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Energy Rents, Remittances and Regional Trade Cooperation in Central Asia

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Abstract

This article analyses the relationship between energy rents, remittances and regional trade cooperation in Central Asia. The study shows that access to energy rents makes the governments of energy-rich Turkmenistan and Kazakhstan reluctant to expand regional trade cooperation, while remittances earned by citizens of resource-poor Kyrgyzstan and Tajikistan disincentivise the elites of those countries from working towards cooperation. Furthermore, the study demonstrates that Uzbekistan, which sits between two sets of cases because of depleting resources and unstable remittance inflows, is most likely to push for regional connectivity. Our findings are confirmed by the gravity model of trade and have implications for the studies of regional cooperation in other parts of the world.

SCHOLARS OF CENTRAL ASIA HAVE DEBATED THE TOPIC of regional cooperation and connectivity since the late 1990s; however, the impact of energy rents and remittances earned in the resources-rich states on the regional political order has not been addressed (Cornell & Starr 2018; Lewis 2018; Costa Buranelli 2021). Rather, studies have looked at problems associated with state-building and ethnic issues (Kubicek 1997); taken stock of different attempts at cooperation in the 1990s and 2000s (Gleason 2001a; Bobokulov 2006); analysed linkages between cooperation, patrimonialism and authoritarianism (Allison 2008; Collins 2009);[1] discussed the growing role of China (Libman & Vinokurov 2011) and, more recently, perceived cooperation amongst the Central Asian states as a possible bulwark against great powers (Tskhay & Costa Buranelli 2020). The energy rent-based analysis contributes to the debate by re-emphasising the importance of resource-rich states (Kazakhstan and Turkmenistan), which in real terms have very few economic incentives to cooperate, and resource-poor states (Kyrgyzstan and Tajikistan), which could benefit from regional trade cooperation but are far too weak and dependent on

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[1] See also Debre (2021).

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energy-rich countries to push for it. This structural weakness is aggravated by the fact that while remittances ensure social peace and keep governments in power, they do not contribute to economic development or new industries. Uzbekistan is a unique case in the region, as it does not fit into any of the categories. It is not as resource-rich as Kazakhstan and Turkmenistan neither does it depend on resource-producing states to the same degree as Kyrgyzstan and Tajikistan. As a result, Uzbekistan could gain considerably from regional trade cooperation and may advocate for it if there is enough political will in the country to do so.

Our findings are confirmed by the gravity model of trade, which is used to estimate the regional bilateral trade flows across Central Asian states. The analysis shows that energy rent makes the governments of resource-rich Kazakhstan and Turkmenistan reluctant to expand regional trade cooperation. Similarly, the remittances earned by citizens of resource-poor Kyrgyzstan and Tajikistan limit the incentives of the ruling elites to seek regional connectivity. Furthermore, the study demonstrates that Uzbekistan, due to depleting resources and unstable remittance inflows, is most likely to develop new industries and push for regional trade cooperation. This is amplified by the fact that Uzbekistan has the largest population in the region and is a double-landlocked country.

Outside Central Asian studies, there are few surveys that address the question of resources and cooperation. Although such studies are an important stepping stone, they focus on energy-rich states rather than on the effect that energy rents have on the entire regional order (Ross & Voeten 2016; Carlson & Koremenos 2021). Missing from the debate thus far is a distinction between, first, producing/rentier states; second, resource-poor states that largely depend for their survival on remittances earned by their citizens in the producing states; and, third, states that are relatively resource-rich but not fully rentier and whose economies also rely on remittances. The Central Asian region fills this gap by presenting a range of diverse and valid cases. Thus, a regionally focused analysis can reveal otherwise obscured dynamics.

The article demonstrates that in a region dominated by energy rents, the most likely engine for trade cooperation will be a state or a group of states that are not fully part of the rentier economy or/and sit outside the political and economic order that rentierism produces. Energy-rich countries may engage with the process of regional connectivity and even make it an important part of their foreign policy; their real long-term commitment is questionable due to the relatively few economic and political benefits that trade cooperation is likely to bring to them. This is because, first, markets for resources are outside the region and, second, key strategic economic alliances are often formed with external powers. Resource-poor countries are dependent on resource-rich partners and their fortunes are indirectly linked to global commodity prices. Remittances earned in resource-rich states might buy social peace and keep regimes in power but achieve little more than that. All those factors explain why regional cooperation in regions dominated by resource-rich states is a complex process.

The first part of the article discusses the rentier state theory (RST), which studies the importance of energy rents (unearned government income) for the political survival of the ruling regimes in resource-rich countries. The overriding priority for those regimes is access to foreign investment and foreign markets rather than trade cooperation with other regional actors. On the other side of the regional equation are the ruling regimes of

resource-poor states, which also benefit, albeit indirectly, from energy rents. The remittances sent home by the immigrants who work in the energy-rich states allow the regime, on the one hand, to maintain relative social peace at a very low cost to the state and, on the other, provide the elites with a source of rents that they extract from the local population *via* taxes. As a result, remittances do not lead to the development of new industries and have a weak impact on regional trade cooperation. The second part of the article will look at individual cases. We will demonstrate why and how the Central Asian states became part of the broadly understood rentier space after the collapse of the Soviet Union. The third part will use the gravity model of trade, which confirms our findings.

