Re-examining the 'Resource Curse' Concept in Resource-Rich Post-Soviet States: The Cases of Azerbaijan and Kazakhstan

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Doğal Kaynak Zengini Post-Sovyet Ülkelerde 'Kaynak Laneti' Kavramının Yeniden İncelenmesi: Azerbaycan ve Kazakistan Örneği

Abstract

The article reexamines the "resource curse" concept for the resource-rich post-Soviet states (RRPSSs), focusing on Kazakhstan and Azerbaijan, both nations with substantial oil and gas reserves that significantly influenced their post-Soviet economic trajectories. The authors aim to explore the causes, effects, and transmission channels of the "resource curse" after 33 years (1991-2024) of independence and sovereignty in these countries. The article considers their specific institutional contexts, fiscal policy peculiarities, and economic performance, including GDP growth paths and levels of economic and export diversification. Besides economic growth, the study also examines the volatility of GDP growth in Kazakhstan and Azerbaijan, highlighting it as a noteworthy indicator or symptom of the "resource curse." One key finding is that the defining feature of the economic growth trend in the resource-rich post-Soviet states, related to the "resource curse," is not necessarily outperformance or underperformance but rather the volatility of real GDP growth relative to the long-term trends of less oil-dependent countries. The research employed various quantitative methods, including correlation analysis and comparative data analysis.

Keywords : Resource Curse, Azerbaijan, Kazakhstan, Post-Soviet, Oil, Gas, Diversification.

JEL Classification Codes : Q33, Q34, Q35, Q38.

Öz

Bu çalışmada, doğal kaynaklar açısından zengin olan post-Sovyet ülkeler için "kaynak laneti" kavramı, önemli petrol-gaz rezervlerine sahip olan Kazakistan ve Azerbaycan örneğinde yeniden incelemekte ve 1991-2024 yılları arasındaki 33 yıllık bağımsızlık ve egemenlik döneminde "kaynak laneti"nin nedenleri, etkileri ve iletim kanalları araştırılmaktadır. Ayrıca, bu ülkelerin kurumsal özellikleri, maliye politikaları, GSYİH'nın büyümesi, ekonominin ve ihracatın çeşitlendirilme düzeyi de dahil olmak üzere ekonomik performansları da değerlendirilmektedir. Ekonomik büyüme performansına ek olarak, Kazakistan ve Azerbaycan için GSYİH büyümesinin volatilitesi "kaynak laneti"nin önemli bir göstergesi ve belirtisi olarak incelenmiştir. Makalenin temel bulgularından biri, doğal kaynaklar açısından zengin eski Sovyet ülkelerindeki ekonomik büyüme eğiliminin "kaynak laneti" olgusuyla ilgili temel ayırt edici özelliğinin, yüksek veya düşük ekonomik performans değil, uzun vadeli perspektifte petrol dışı veya "daha az petrol" zengini ülkelerin ekonomik büyüme eğilimleriyle karşılaştırıldığında reel GSYİH büyüme oranının volatilitesi olduğudur. Makalede korelasyon analizi ve karşılaştırmalı veri analizi teknikleri de dahil olmak üzere çeşitli nicel araştırma yöntemleri kullanılmıştır.

1. Introduction

The "resource curse" hypothesis holds that ongoing political, economic, and governance challenges in resource-rich countries, particularly those that export fossil fuels, such as declining economic growth, limited democratic space for non-state actors, and rising civil tensions (Rosser, 2006). Through a review of open research repositories, the authors noted that the concept of the "resource curse" in Resource-Rich Post-Soviet States (RRPSS) has received less focus from academia and think tanks in recent years, especially amid the shift from fossil fuels to renewables and changes in energy demand structures. Nonetheless, some articles and reports indicate that energy transitions and climate-related impacts offer a new perspective on the resource curse (Lahn & Stevens, 2017; Bradley et al., 2018). Significant changes have occurred in energy markets, technologies, and price volatility levels driven by factors such as a boom in fossil fuel production, private upstream and downstream investments, technological innovations, regulatory frameworks, and geopolitical shifts (Dabbar, 2024).

Technological developments and advances in the global energy industry, higher volatility in energy prices driven by various economic and geopolitical factors, and rapid changes in countries' energy consumption and production structures indicate that a global energy transformation is underway (IEA, 2023). The shifting energy landscape following the worldwide pandemic, the Russia-Ukraine war, subsequent conflicts in the Caucasus and the Middle East, and the ongoing competition and "trade wars" between the USA and China could also affect the flow of natural resources and the social, economic, and political situations in resource-rich states. Significant changes in energy markets, technologies, and prices could create new concerns and uncertainties for RRPSSs, given how they have managed their resource wealth to date. The existing institutional model couldn't guarantee steady management of these changes in energy markets and the shifting geopolitical landscape of energy (Ahmadov et al., 2013).

In the context of increasing external complexities in energy markets and geopolitical uncertainties, the governments of Azerbaijan and Kazakhstan are increasingly compelled to consider extrinsic factors in economic decision-making, thereby exacerbating manifestations of the "resource curse." Political-economic burdens outweigh pure economic rationalism, and institutional frameworks suffer more than the economy itself. The "resource curse" concept will be reassessed for RRPSSs, which have experienced several economic and political transformations alongside various boom-bust cycles of commodity prices. RRPSSs (especially fossil-fuel-rich states) attracted foreign investment in the 1990s to boost their hydrocarbon reserves. In the 2000s and 2010s, they strengthened their raw-material economies through revenues from rising hydrocarbon and mineral exports. During this period, resource-rich post-Soviet economies faced collapses in raw material and energy

prices, followed by price surges during crises such as 2008-2009, 2014-2015, and 2020-2021. The behaviour of governments and various private-sector actors during these boom-bust cycles shaped the complex performance of national economies and the status of political systems.

Azerbaijan and Kazakhstan were unable to achieve average GDP growth rates higher than those of most of their non-extractive, exporting former Soviet neighbours. However, economic growth volatility was relatively higher over the past 30 years. Kazakhstan also needs to diversify its export composition and the geographical structure of its export basket. Yet, the commodity and geographical concentration ratios are even more extreme in Azerbaijan's export basket. Both countries have implemented some policy measures to steady public expenditures and avoid pro-cyclical fiscal policies. Benefiting from political regime stability over the last 30 years, they performed differently in terms of government effectiveness. Nevertheless, Kazakhstan and Azerbaijan exhibited a stronger negative correlation between government effectiveness and political rights, which may signal a "social contract" warranting closer scrutiny.

The current research aims to address a gap in the existing literature by comprehensively assessing the "resource curse" phenomenon in resource-rich post-Soviet states, analysing long-term economic and political trends across long cycles. The article seeks to reexamine the causes, effects, and transmission channels of the "resource curse" after 33 years (1991-2024) of independence and sovereignty in post-Soviet Kazakhstan and Azerbaijan. In this study, we reassess the impacts of the "resource curse" on Azerbaijan and Kazakhstan across 30 years. We explore whether and how the "resource curse" phenomenon influences these countries, and what the implications are for their capacity to manage resource wealth amid rapidly evolving energy markets.

2. Literature Review

Since the last decade of the twentieth century, the "resource curse" has been the most debated topic among politicians, economists, academics, and opinion leaders in civil society. Briefly, the "resource curse" explains the strong correlation between the abundance of natural resources and poor political economy and governance performance (Auty, 1993). The "resource curse" is the term used to describe the failure of resource-rich countries to benefit from their natural wealth, a paradox of plenty (Karl, 1997). Moreover, this term indicates negative economic effects for resource-rich countries, such as excessive government spending, neglect of competitive principles, corruption, and political outcomes such as authoritarian governance (Sachs, 2001; Collier, 2010; Hilson, 2008).

The negative correlation between the abundance of natural resources and economic growth was highlighted in some research (Torvik, 2009; Stevens, 2015). Some authors specifically emphasise the alleged symptoms of the resource curse, such as lower economic growth, increased inequality of wealth, entrenchment of undemocratic regimes, poor decision-making, the failure to create a productive, efficient economy (crowding out),

increased conflict in society, and degradation of the environment and human rights. The "resource curse" transmission channels between the extractive and the non-extractive sectors in resource-rich economies were discussed by various scholars (Stevens et al., 2015).

Frankel (2012) described the possible six channels of causation of the resource curse, including long-term trends in world prices, energy price volatility, permanent crowding out of manufacturing, autocratic/oligarchic institutions, anarchic institutions, and cyclical Dutch Disease. He emphasises explicitly that a permanent commodity boom, which crowds out the manufacturing sector, is very harmful to economic prospects from a sustainability perspective. Addison and Roe (2018) highlighted the fiscal aspect of the resource curse-the so-called spending effect-and extractive government behaviour. Arezki (2009) highlighted another aspect of the resource curse linkage, or resource curse channels, including the presence of natural resources, institutions, non-resource growth, income effects, fiscal policy, and Dutch disease. Torvik (2009) examined the causal relationship between resource abundance and slow economic growth.

Ross (2001) examined the relationship between the "resource curse" and the institutional capacities of extractive countries, a topic discussed in the literature since the late 1990s. Furthermore, Ross (2012) contends that "the political and economic problems of the oil states can be traced to the unusual properties of petroleum revenues". Four specific features of petroleum revenues—scale, source, stability, and secrecy—along with the performance and role of state-owned oil companies, influence the political systems and economic models of oil-exporting nations, regardless of the efficiency of government spending mechanisms or of how oil revenues are utilised.

