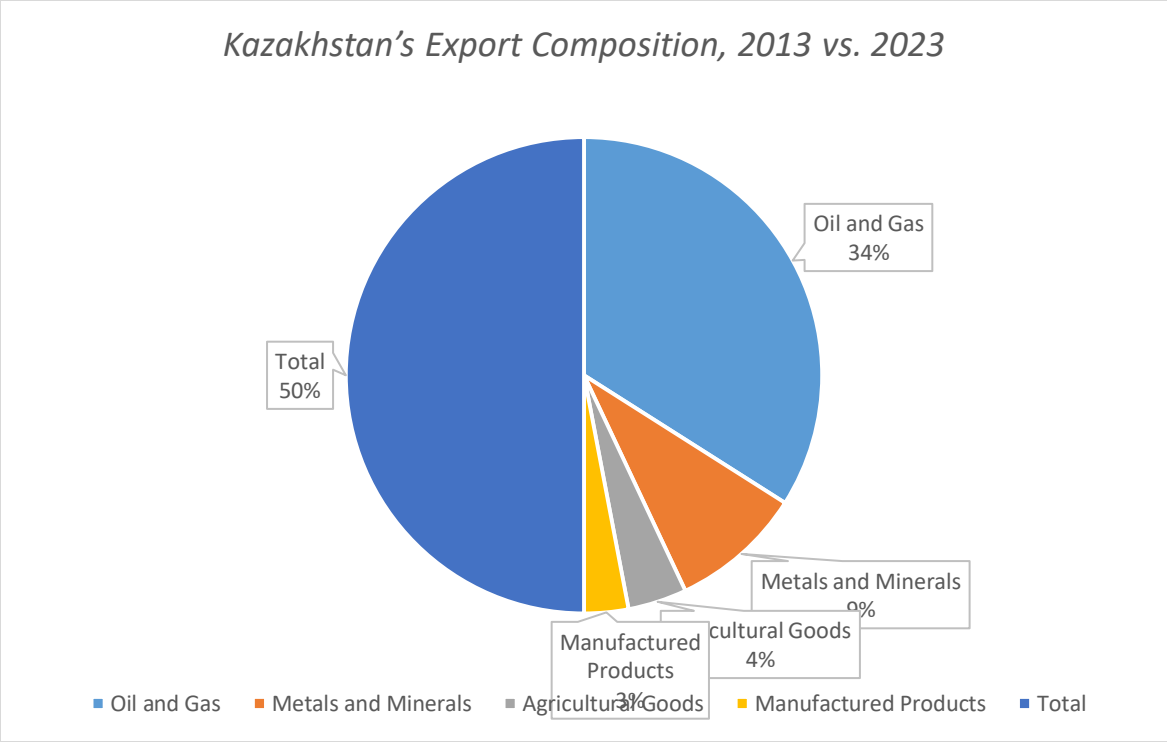


Figure 3 Kazakhstan's Export Composition, 2013 vs. 2023

BRI has also boosted the inclusion of Kazakhstan to the Eurasian Economic Union (EAEU) and Shanghai Cooperation Organization (SCO). Since the BRI corridors coincide with EAEU infrastructure agendas, Kazakhstan enjoys the harmonies of customs processes, and extended transit treaties. The connectivity of the region strengthens its future identity as the logistics gateway of Eurasia (Yoo et al., 2010).

Nevertheless, there are still high risks of trade dependency. China supplies more than 30 percent of imports into Kazakhstan, and very little of the exports are of high value. This disparity might be the weakness to market shifts and changes in Beijing policies. Dependency theorists believe that this imbalance is a manifestation of a neo-mercantilist form, according to which China obtains more value than the infrastructure and resources of Kazakhstan.

5.5 Socioeconomic and Governance Implications

To the extent beyond economics, BRI projects have impacted the urban development, employment, and governance in Kazakhstan (Gießmann, 2018). According to the calculations made by the government, infrastructure related to BRI created more than 100,000 employment opportunities in the period between 2015 and 2023, primarily in the construction and logistics sectors (Ministry of Labor, 2023). Almaty, Aktobe, and Shymkent are urban centers which are fully modernizing, and new transport terminals, industrial groups, and service networks are appearing.