Lashitew, Ross, & Werker (2021) link the "resource curse" to the economic diversification performance of resource-rich countries using metrics such as manufacturing value added per capita, public capital accumulation, human capital, and intellectual capital. Karanfil and Omgba (2023) have found that oil-exporting countries with greater export diversification can reduce vulnerability and sensitivity during oil price collapses and promote a more stable economic trajectory during the energy transition.

The initial instances of the "resource curse" were predominantly observed in resource-rich African countries and later in some impoverished Middle Eastern nations, South America, and South Asia. Paul Collier published a well-known book titled "The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done About It" in 2007, which provided an extensive analysis of the "resource curse" through examples from African economies. Collier (2007) argued that "the heart of the resource curse is that resource rents make democracy malfunction" as a consequence of price-revenue volatility and institutional factors. He highlighted the "natural resource" trap as a key reason for persistent poverty and underdevelopment, alongside the conflict trap, "bad governance" trap, and "landlocked with bad neighbours" trap in African, Asian, and Latin American countries.

However, in the early 2000s, the resource curse became a widely accepted explanation for the obstacles to successful natural resource development, and post-Soviet countries also fell within its scope. Some other researchers examined different aspects of the resource curse in resource-rich countries, particularly Russia, Kazakhstan, and Azerbaijan (Pleines et al., 2016; Kalyuznova, 2006; Movchan et al., 2017; Polterovich et al., 2007).

Ahmadov, Mammadov, & Aslanli (2013) found that revenues from total natural resources harmed government effectiveness in Azerbaijan, Russia, Kazakhstan, and Turkmenistan from 1996 to 2011. Countries with higher average oil rents (% of GDP) and total natural resource rents (% of GDP) tend to have lower rates of government effectiveness. Compared to the previous research conducted in 2013, this article extends the timeframe (from 1991 to 2024) to update performance and correlations. It narrows the focus to two natural resource-rich countries, Azerbaijan and Kazakhstan. The article focuses on the macroeconomic, diversification, fiscal, and institutional linkages between resource abundance and economic (and other) performance indicators, suggesting the presence or absence of "resource curse" symptoms. As a limitation, the scope of the current article does not include the social tension dimension of the "resource curse" concept due to a lack of reliable data to measure the extent of conflicts among various social groups.

3. Research Methodology

In this article, the authors aim to identify the manifestation of the "resource curse" in two resource-rich post-Soviet states, considering the emerging circumstances of the early twenty-first century, which have significantly expanded the ways this "disease" can manifest. The current research analyses economic, political, and governance indicators for Azerbaijan and Kazakhstan to reveal contemporary manifestations of the "resource-rich" phenomenon. At the same time, a political-economic approach was employed as the methodological basis for the research design. This approach most accurately helps avoid extreme assessments of the presence or absence of the disease's symptoms in new circumstances. It also explains the gap between macroeconomic indicators and the socio-political context of governance. Statistical indicators from both countries, as well as global indices such as polity scores and the government effectiveness index, were used as secondary sources based on time-series data, cross-sectional data, and longitudinal panel data from official reports of the governments of Azerbaijan and Kazakhstan, alongside international organisations (e.g., World Bank's Updated Worldwide Governance Indicators 2024). The rationale for selecting the timeframe for data analysis in Azerbaijan and Kazakhstan (1991-2024) is to uncover long-term and cyclical trends in relevant parameters that indicate symptoms of a "resource curse". The authors conducted a correlation analysis of relevant political, economic, and governance parameters, identifying similarities among hydrocarbon-rich post-Soviet countries and differences from neighbouring resource-poor countries.

4. Macroeconomic Linkages

4.1. Fossil Fuels (Oil and Gas) Reserves and Production: Azerbaijan and Kazakhstan

Azerbaijan and Kazakhstan are key oil and gas producers in the Caspian Basin and Eurasia. Azerbaijan has around 7 billion barrels of proven oil reserves, while Kazakhstan possesses about 30 billion barrels (2020). Combined, the two countries hold 2% of the world's verified oil reserves. Oil production in Kazakhstan steadily grew from 1994 to 1995 and reached 90 million tonnes annually in 2018-2019. In Azerbaijan, oil production has been increasing since 2004, peaking at 51 million tonnes in 2010 (BP Energy Institute, 2024). After this peak, crude oil production in Azerbaijan has been in a continuous decline (see Figure 1).

Figure: 1
Oil Production (Million Tonnes)
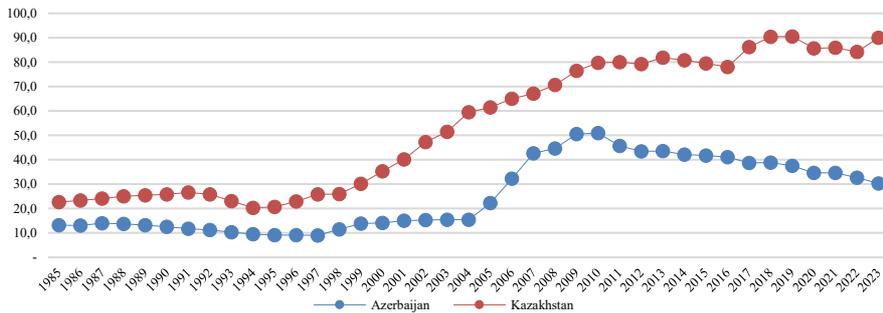
Source: BP Energy Institute (2024).

Figure: 2
**Natural Gas Production (Billion Cubic Metres)**
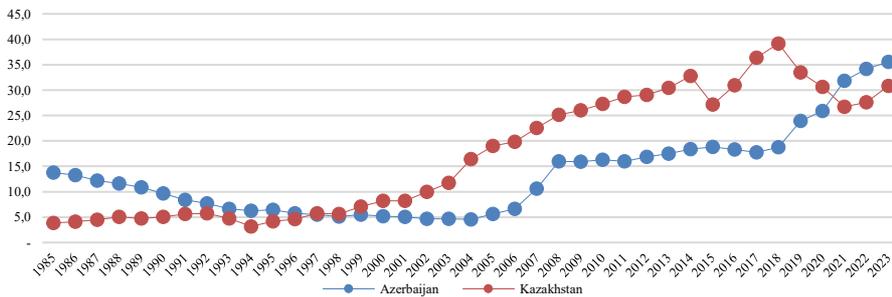
Source: BP Energy Institute (2024).

Azerbaijan owned 2,5 trillion cubic metres and Kazakhstan owned 2,3 trillion cubic metres of total proved gas reserves in 2020 (BP Energy Institute, 2024). Two countries possess 2,5% of the global proved gas reserves. Azerbaijan almost doubled its gas production from 17,5 billion cubic metres in 2013 to 35,6 billion cubic metres in 2023 (an average annual growth of more than 7%). Meanwhile, Kazakhstan's gas production fluctuated significantly between 2013 and 2023, averaging around 30 billion cubic metres (see Figure 2). Volatility in oil and gas production in Kazakhstan and Azerbaijan was accompanied by sharp price fluctuations, negatively affecting GDP growth and other socio-economic indicators.

4.2. Economic Growth: Azerbaijan and Kazakhstan

The "resource curse" is a paradoxical phenomenon in which countries rich in natural resources, such as fossil fuels, minerals, and metals, often experience slower economic growth and poorer development outcomes than nations with fewer resources. Consequently, one of the most significant signs of the "resource curse" in resource-rich nations is the decline in long-term economic growth. Over 33 years after independence, the growth paths of Azerbaijan and Kazakhstan's economies were quite similar, specifically from 1991 to 2023. The correlation between their 33-year economic growth trends is relatively high (around 0,8). In other words, their economies expanded and contracted roughly during the same periods. The average economic growth during this period was also quite close; Azerbaijan's economy grew by an average of 3,91% annually, while Kazakhstan's grew by 2,95% (see Figure 3). However, during the last three crises - the global financial crisis of 2008-2009, the collapse of oil prices in 2015-2016, and the global pandemic of 2020-2021 - Kazakhstan's economy recovered more quickly, with less fluctuation in growth rates than Azerbaijan's. This difference can probably be explained by the level of economic diversification and the composition of their export baskets.

Figure: 3
**GDP Growth (Annual %) Comparison: Azerbaijan vs. Kazakhstan**
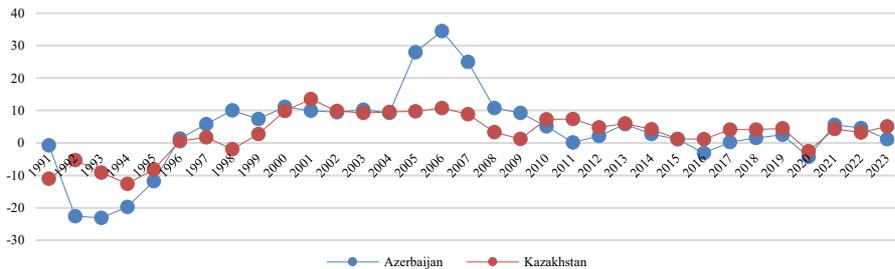
Source: World Bank Open Data (2024).

4.3. The Comparison of Azerbaijan and Kazakhstan's Economic Performances with Their Respective Neighbours

We can compare the two countries by analysing the economic performance of their neighbours. Although these neighbouring countries export other raw materials, such as metals, ores, and gas, they are not oil-rich like Azerbaijan and Kazakhstan. Among the three South Caucasus countries, Georgia demonstrated the weakest performance from 1991 to 2023 (see Figure 4). Its average annual economic growth over these 33 years was 1,64%. Despite lacking oil and natural gas, Armenia's average yearly economic growth rate over the same period is roughly the same as Azerbaijan's (average GDP growth from 1991 to 2023: 3,67%), where metals and precious stones account for a significant 40% of exports. The fact that oil- and gas-rich Azerbaijan exhibited approximately the same economic growth as resource-poor Armenia during these 33 years could be viewed as a moderate sign of the "resource curse". Countries rich in natural resources, especially crude oil, such as Azerbaijan, often experience an initial surge in economic growth driven by resource extraction and exports. However, this growth can be unsustainable if it leads to over-dependence on resource sectors. When resource prices decline, such countries may face severe economic downturns due to their lack of economic diversification.

**Figure: 4**
GDP Growth in South Caucasus (Annual %)
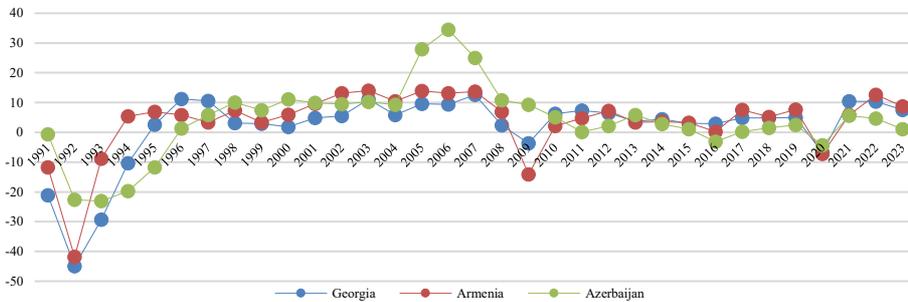
Source: World Bank Open Data (2024).

In Central Asia, the GDP growth rates of natural gas-rich Turkmenistan and Uzbekistan outperformed those of oil-rich Kazakhstan (see Figure 5). The national economies of Uzbekistan and Turkmenistan grew by an average of 4,45% annually from 1991 to 2023, while Kazakhstan's economy grew by 2,95%, Tajikistan's by 2,78%, and Kyrgyzstan's by 1,76%. Turkmenistan was the fastest-growing economy in the region between 2005 and 2014, but after 2015, Tajikistan took the lead. Tajikistan, a country rich in precious metals, especially gold, had an average economic growth of 7,4% over the 25 years from 1998 to 2023. During the same period, oil-rich Kazakhstan's average annual growth was 5,4%. Fluctuations in oil prices have also increased volatility in Kazakhstan's economic growth trend. However, since most Central Asian countries are rich in natural

resources, it is difficult to conclude that any one country shows signs of the "resource curse" solely on the basis of economic growth figures.

Figure: 5
GDP Growth in Central Asia (Annual %)
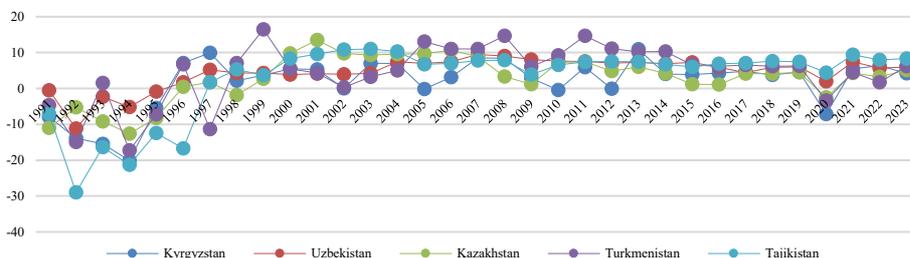
Source: World Bank Open Data (2024).

We must recognise that the emphasis on resource curse metrics that measure economic growth as a performance indicator is a widely debated topic in the current literature (Lahn & Stevens, 2018). For some scholars, GDP growth is only one measure of progress towards specific goals, such as societal prosperity and development, but not the ultimate aim. It has limitations regarding sustainability and its ability to reflect the actual performance of national economies. To address this gap, we can conceptually incorporate an income distribution dimension and human-centric metrics into the analytical framework (Aslanli, 2022).

4.4. The Correlation Between Economic Growth and Natural Resources

When we analyse the relationship between the average economic growth (shown on the horizontal axis in Figure 6) over approximately 30 years (from 1991 to 2021) and the ratio of total natural resource rent to GDP (vertical axis in Figure 6) in 12 countries within the former Soviet region (excluding the Baltic states), we can draw a meaningful conclusion. There is a noticeable moderate positive correlation between natural resource wealth and the economic performance of these countries, with a correlation coefficient of 0,53 (1991-2021) (see Figure 6).

Additionally, there is a positive (though not strong) correlation between the average annual GDP growth from 1991 to 2023 and the share of primary products (fossil fuels, ores and metals, agricultural raw materials) in a country's exports (2022) within resource-rich and resource-poor countries of the post-Soviet region. Countries with a relatively higher proportion of primary products in their export baskets showed slightly higher economic growth (correlation coefficient: 0,5) after the collapse of the USSR. Natural resources partly supported GDP growth rather than hindering the economic success of the post-Soviet states. However, there was an evident exception in the "resource-growth" relationship, as well.

Resource-rich Kazakhstan and resource-poor Moldova experienced similar average economic growth rates during the years of independence (see Table 1).

Figure: 6
Resource Abundance and Economic Performance in Post-Soviet States
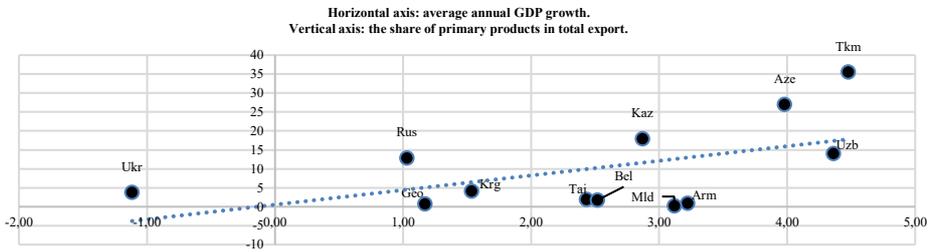
Source: UNCTAD (2024); World Bank Open Data (2024).

Table: 1
Natural Resources and Economic Growth

	Average annual GDP growth for 1991-2023 (%)	Share of primary products in a country's exports (2022)
Georgia	1,64%	22%
Armenia	3,67%	31%
Kyrgyzstan	1,76%	19%
Uzbekistan	4,45%	25%
Azerbaijan	3,91%	93%
Kazakhstan	2,95%	76%
Turkmenistan	4,45%	89%
Tajikistan	2,78%	55%
Russia	1,01%	67%
Belarus	2,34%	13%
Ukraine	-1,77%	8%
Moldova	2,74%	14%

Source: UNCTAD (2024); World Bank Open Data (2024).

4.5. The Correlation Between Natural Resources and GDP Per Capita

There is no significant correlation between the ratio of total natural resource rent to GDP and GDP per capita in Azerbaijan and Kazakhstan (in current USD). GDP per capita in Azerbaijan and Kazakhstan fluctuates within a specific range. GDP per capita in Kazakhstan ranged between 8000 and 14000 dollars from 2008 to 2023. Similarly, GDP per capita in Azerbaijan fluctuated between 4000 and 8000 dollars during the same period (see Figure 7). This phenomenon may also serve as an early warning of the "middle-income trap" in natural resource-rich countries that have not been sufficiently explored in the literature. Lee (2013) argues that although the transition from low to middle income tends to involve trade-based specialisation in sectors inherited from developed nations, the subsequent move from middle to high income involves deeper, technology-based specialisation in sectors with short cycle periods, where new technologies often emerge. It can be argued that dependence on extractive industries may hinder high-technology specialisation due to a combination of factors: incentives for rent-seeking behaviour, increasing reliance on imports, volatility in the current account affecting inputs to production, subsidised fuel prices that impact

efficiency by favouring energy-intensive preferences, and a lack of sustainable motivation for private sector innovation.

Figure: 7
GDP Per Capita (Current USD): Azerbaijan and Kazakhstan

Source: World Bank Open Data (2024).
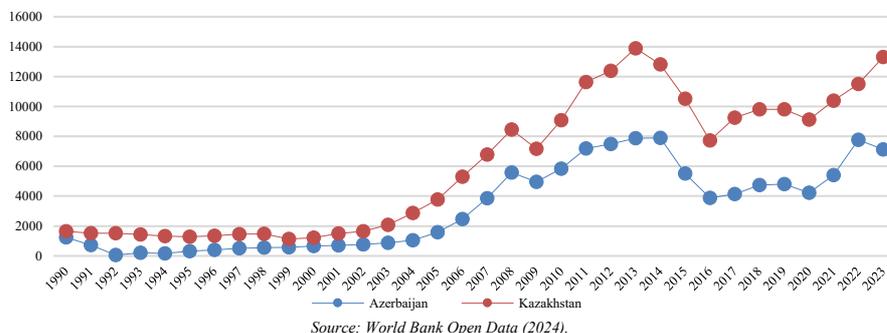
4.6. Economic Growth Volatility in Azerbaijan and Kazakhstan

Oil-rich Azerbaijan has experienced some of the highest levels of volatility in economic growth among post-Soviet states from 1991 to 2023. Other countries in the same group with relatively higher volatility were those rich in precious minerals and metals, as well as those facing military conflicts with neighbouring nations, such as Georgia, Armenia, Tajikistan, and Ukraine. Azerbaijan recorded the highest levels of economic volatility from 2000 to 2023 (and from 2003 to 2023), partly due to its heavy reliance on crude oil in its GDP, public finances, and total exports, driven by significant fluctuations in oil prices and resulting volatility in oil revenues. However, Kazakhstan, which depends less on crude oil for its GDP, budget, and exports, has experienced fewer economic fluctuations. This trend appears to support Ross's (2012) argument that the main distinguishing feature of the economic growth trend in oil-rich countries is not outperformance or underperformance, but the volatility of real GDP growth relative to the long-term trends of non-oil or "less-oil" economies. Such volatility, stemming from the "resource curse," can hinder sustainable development and reduce private-sector innovation incentives, potentially leading to diversification in various ways.