Still, there are opinions regarding transparency and governance. According to reports published by the Transparency International (2022), there is a lack of public control over BRI contracts, which may cause certain inefficiency and rent-seeking activities. Also, sustainability issues have been called into question due to environmental challenges e.g. land degradation that is caused by highway expansion.

5.6 Analytical Synthesis

The results indicate a two-way dynamic as per the theoretical framework of the study. In terms of modernization, it is evident that BRI has initiated faster modernization of Kazakhstan to a logistic-based-

economy, as opposed to the resource-based-economy. Trade, industrial diversification, and infrastructure can be taken to be indicators of quantifiable advancement to the leadership of regional growth (Staub, Aier, et al., 2022).

Nonetheless, in dependency perspective, structural imbalances, i.e., financial, technological and trade-based are threats of economic subordination and low local empowerment. The long-term success of the modernization of Kazakhstan, therefore, depends on the strategic reforms of the governance, modernization of technologies and the multilateral relationship outside of China-focused expanse.

6. Discussion

The results show that the process of Kazakhstan entering the Belt and Road Initiative (BRI) has changed the developmental path of the state fundamentally (Huh & others, 2017b). The way the nation is evolving into a transit state and an area of emerging regional development is a case in point as to the potential opportunities and dangers of transnational infrastructure-based modernization. Based on the modernization and dependency theories, this section explains these patterns within the framework of structural, political, and economic dynamics.

6.1 Infrastructure as a Catalyst for Modernization

The infrastructural transformation of Kazakhstan under the BRI is a manifestation of a modernization trajectory which is instigated by connectivity and inflows (Arkadan, 2023). Better transport corridors, industrial belts and logistic centers have reduced the cost of transactions as well as increasing regional integration. The Khorgos Gateway and the Western Europe Western China (WE-WC) highway, is one of the brightest illustrations of the power of infrastructure to encourage the trade, create the employment and promote investment (Cusumano et al., 2019).

The developments described in terms of modernization theory, bring Kazakhstan nearer to the take-off phase (Rostow, 1960) when physical and institutional modernization in the country preconditions the process of self-sustained growth.

The combination of BRI and domestic Nurly Zhol program in Kazakhstan is a good example of successful policy convergence. The focus on infrastructure first by the government has paid off with the visible dividends such as diversification of the export pathways and the growth of the logistic services (Al-Qudah & others, 2022b). Another way that has facilitated urbanization is through the connection of big cities and industrial areas that BRI has made, and this has led to labor mobility and to the growth of the service sector. These results confirm the modernization story that the investment in infrastructure leads to economic and social changes.

6.2 The Persistence of Structural Dependency

This optimism is however curbed by the dependency theory perspective. The dependence of Kazakhstan on Chinese funding, technology and markets puts the issue of asymmetric interdependence into question (Hurley et al., 2019). Though infrastructure building has helped the growth, a lot of the value chain is externalized: Chinese companies are dominant in engineering, procurement, and building contracts; local companies are commonly left with the subordinate role.

This trend echoes the thesis by Andre Gunder Frank (1967) that the periphery economies can still modernize structurally but be reliant on external flows of capital and technology.

The dependency mechanisms are also represented in debt exposure and trade concentration. The increased presence of China in the importation basket of Kazakhstan especially machinery, electronics and construction materials restricts the development of local capacity (Demir & others, 2024). Besides, concentration of trade within the Chinese corridors limits the strategic independence of Kazakhstan in

Eurasian transport system. These institutional relations pose a threat of establishing an economic geography that is neo-colonial in that the modernization of Kazakhstan is conditional to the interest of the external actors.

6.3 Balancing Agency and External Influence

The leadership of Kazakhstan has tried to hedge these threats using its multi-vector foreign policy, which encourages a balanced relationship with China, Russia, European Union and America. Such diplomatic pragmatism adds strength to the agency of Kazakhstan in the framework of the BRI, as it allows the country to use rivalry among the powerful states to its benefit and secure the best investment terms (De Reuver et al., 2018).

This agency highlights the fact that dependency is negotiable and not only fixed, that is, states can renegotiate their positions in world value chains by institutional changes, by adopting technology, and by diversifying.