Countries rich in natural resources often experience rapid economic growth initially from the extraction and sale of resources such as oil and gas (Table 2). However, this growth may not be sustainable if it leads to excessive dependence on the resource sector, as seen in Azerbaijan. Such reliance can overshadow other industries, reducing economic diversity and making the economy vulnerable to commodity price fluctuations, including oil prices. When resource (oil and gas) prices fall, these countries can face significant economic challenges because they lack a diversified economic base.

Table: 2
Volatility in Economic Growth*

Countries	Standard Deviation (p) or Volatility in Economic Growth		
	1991-2023	2000-2023	2003-2023
Georgia	11,99	4,31	4,54
Armenia	10,57	6,54	6,78
Kyrgyzstan	7,20	3,65	3,77
Uzbekistan	4,27	1,76	1,63
Azerbaijan	**11,96**	**9,30**	**9,88**
Kazakhstan	6,38	3,72	3,31
Turkmenistan	7,98	4,32	4,29
Tajikistan	10,02	1,68	1,58
Russia	6,02	4,04	4,01
Belarus	6,14	4,36	4,63
Ukraine	9,49	8,88	9,19
Moldova	5,39	4,96	5,18

* *Volatility in economic growth was calculated through the standard deviation from the average real GDP growth.*
Source: World Bank Open Data (2024).

4.7. Preliminary Assessment of Economic Growth Dimension of the 'Resource Curse'

Azerbaijan and Kazakhstan could not demonstrate higher average growth than most of their non-extractive, former-Soviet exporting neighbours. Also, they exhibited relatively higher levels of economic growth volatility over the last 30 years. Oil-rich Kazakhstan and oil-and-gas-rich Azerbaijan have not managed to outperform their neighbours, which are rich in metals, minerals, and natural gas. Therefore, it would be an overstatement to claim that the abundance of natural resources generally has a negative effect on the long-term economic growth of post-Soviet states and that the symptoms of the "resource curse" are immediately evident. Perhaps we can discuss the "oil curse" in the specific cases of Kazakhstan and Azerbaijan, where oil wealth did not notably boost economic growth. However, when comparing resource-rich countries with each other or with resource-scarce nations, it is crucial to recognise that they experience different rates of economic growth at various periods. As Ross (2012: 13) states, "while economic growth in the oil states has been unusually volatile, in the long run it has been neither faster nor slower than in the rest of the world".

5. Diversification Linkages

### 5.1. Economic Diversification in Kazakhstan and Azerbaijan

The economies of Azerbaijan and Kazakhstan depend heavily on the oil sector, making their fiscal and trade balances susceptible to fluctuations in oil prices. This remains true despite ongoing efforts to diversify their economies and foreign trade through various policies and programmes. The oil and gas sector makes up about 20% of GDP, over 50% of exports, and more than 30% of government revenues in Kazakhstan (2023) (S&P Global, 2024). The structural non-oil deficit reached 8,7% of GDP due to strong spending growth in 2023 (expansionary fiscal policy) (IMF, 2024a). Additionally, the non-oil fiscal balance accounted for 8% of GDP in 2022 (IMF, 2024b).

In Azerbaijan, the oil sector contributed 48% of GDP in 2022 and 37% in 2023. The non-oil-gas industry accounted for only 8% of GDP in 2023 (Iqtisadiyyat Nazirliyi, 2023). Nearly 30% of investments in fixed capital were allocated to the oil sector, while 70% went to the non-oil sector in 2023. The ratio of the central budget's non-oil primary deficit to non-oil GDP was 22,5% in 2023, which is 2,5 percentage points below the target of 25% for 2023 (17,5% by the end of the medium-term period or 2026). The public debt-to-GDP ratio was 21,8%, remaining within the target set for the medium-term period (30%) (Maliyyə Nazirliyi, 2024). Diversification of national economies remains a crucial prerequisite and condition for fiscal sustainability and a balanced foreign trade structure in Kazakhstan and Azerbaijan.

We could use alternative indicators to compare the economic and export diversification performance of Azerbaijan and Kazakhstan, based on the methodology suggested by Lashitew, Ross, & Werker (2021) for the nexus between the "resource curse" and economic and export diversification. We can use manufacturing value added (MVA) per capita for economic diversification and manufactured exports per capita for export diversification, based on the World Bank and UNECE's statistical data. UNSTAT defines manufacturing as an economic production sector or "units engaged in the physical, or chemical transformation of materials, substances, or components (or raw materials) into new products" (UNSTATS, 2002; World Bank, 2024).

Manufacturing value added (MVA) per capita is calculated by dividing MVA (constant 2010 USD) by the population of Azerbaijan and Kazakhstan (see Figure 8-9). The MVA per capita in Azerbaijan is significantly lower (approximately 400 USD in 2023) than in Kazakhstan (approximately 1400 USD in 2023) (UNECE, 2024; WB Prosperity Data, 2024). Additionally, from an export diversification perspective, manufactured exports per capita in Kazakhstan (approximately 700 USD in 2021) were considerably higher than in Azerbaijan (approximately 200 USD in 2021) (UNIDO 2024). When analysing the shares of manufacturing value added in total GDP and of manufacturing exports in total exports for both countries, it is evident that Azerbaijan underperforms Kazakhstan.

Figure: 8
Manufacturing Value Added Per Capita (Constant 2010 USD)
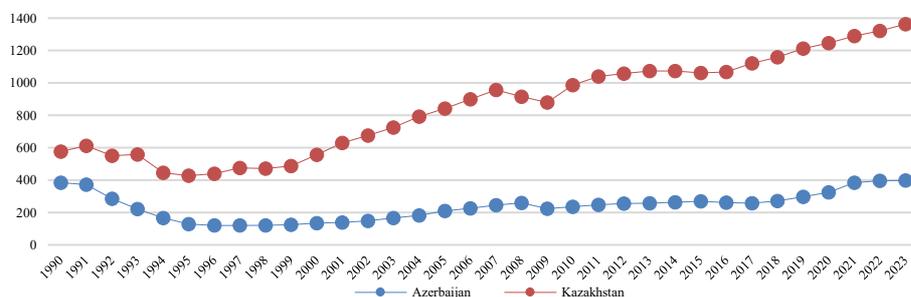
Source: UNECE Data Portal (2024), World Bank Open Data (2024) and authors' calculations.

Figure: 9
**Manufactured Exports Per Capita (USD)**
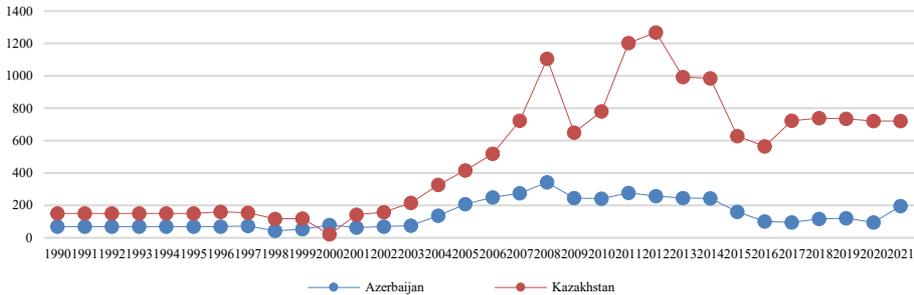
Source: UNECE Data Portal (2024), World Bank Open Data (2024) and authors' calculations.

5.2. Export Diversification in Azerbaijan

Azerbaijan's export basket heavily depends on crude oil and natural gas. The share of crude oil in the total annual exports decreased from 92,5% in 2008 to 48% in 2023 due to declining crude output and resource depletion. Meanwhile, the share of natural gas increased from 1,5% in 2014 to 40% in 2023 (see Figure 10). Additionally, the share of processed oil products in total exports declined from 27,5% in 2007 to 1,7% in 2023, reflecting a shrinking capacity of oil-processing facilities. Although the share of crude oil and oil products decreased, and that of natural gas increased, the overall share of fossil fuels in Azerbaijan's export basket has not changed significantly. The average annual share of total hydrocarbon exports in Azerbaijan's export basket was approximately 90% between 2003 and 2023.

Figure: 10
The Share of Crude Oil, Natural Gas, and Oil Products in Azerbaijan's Total Exports (%)
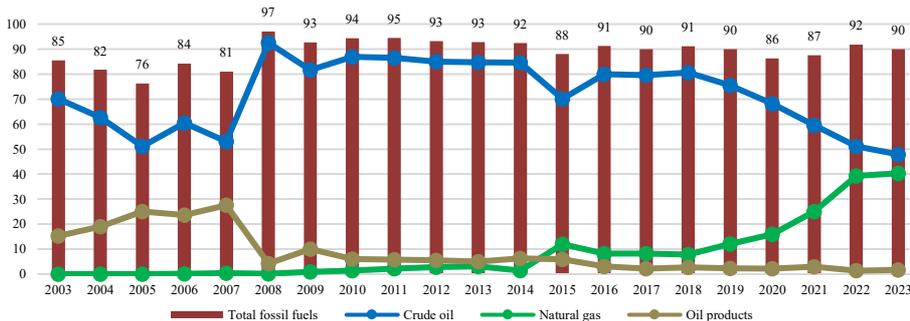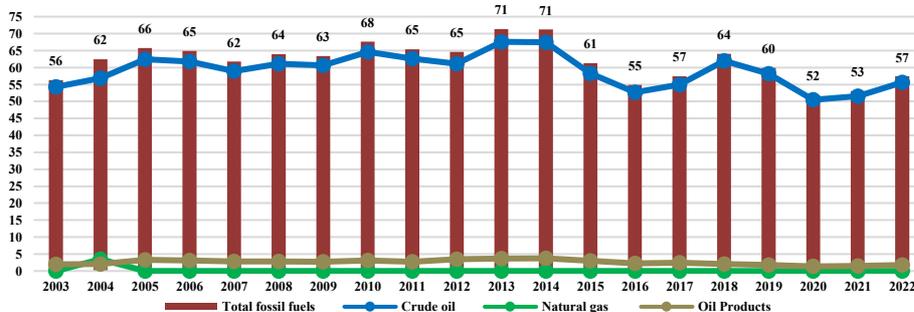

Source: Trade Map Platform (2024).

Azerbaijan's non-oil and gas exports mainly consist of agricultural products like fruits and vegetables, chemical industry products (such as methanol and nitrogen fertiliser),

plastics and their derivatives (e.g., polyethene and polypropylene), cotton fibre and yarn, electricity, ferrous metals, and aluminium. Besides the concentration at the product level, there is also a geographic concentration in Azerbaijan's exports. Italy is a key export destination, accounting for around 45% of exports on average from 2022 to 2023. Other significant markets for Azerbaijan's oil and gas exports include Turkey, Israel, Greece, and India. The primary traditional markets for Azerbaijan's limited non-oil and gas exports are Russia, Turkey, and Georgia. It is clear that Azerbaijan urgently needs to diversify both the composition of its export basket and its geographical distribution.

5.3. Export Diversification in Kazakhstan

Kazakhstan's export portfolio depends less on fossil fuels, especially crude oil, than Azerbaijan's does. The share of total fossil fuels—crude oil, natural gas, and oil products—in the export portfolio hovered around 62% from 2003 to 2022 (see Figure 11). Natural gas and oil products have traditionally played a minor role in Kazakhstan's exports. The average annual proportion of crude oil in Kazakhstan's total exports was approximately 60% during 2003-2022. The peak of crude oil's share in total exports occurred in 2013-2014, reaching 67-68%. The lowest levels were observed in 2016 and 2020, due to declines in the volume and prices of exported oil.

Figure: 11
The Share of Crude Oil, Natural Gas, and Oil Products in Kazakhstan's Total Exports (%)


Source: Trade Map Platform (2024).

Kazakhstan's export basket is relatively more diverse than Azerbaijan's. It includes commodities such as copper, ferroalloys, radioactive chemical elements, radioactive isotopes, wheat and meslin, coal, zinc, iron and steel, sulphur, aluminium, silver, and precious metal ores, which constitute a significant part of its exports. The geographical structure of Kazakhstan's exports is also more varied than that of Azerbaijan's. In 2023, Kazakhstan's main export partners were Italy (19%), China (19%), Russia (12%), the Netherlands (5%), Turkey (5%), and South Korea (5%). Its main import partners were China (27%), Russia (27%), Germany (5%), the USA (4%), South Korea (3,6%), and Turkey

(3,3%) (Kazakhstan Byuro Natsionalnoy Statistiki, 2023). Overall, it is evident that Kazakhstan also needs to diversify both the composition of its commodities and the geographical structure of its export basket. However, its concentration ratio is less extreme than Azerbaijan's.

6. Fiscal Linkages

Experts often cite the spending effect as a typical symptom of the resource curse. This phenomenon occurs when resource-rich countries, using extra income usually called "windfall" money, unnecessarily increase state budget expenditures (Arezki & Alichi, 2009). The main reason is that, due to the appreciation of the national currency, export of non-oil commodities becomes more difficult for resource-rich countries, making them less competitive with imports (Humphreys et al., 2007). Experts highlight the high level of current expenditures in resource-rich countries, driven by budget surpluses, which create additional market demand. However, these opportunities are primarily used for non-tradable sectors and ineffective maintenance of employment in the public sector. Therefore, in oil-dependent countries, the state usually acts as the employer of first resort (Tamirisa & Duenwald, 2018). The level of public expenditure as a percentage of GDP in Kazakhstan and Azerbaijan does not differ significantly from that of other post-Soviet, poor, resource-rich countries (see Figures 12-13). It should be noted that, as a legacy of the Soviet era, budget expenditure levels hover around 30%, which remains an average indicator for post-Soviet countries.

Figure: 12
Azerbaijan: GDP and Public Spending (Mln. AZN) (1995-2022)
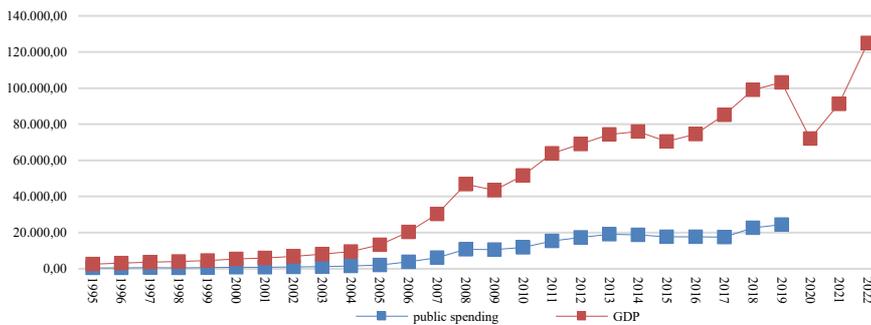
Source: State Statistical Committee of the Republic of Azerbaijan (2024).

Figure: 13
Kazakhstan: GDP and Budget Spending (Mln. USD) (1995-2022)
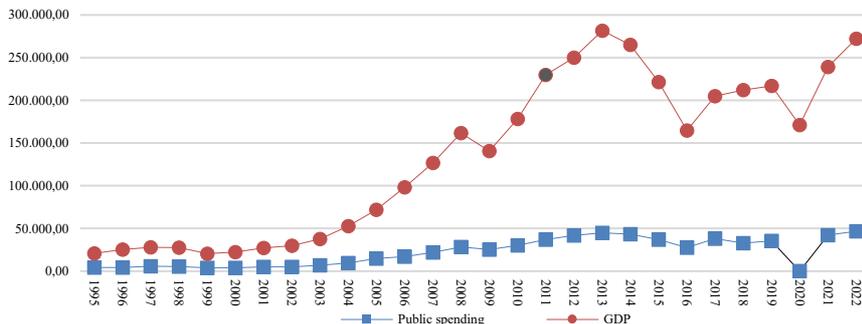

Source: Bureau of National Statistics, Kazakhstan (2024).

Another more significant and widely recognised characteristic of the spending effect symptom is the typical procyclical behaviour of budgeting, its reliance on the overall oil price, and its sensitivity to income volatility. In general, procyclicality has been a feature of budgeting in resource-rich countries (Frankel, 2012). The boom-bust spending volatility effect was evident in purely oil-dependent countries, such as during the 1980s, where Venezuela and Nigeria's expenditure volatility closely followed revenue volatility (NRGI, 2015). Today, amid increasingly turbulent global and regional circumstances, the issue of procyclicality is becoming even more severe. Uncertainties surrounding the energy transition and social pressures lead to higher spending, which, in turn, drives inflation and macroeconomic imbalances (IMF, 2024b).

However, when we examined the cases of Azerbaijan and Kazakhstan over the past 30 years, we did not observe these symptoms manifesting in their pure forms in either country. Moreover, the level of budget expenditure in resource-rich and neighbouring resource-poor countries does not differ significantly. The relationship between oil rents and public spending in both countries shows a weak correlation. In other words, the dynamics of public expenditures in both countries appear smooth despite the volatility of oil rents (see Figure 14-15).

Figure: 14
Azerbaijan: Trends of Oil Rents and Public Spending (as % in GDP) (1995-2021)
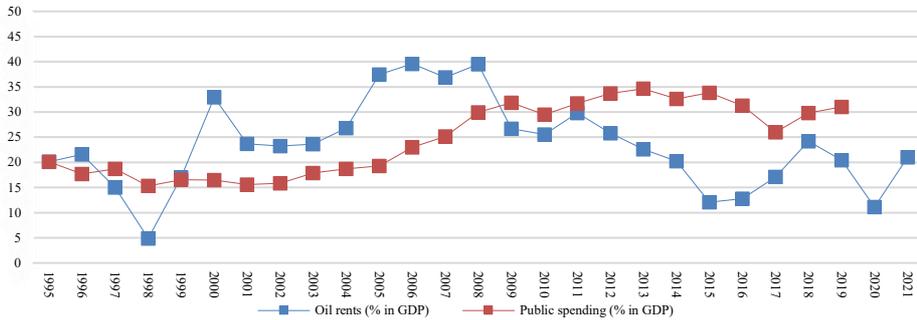
Source: World Bank Data Azerbaijan (2024).

Figure: 15
Kazakhstan: Trends of Oil Rents and Public Spending (as % in GDP) (1995-2021)
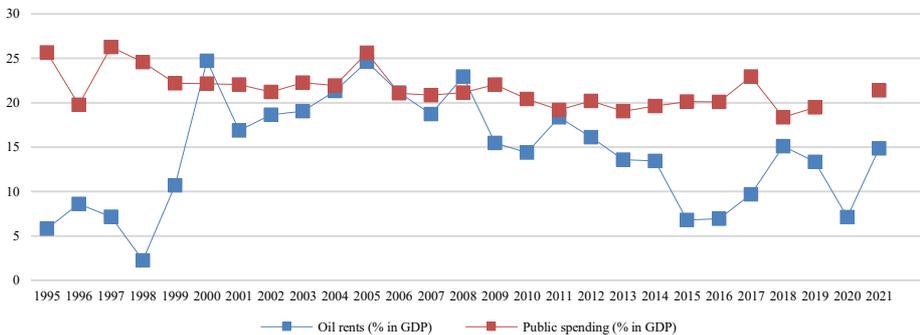
Source: World Bank Data Kazakhstan (2024).