The attempts of Kazakhstan to enhance regional integration to the Eurasian Economic Union (EAEU) and Trans-Caspian International Transport Route (TITR) reflect the search of independence in the system of interconnection (Hurley et al., 2019). These support initiatives dispersion of transport corridors and discourage reliance with any partner. So, although the dependency theory emphasizes structural limitations, the changing strategy of Kazakhstan is characterized by adaptive modernization-accomplishment of making use of external resources and resilience development on domestic level.

6.4 Governance, Sustainability, and Social Dimensions

The quality of governance is the key to the sustainability of BRI-driven modernization. It is essential to promote transparency and public accountability in order to make sure that investment of infrastructure generates long-term national good instead of rent-seeking or elite capture (G. G. Parker, Van Alstyne, & Jiang, 2016).

The key to whether BRI investments will contribute to inclusive development or not will be the strengthening of institutional capacity, anti-corruption implementation, and project evaluation mechanisms.

BRI-type projects have also helped in creating employment opportunities, city regeneration, and enhanced mobility, although they have initiated localized processes like environmental degradation and biased regional development, socially (Gawer & Cusumano, 2014). By including elements of environmental protection and community involvement in the project planning process, it is possible to make the BRI consistent with the sustainable-development priorities of Kazakhstan.

6.5 Synthesis

In general, the discussion has shown that modernization and dependency have a dialectical relationship. The BRI has definitely boosted the infrastructure development and diversification of the Kazakh economies confirming the fundamental assumptions of modernization theory. However, in its inability to match the dominance of foreign capital and lack of domestic technological capability, there are dependency issues (Staub, Haki, et al., 2022).

The effectiveness with which Kazakhstan will be able to institutionalize its reforms, stimulate local innovation, and establish fair partnership relations with the rest of the Eurasian integration process will eventually define its success in the transformation between the transit hub and a regional growth engine.

7. Conclusion

The involvement of Kazakhstan in the Belt and Road Initiative (BRI) is one of the significant moves in transforming the Eurasian economy. BRI initiatives have made Kazakhstan an even more important country in the regional trade and logistics and brought-on new dependency issues (Gawer & Cusumano, 2014). The study concludes that the infrastructure projects, Khorgos and the Western Europe-Western China corridor, have increased efficiency in transportation systems, diversification of industries and connectivity making Kazakhstan a strategic cross-Eurasian bridge.

There is, however, structural vulnerability to reliance on Chinese finance, technology, and markets. Low technology transfer and resource-based export system imply that an increase in modernization at the expense of innovation is likely to increase dependency. The key to the future of the nation lies in technological upgrading, diversification of partnerships and institutional reform as a way of balancing between integration and autonomy (Liu, 2019).

In the end, the success of the BRI in creating sustainable, inclusive modernization or solidifying the foreign dependence of Kazakhstan will be defined by the success of that country in its transition away from transit hub and towards being a growth engine. It will be essential to transform connectivity into economic sovereignty and innovation with the help of strategic management and a powerful domestic policy.

8. Policy Recommendations

In order to enhance the BRI results and decrease dependency, Kazakhstan ought to:

8.1 Diversify Partnerships

Diversify the China investment by involving EU, Japan, South Korea and Gulf states. It can be facilitated through joint ventures and public-sponsored relationships to facilitate technology movement and less dependence on financing within a specific country (Ozili, 2022).

8.2 Build Industrial Capacity

Increase investment in value-added sectors, and close to logistic centres, promote innovation, research, and training of skills to advance along the technology ladder.

8.3 Promote Governance and Transparency.

Adopt open bidding, independent audits, and periodic business reviews of costs and benefits to eliminate corruption and accountability.

8.4 Build Strength in Regional Multilateralism.

Take advantage of the Eurasian Economic Union, the SCO, and the Trans-Caspian networks as an instrument to diversify the economic connections and strengthen the role of Kazakhstan as a connective hub (Van Alstyne et al., 2016).

8.5 Embed Sustainability

Incorporate environmental and social impact assessment, advance green technologies, and make projects consistent with the Sustainable Development 2050 strategy.

These actions will help Kazakhstan convert the involvement in BRIs into a channel of sustainable and independent modernization of the entire Eurasia.

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