The mitigation of procyclicality is mainly due to the presence of sovereign wealth funds in both countries. The Azerbaijan State Oil Fund (SOFAZ), established in 1999, and the Kazakhstan National Fund, founded in 2000, are actively incorporated into public budgets. Since 2003, SOFAZ has made annual transfers to the budget, with the current transfers accounting for around half of state budget revenues.

However, as shown on the graph, the dynamics of public expenditures in Azerbaijan differ slightly from those in Kazakhstan. Azerbaijan exhibits an upward trend, while Kazakhstan shows a downward trend. Another distinctive feature is the volume of oil fund assets used in public spending, which will be discussed below. Both characteristics stem from Azerbaijan's greater reliance on oil than Kazakhstan's.

The existence of SWFs substantially alters the symptoms of the resource curse. Sterilisation and withdrawal of funds for domestic use break the direct link between oil rent and key macroeconomic indicators, thereby significantly mitigating the adverse effects of the "resource curse" on the economy. However, this is a short-term effect that still reflects the current relatively prosperous situation, like a distorting mirror, postponing the problem for the long term.

A similar practice exists in Kazakhstan (see Table 3). In 2005, the government approved the first medium-term concept for the formation and use of funds of the National Fund of the Republic of Kazakhstan (NFRK). The concept specified a guaranteed transfer to the republican budget of 8,0 billion USD and included an option to adjust it by 15%, depending on economic conditions. Additionally, the concept established a minimum balance for the NFRK of 20% of gross domestic product (GDP), which was later increased to 30% of GDP in 2016 (ADB, 2020).

Table: 3
The Key Characteristics of the Fiscal Rules in Azerbaijan and Kazakhstan

	Key Targets	Measurement
Azerbaijan	Non-oil primary deficit of the consolidated budget	- Ratio of non-oil primary deficit of the consolidated budget to non–oil GDP - Ratio of public debt to GDP (%)
Kazakhstan	Non-oil deficit in % of GDP	- "Guaranteed" and "targeted" transfers to the budget - Assets are to be maintained at least at 30% of GDP - Public debt is not to exceed the size of NFRK assets.

Source: Milli Meclis (2021); World Bank Kazakhstan (2024).

In 2017, Kazakhstan adopted a new fiscal rule. According to this revised rule, "i) the non-oil deficit, the main anchor of fiscal policy, was to be progressively decreased to 7% of GDP by 2020, and 6% by 2025; ii) guaranteed transfers from the NFRK were to be reduced from the 8 billion USD of the time to the equivalent of 6 billion USD by 2020; iii) the NFRK assets are to be maintained at least at 30% of GDP" (ADB, 2020). As in the case of Azerbaijan, Kazakhstan is trying to break the direct link between the volatility of budget revenues and the volatility of crude oil prices on world markets, as well as the cyclical nature of budget revenues. Thus, the parameters of the state budget in both countries exhibit relatively stable dynamics, in contrast to the more volatile dynamics of oil rents.

SWFs of both countries serve as shock absorbers against volatility. Consequently, budgets in both nations remain relatively comfortable, and the test of cyclicality here is even less rigorous than in resource-poor countries with similar conditions. Generally, weak institutional quality exerts a greater influence on fiscal procyclicality than any purely economic factors, such as the level of oil dependence or the structural model (Çiçekçi & Gaygısız, 2023).

7. Political and Institutional Linkages

7.1. Polity Scores of Oil-Rich and Oil-Poor Post-Soviet States

In addition to the subtle interaction between oil revenues and institutional quality, oil abundance (reserves, wealth, assets, and revenues) can shape the character of political regimes. Ross (2012) highlights that "Polity" is a measure of a country's regime type within its political institutions. The "Polity5" dataset is a widely used comparative academic resource for measuring and examining democracy and autocracy metrics, or "authority characteristics of states in the world system" (Centre for Systemic Peace, 2024). The Centre produces the "Polity5" dataset for Systemic Peace (USA) and offers information on the levels of democratic and autocratic authority within governing institutions. The "Polity5" dataset assigns numerical scores to states based on their political regime characteristics, including the degree of competition, openness, and institutionalisation of the political systems.

These scores range from -10 (fully institutionalised autocracies) to +10 (fully institutionalised democracies), with 0 representing a neutral, hybrid or mixed regime. The "Polity5" dataset for Azerbaijan, Kazakhstan, and other post-Soviet states covers the period from 1991 to 2018 (see Table 4). The "Polity Score" can also be translated into political regime categories in a proposed 3-block classification of "autocracies" (-10 to -6), "anocracies" (-5 to +5), and "*democracies*" (+6 to +10).

The average "Polity Scores" of oil-rich Azerbaijan and Kazakhstan from 1991 to 2018 were almost identical (-6), indicating that their political regimes were classified as "autocracies". The scores of Azerbaijan and Kazakhstan have changed little since 1995, the year when autocratic institutions were partly institutionalised. Consequently, there is no need to calculate the correlation between "Polity Scores" and fluctuating oil revenues in both countries. A strong correlation (0,92) exists between Azerbaijan's and Kazakhstan's "Polity Scores" from 1991 to 2018. This suggests that the oil-rich states of the South Caucasus and Central Asia followed similar trajectories in terms of political regime quality during their periods of political independence.

Regarding the "authority characteristics of states", two oil-poor neighbours of Azerbaijan and Kazakhstan, namely Armenia and Kyrgyzstan, were classified as "anocracies" that combine key aspects of both democracies and autocracies. The average "Polity Score" for Armenia was 4, and for Kyrgyzstan, it ranged from 1991 to 2018. However, if we focus on the "Polity Scores" for 2018 — 7 for Armenia and 8 for Kyrgyzstan, the latest available data, both countries' political regimes were identified as "democracies". The correlation between "Polity Scores" for Azerbaijan and Armenia was nearly zero, whereas between Kazakhstan and Kyrgyzstan, it was approximately -0,4 from 1991 to 2018. This indicates that oil-rich and oil-poor pairs in the South Caucasus and Central Asia followed markedly different paths in terms of power concentration, power competition, and the institutionalisation of their political systems after the collapse of the Soviet Union.

Table: 4
Comparative "Polity Scores" for Azerbaijan, Kazakhstan, and Their Oil-Poor Neighbours

	Azerbaijan	Kazakhstan	Armenia	Kyrgyzstan
1991	-3	-3	6	-3
1992	1	-3	6	-3
1993	-3	-3	6	-3
1994	-3	-3	6	-3
1995	-6	-6	1	-3
1996	-6	-6	-6	-3
1997	-6	-6	-6	-3
1998	-7	-6	5	-3
1999	-7	-6	5	-3
2000	-7	-6	5	-3
2001	-7	-6	5	-3
2002	-7	-6	5	-3
2003	-7	-6	5	-3
2004	-7	-6	5	-3
2005	-7	-6	5	3
2006	-7	-6	5	4
2007	-7	-6	5	3
2008	-7	-6	5	3
2009	-7	-6	5	1
2010	-7	-6	5	0
2011	-7	-6	5	7
2012	-7	-6	5	7
2013	-7	-6	5	7
2014	-7	-6	5	7
2015	-7	-6	5	7
2016	-7	-6	5	7
2017	-7	-6	5	8
2018	-7	-6	7	8

*Source: Centre for Systemic Peace (2024).*

Given the stable, consistent trends in "Polity Scores" for oil-rich post-Soviet states from the 1990s to the 2010s, we cannot determine the impact of oil revenues on the nature of political regimes in these countries. The volatility of "Polity Scores," as measured by standard deviation, was considerably higher in Armenia (3,05) and Kyrgyzstan (4,55) than in Azerbaijan (1,89) and Kazakhstan (1,07). This clearly demonstrates the long-term stability of political regimes in oil-rich post-Soviet states compared to oil-poor states. Therefore, we will refer to the World Bank's (WB) Worldwide Governance Indicators (WGI) to explore any correlation between oil revenues and institutional qualities.

7.2. Government Effectiveness in Azerbaijan and Kazakhstan

The World Bank's Worldwide Governance Indicators (WGI) measure perceptions of governance across various actors. The WGI includes six aggregate governance indicators for more than 200 countries, covering 1996-2022: voice and accountability; political stability and absence of violence/terrorism; government effectiveness; regulatory quality; rule of law; and control of corruption. In this research, we focus on two relevant indicators from WGI to evaluate institutional quality: government effectiveness and regulatory quality. The government effectiveness indicator "reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" (Kaufmann & Kraay, 2023). The regulatory

quality indicator "reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development" (Kaufmann & Kraay, 2023). The scores for government effectiveness and regulatory quality range methodologically from weak (-2,5) to strong (2,5) governance capacity.

Figure: 16
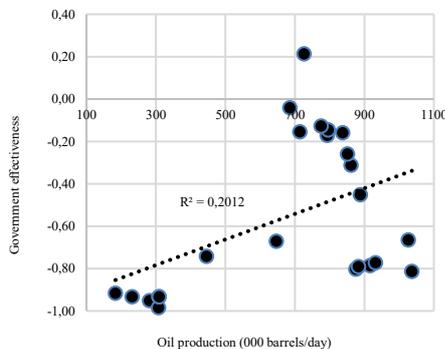**Government Effectiveness: Azerbaijan vs. Kazakhstan**
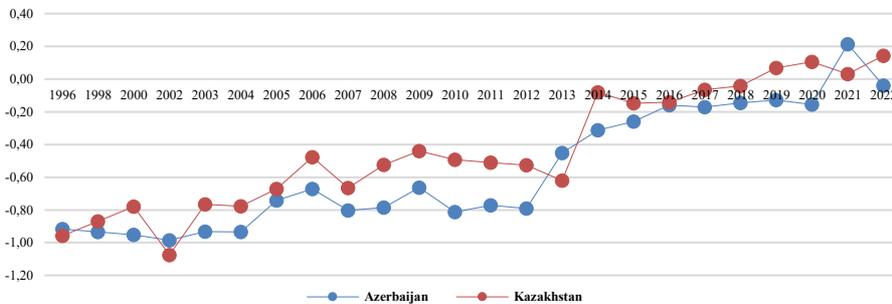
Source: Kaufmann & Kraay (2023); authors' calculations.

The performance of Azerbaijan and Kazakhstan in government effectiveness followed a very similar trajectory (correlation coefficient: 0,93) and volatility (approximately 0,37 standard deviation) (see Figure 16). In terms of cyclicality, 2012-2013 marked a turning point for the governments of Azerbaijan and Kazakhstan, with the start of rapid improvements. There is a positive correlation between government effectiveness and oil prices in Azerbaijan (0,7) and Kazakhstan (0,8) from 1996 to 2011. Conversely, a negative correlation exists between government effectiveness and oil prices in both countries from 2012 to 2022.

In the first period, increasing government effectiveness was marked by rising crude oil prices. During the second period, government effectiveness continued to improve despite more volatile oil prices. Unlike oil prices, Azerbaijan (0,45) and Kazakhstan (0,82) show differing correlations between government effectiveness and oil production from 1996 to 2022 (see Figures 17 and 18). There is a weak positive correlation between government effectiveness and the share of fuel exports (mainly crude oil and oil products) in Azerbaijan's (0,38) and Kazakhstan's (0,34) total merchandise exports. However, the correlation between government effectiveness and the share of oil rents in GDP was slightly negative in Azerbaijan (-0,42) and Kazakhstan (-0,36).

Figure: 17
Government Effectiveness and
Oil Production in Azerbaijan
(1996-2022)

Figure: 18
Government Effectiveness and
Oil production in Kazakhstan
(1996-2022)

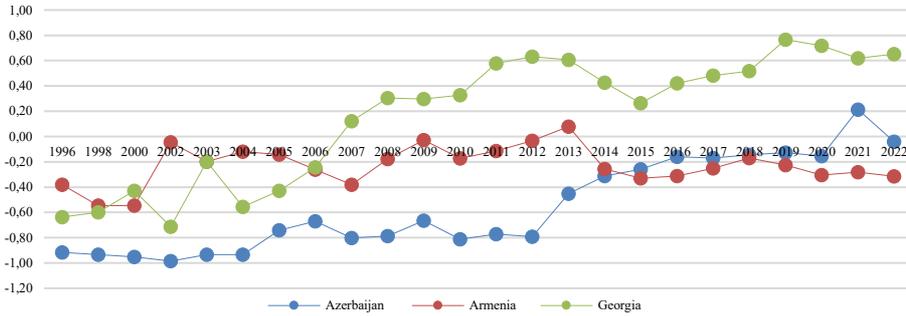*Source: Kaufmann & Kraay (2023); BP Energy Institute (2024); authors' calculations.*
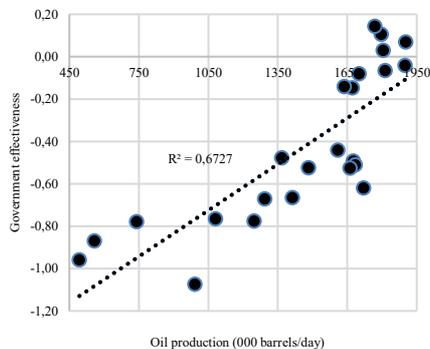
We can conclude that the effectiveness of the governments in Azerbaijan and Kazakhstan has improved, especially since the 2010s. This improvement is evident in the quality and political independence of public services and the civil service, as well as in the quality of public policy formulation and implementation, and in bureaucratic credibility. However, this does not imply that government effectiveness declined in Azerbaijan and Kazakhstan between 1996 and 2011. On the contrary, the efficacy of governments either remained stable or increased slightly before the early 2010s. Nonetheless, oil production, oil prices, oil rents as a share of GDP, and the share of fuel exports in Azerbaijan and Kazakhstan showed different trends from 1996 to 2022. The only exception is the strong positive correlation between Kazakhstan's oil production and government effectiveness scores during the entire period (the accumulated effect of oil on institutions).

Let's compare Azerbaijan's government effectiveness scores with those of other South Caucasus states. We can see that, despite being oil-rich, Azerbaijan had lower government effectiveness scores than oil-poor Georgia between 1996 and 2022 and lower scores than oil-poor Armenia between 1996 and 2014 (see Figure 19). However, when we compare the effectiveness of governments in Central Asian countries, we see a different picture between oil-rich and oil-poor countries compared to the South Caucasus. Since 2005, Kazakhstan's government effectiveness rating has been higher than that of other oil-rich and oil-poor Central Asian countries. Countries in the region rich in natural gas, such as Uzbekistan and Turkmenistan, performed very differently between 1996 and 2022 (see Figure 20).

Figure: 19
Government Effectiveness in the South Caucasus States

Source: Kaufmann & Kraay (2023); authors' calculations.

Figure: 20
Government Effectiveness in Central Asia
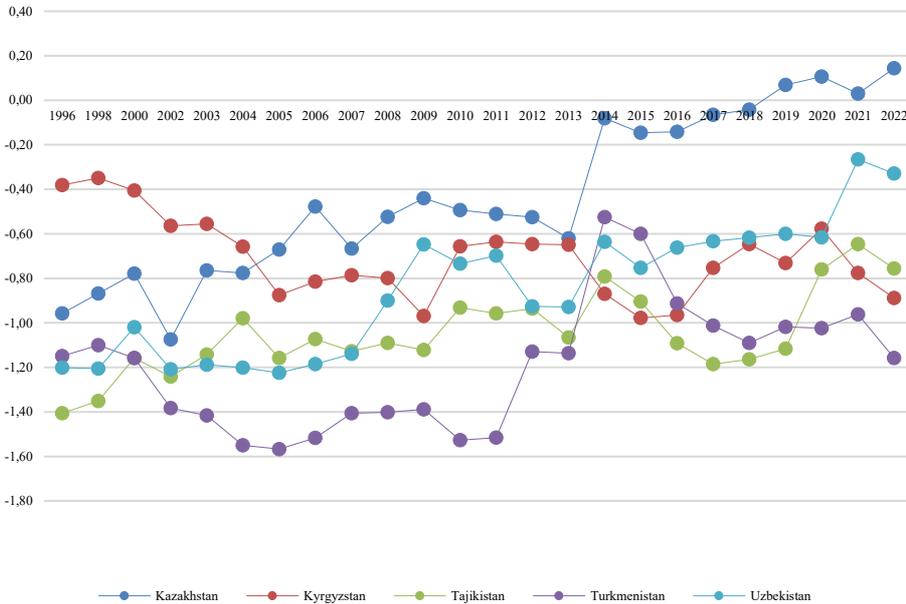
Source: Kaufmann & Kraay (2023); authors' calculations.

7.3. The New 'Social Contract' and Institutional Settings in Azerbaijan and Kazakhstan

The correlation between "Voice and Accountability" scores (which include political rights such as the freedom to vote, freedom of expression, freedom of association, and free media) and "Government Effectiveness" scores (which encompass the quality of public services, the calibre of the civil service, its independence from political pressures, the quality of policy formulation and implementation, and the reliability of the government's commitments to such policies) is demonstrated in Table 5 from the World Bank's Worldwide Governance Indicators (WGI) database for the South Caucasus (Azerbaijan and neighbouring countries), Central Asia (Kazakhstan and neighbours), and Russia. These countries combine oil-rich and oil-poor post-Soviet states.

Table 5 also illustrates the share of oil rents in GDP for the countries mentioned above. Countries with relatively higher proportions of oil rents or revenues in GDP, such as Azerbaijan and Kazakhstan, also exhibit a stronger negative correlation between government effectiveness and political rights. This higher negative correlation indicates that these countries improved government effectiveness while restricting political rights. It was a "social contract" that envisioned more effective social-economic and stabilisation policies, thanks to substantial oil revenues, in exchange for limited political rights. Oil-poor countries like Georgia had a different "social contract" due to the lack of significant oil revenues and a distinct political landscape. These countries improved government effectiveness alongside the expansion of political rights.

Table: 5
The Correlation Between Political Rights, Government Effectiveness Scores, and Oil Rents' Shares in GDP

Countries	Correlation	Oil rents (% in GDP)
Azerbaijan	-0,89	21%
Kazakhstan	-0,56	15%
Russia	-0,47	10%
Armenia	-0,29	0%
Kyrgyzstan	-0,28	0,1%
Tajikistan	-0,26	0,3%
Turkmenistan	-0,21	6%
Uzbekistan	0,39	0,9%
Georgia	0,68	0%

Source: Kaufmann & Kraay (2023); World Bank Comparative (2024); authors' calculations.

8. Discussion of the Findings

The current research used a quantitative method to collect and analyse data to identify characteristic patterns in resource-rich post-Soviet economies and to test causal relationships between natural resources and selected institutional, economic, and political variables. The study particularly focused on three economic features of the "resource curse" phenomenon:

(a) volatility in the long-term economic growth performances of Azerbaijan and Kazakhstan.

(b) Inadequate contribution of natural resources (particularly oil) to economic growth.

(c) There is an urgent need to diversify the structure of national economies and export portfolios.

The statistical analysis of selected quantitative data and related conclusions support the argument that the main distinguishing feature of the economic growth trend in oil-rich countries is not outperformance or underperformance, but the volatility of real GDP growth relative to the long-term GDP growth trends of non-oil or "less-oil" countries. Volatility, as one of the key features of the "resource curse," accompanies resource-rich post-Soviet countries such as Kazakhstan and Azerbaijan throughout the entire value chain of extractive industries, including oil and gas production, fiscal revenues from resource exports, and economic growth performance. Volatility in oil prices has increased fluctuations in economic growth in Kazakhstan and Azerbaijan.

The comparison between resource-rich Azerbaijan and Kazakhstan with their resource-poor neighbours showed that they experienced similar economic growth from 1991 to 2023, indicating a moderate manifestation of the "resource curse". Data analysis revealed that while natural resources did not necessarily hinder the economic success of resource-rich post-Soviet states, their contribution to GDP growth was limited. Azerbaijan and Kazakhstan did not outperform many of their non-extractive, former Soviet neighbours in average growth rates, and both countries exhibited notably higher economic growth volatility over the past 30 years.

Despite ongoing efforts to diversify their economies and foreign trade through various policies and programmes, Azerbaijan and Kazakhstan continue to heavily rely on the oil sector, making their fiscal and trade balances vulnerable to fluctuations in oil prices. Diversification of their national economies is vital not only for stable, long-term economic growth but also for ensuring fiscal policy sustainability and a balanced export structure in both countries. By comparing the share of manufacturing industry value added in total GDP and the share of manufacturing industry exports in total exports, it becomes evident that Azerbaijan lags behind Kazakhstan in terms of diversification. While Kazakhstan also needs to diversify the composition and geographic structure of its export basket, its level of dependence is lower than Azerbaijan's.

Kazakhstan and Azerbaijan struggle between procyclical and countercyclical fiscal policy behaviours, with sovereign wealth funds (SWFs) in both countries acting as mitigators of procyclicality and shock absorbers against volatility. Fiscal policy functions as a "transhipment belt" connecting the economic and political symptoms of the "resource curse" through public expenditures. Oil revenues have solidified political regimes and reinforced power concentrations in Azerbaijan and Kazakhstan. In both countries, the current "social contract" indicates relatively socio-economic improvements, long-term stabilisation policies, and better public services funded by substantial oil revenues, in

exchange for political rights. Azerbaijan and Kazakhstan have relatively strengthened government effectiveness while delimiting political rights.

Testing for all symptoms of the resource curse in post-Soviet oil-rich countries, we identified specificities that can be interpreted only from a political economy perspective. Thus, while the apparent economic symptoms, such as slow economic growth and spending effects, manifest as subtle signals, the institutional and governance indicators primarily reflect the significant impact of this disease on the country's environment. In other words, the primary focus of the "resource curse" is on the political rather than the economic framework. Shifting the focus of the "resource curse" from a purely economic framework to a political-economic one complicates, to some extent, the way to measure this "disease".

In this context, fundamental macroeconomic indicators that initially suggest a benign economic outlook can be misleading. Furthermore, weak but relatively stable economic growth combined with fiscal "soundness" may lead to complacency in the government, as there are no apparent concerns about stability. However, such a drastic "transhipment" could worsen the political economy outlook, delay the essential diversification of the economy, and hinder the government's reform efforts. Volatility in economic growth and oil and gas revenues also limits the long-term planning capacity of governments in resource-rich post-Soviet states.

Alongside governments, various actors, such as oil and gas companies and non-state actors, can serve as transmission channels between natural resources and different institutional settings, influencing "resource curse" symptoms. The article does not adopt actor-specific or agent-centred approaches to identify the institutional factors behind the "resource curse" in resource-rich post-Soviet countries. This limitation can be seen as a path for future research. Conversely, the findings presented here can assist both researchers and policymakers in reconsidering the "resource curse" and viewing the phenomenon from a fresh perspective. Undoubtedly, further research and the development of new tools are necessary for a more detailed analysis of all aspects of the "resource curse" in today's context.

9. Conclusion and Recommendations

The article has analysed macroeconomic, diversification, fiscal, and institutional linkages and transmission channels between natural resources, more specifically oil, and economic and other symptoms of the "resource curse" in Kazakhstan and Azerbaijan. Oil and gas production volatility in Kazakhstan and Azerbaijan was accompanied by severe price volatility, negatively affecting GDP growth and other socio-economic indicators. Kazakhstan's economy recovered more quickly, and its economic growth rates fluctuated less during periods of monetary crisis than Azerbaijan's did. This could probably be explained by the level of diversification in the economies and export baskets of both countries. However, oil-rich Kazakhstan and oil-and-gas-rich Azerbaijan have not

demonstrated better long-term economic growth than their neighbouring countries, which are rich in metals, minerals, and gas.

Besides economic growth, GDP volatility is also an essential indicator of the "resource curse". Oil-rich Azerbaijan experienced one of the highest levels of volatility in GDP growth among post-Soviet states from 1991 to 2023. Kazakhstan, with a lower dependence on crude oil in its GDP, state budget, and exports, has seen less volatility in economic growth. This tendency partly confirms Ross's (2012) argument that the main distinguishing feature of the economic growth trend in oil-rich countries is not necessarily outperformance or underperformance, but rather the volatility of real GDP growth compared to the long-term economic growth patterns of non-oil countries.

Diversification linkage transmits crude oil dependence into underperformance in economic growth. Azerbaijan's economy shows a greater need for diversifying its GDP structure. Additionally, Azerbaijan must diversify not only its commodity composition but also the geographical aspects of its export basket. Compared to Azerbaijan, Kazakhstan's GDP composition and export portfolio depend less on fossil fuels, particularly oil. Kazakhstan also needs to diversify its commodity composition and the geographical structure of its export basket, but its concentration ratio is not as extreme as in Azerbaijan.

Kazakhstan and Azerbaijan now have genuine opportunities to diversify their economies more steadily, considering the energy transition and the expansion of renewable energy projects. As hosts of COP29 in 2024, Azerbaijan showcases its commitment to broadening its energy mix and pursuing ambitious renewable energy initiatives with leading global companies. However, for successful diversification, the government should particularly focus on strengthening the competitive environment, safeguarding investments, and boosting the private sector's role. Effective market mechanisms, a simplified investment process, and reduced bureaucratic hurdles will help unlock domestic potential for economic and export diversification. The energy transition could indeed serve as a vital driver for reshaping both the economy's structure and exports in the current context. Nevertheless, to realise this, the governments of both nations need to fundamentally reform the rules of engagement with business and institutional frameworks, prioritising the safeguarding of property rights, the principle of competition, and the predictability of the state's medium- and long-term stance towards business.

Fiscal linkage exposes the institutional weaknesses in managing oil revenue volatility through counter-cyclical budgetary policies. The level of public expenditure as a share of GDP in Kazakhstan and Azerbaijan does not differ significantly from that of other post-Soviet resource-rich, low-income countries. The relationship between annual oil rents and public expenditures in both countries shows a weak correlation. In other words, public expenditure patterns in both nations remain steady despite fluctuations in oil rents. The mitigation of procyclicality is mainly due to the presence of sovereign wealth funds in both countries. Governments should particularly prioritise the medium-term expenditure

framework (MTEF) and aim for a gradual reduction in the proportion of oil and gas revenues in total budget income by implementing effective counter-cyclical fiscal policies.

Azerbaijan and Kazakhstan followed similar paths in terms of power concentration, competition, and the institutionalisation of their political systems after the Soviet Union's collapse. Their performances in government effectiveness showed similar patterns and levels of volatility. Post-Soviet countries with a higher share of oil rents or revenues in GDP, such as Azerbaijan and Kazakhstan, also exhibit a stronger negative correlation between government effectiveness and political rights. This higher negative correlation indicates that these countries improved government effectiveness while constraining political rights. This can be seen as a "social contract" that aims for more effective social, economic, and stabilisation policies, driven by substantial oil revenues, in exchange for limiting political rights. Given new geopolitical risks and challenges, both governments should devise long-term strategies to strengthen the institutional frameworks of these relatively young states to improve governance effectiveness.

Although Kazakhstan and Azerbaijan moderately improved the effectiveness of government institutions as the share of oil rent in the national economy soared, as Ross (2012) asserted, oil-rich countries need "powerful" government institutions to manage the intertwined volatility challenges of crude oil prices, oil revenues, fiscal balances, and economic growth.

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Appendix: 1
Socioeconomic Comparison Indicators of Azerbaijan and Kazakhstan

Indicators (2023)	Azerbaijan	Kazakhstan
1. GDP per capita (current US$)	7155	13137
2. GDP growth (annual %)	1,1	5,1
3. Unemployment (% of total labour force)	5,6	4,8
4. Personal remittances, received (% of GDP)	2,6	0,1
5. Inflation, consumer prices (annual %)	8,8	14,7
6. Central government debt, total (% of GDP, 2021)	16,9	22,4
7. Foreign direct investment, net inflows (% of GDP)	0,3	2,0
8. Population growth (annual %)	-0,3	1,3
9. Proportion of seats held by women in parliaments (%)	19	18
10. CO_2 emissions (metric tons per capita, 2020)	3,4	11,3

Source: World Bank Data for Azerbaijan & Kazakhstan (2024).