Rentier state theory, remittances and the question of regional cooperation

The discussion of energy rents and their impact on the politics of resource-rich countries have been mainly analysed within the rentier state theory (RST) framework. The RST was developed by scholars working on the Middle East following the nationalisation of the region's oil industry in the 1970s (Mahdavy 1970; Beblawi & Luciani 1987). Since the late 1980s, it has been applied to every major energy producing region in the world (Karl 1997; Soares de Oliveira 2007; Yates 2012). Arguably, its longevity as an analytical tool was reinforced when it became a 'political element' of the resource curse/paradox of plenty thesis, underpinned by the phenomenon of the 'Dutch disease', which gained considerable prominence in the 1990s and 2000s (Stevens 2003; Rosser 2006). The RST focuses on the profound impact that resources and rents have on a state and its domestic political structure; however, in its original version, it did not say much about how energy rents might also have an impact on regional politics more broadly.

RST, as initially put forward, attempted to account for the impact that rent, in particular that derived from the sale of oil and gas on the international markets, had on the nature of the states and political systems of resource- and energy-rich countries. Thus, the proponents of RST focused on states whose economies were dominated by rents rather than by productive enterprises such as agriculture and manufacturing and where the origins of the income were external. In addition, the rent was generated by a small elite, and the state was the principal recipient of these rents. Accordingly, the rentier state played a central role in distributing wealth to the population (Beblawi 1987, pp. 51–3).

One of the key themes in RST was state autonomy. The argument went that major energy exporters in the Middle Eastern region were financially autonomous from their citizenry, since a rentier state did not exist by extracting surpluses from the local population. The basis for state survival was the rent income, which originated externally (Luciani 1987, p. 69). Although oil rent was not the only income, it certainly predominated in state budgets (Okruhlik 1999, p. 295). Due to the external nature of the state income, the rentier states were only dependent to a small degree on the production processes of their domestic economies. In effect, the state became largely financially independent of domestic production groups. The inputs from the local economies, other than the raw materials, were insignificant (Mahdavy 1970, p. 429; Luciani 1987, p. 69). Lisa Anderson asserted that 'virtually no state in the region relies solely on its domestic population for resources, and many governments are often accountable for their spending, when they are accountable at all, to foreign lenders and donors rather than to their own people'

(Anderson 1987, p. 14). Huge state bureaucracies came to represent a defining feature of rentier states. Autonomous states based on external capital needed extensive apparatuses to distribute oil revenues in a politically advantageous fashion (Moore 2002, p. 129). Nazih Ayubi argued that in rentier states 'bureaucracies are expanded in order to provide the ruler with a "stability platform", a control device and a space for extending patronage' (Ayubi 2001, p. 308). The bureaucracy, whose main role was distribution through secure jobs, was highly undifferentiated and inflexible.

The external nature of rents and the autonomy they enabled had far-reaching repercussions, namely, the decline of the extracting institutions (where they had existed previously), the lack of a coherent economic policy and the deterioration of agriculture and industry. Brynen (1992, p. 74) asserted that because state revenues were dependent not on domestic production but, rather, on the international markets, state decision-makers were far less constrained by the interests of domestic actors. In such a situation, political considerations became the basis for any sort of decisions (Shambayati 1994, p. 309). Furthermore, Pauline Jones Luong argued that 'natural resources wealth is characteristically found in tandem with nondemocratic political systems' (Jones Luong 2000, p. 28).[2] According to the US proponents of RST, in non-rentier states, taxation serves as a lever for society to exercise some political influence over state leaders (Ross 2001). Anderson points out that taxation 'binds the populace to the state by creating expectations among taxpayers that they are to receive in return for their contribution to the upkeep of the administration' (Anderson 1987, p. 9). At the same time, in energy-rich states, rents reinforced and strengthened existing authoritarian structures rather than resulting in the creation of neo-patrimonial regimes in the first place (Crystal 1990; Schwarz 2008).

After the collapse of the Soviet Union, energy-rich Kazakhstan and Turkmenistan, with their entrenched authoritarianism and weak state structures, became the next testing ground for RST (Kechichian & Karaski 1995; Rashid 2001). It is important to note that although oil and gas had also been the cornerstone of the Soviet economy since the 1970s onwards, the Soviet Union was not a petro-state: 'On the contrary, it was an advanced (if inefficient) industrial and technological power. If its industry and manufactured exports were uncompetitive, that was not because of dependency on oil or natural resources but because of the communist system' (Gustafson 2012, p. 6).[3] At the same time, it is important to note that from 1973 to 1985, mineral resources accounted for 80% of the USSR's expanding hard currency earnings, which, to a large extent, were spent on the military budget, allowing the Soviet Union to become a much more credible threat during the Second Cold War, to use Kotkin's terminology (2001).

In the 1980s, RST was not applied to the Soviet case and, by default, not to the Central Asian republics either, but this changed in the post-1991 period. Authors who began to apply RST to Central Asian studies, like scholars working on other regions of the world, were acutely aware that rentierism does not create political arrangements *ex nihilo*, especially at earlier stages in the state-building process (Jones Luong & Weinthal 2001). Rather, it

[2]See also Luciani (1987, p. 74).
[3]See also Jones Luong (2000), Goldman (2008); c.f. Kim (2003).

reinforces pre-existing arrangements; at the same time, it facilitates the development of new *modus operandi* and institutions that enable the state to maintain its authoritarian hold on power more effectively (Jones Luong & Weinthal 2010). In the late 2000s and early 2010s, works on rentierism overwhelmingly focused on strong autocratic presidentialism and neo-patrimonial structures. Scholars claimed that post-Soviet networks were the basis for the allocation of rents through non-transparent mechanisms, and that inherited Soviet networks were sustained by revenues from oil and gas exports (Franke *et al*. 2009; Gawrich *et al*. 2011; Heinrich & Pleines 2012).

It was argued that after independence, the government of Kazakhstan reformed political structures only to the extent necessary to gain international investments, while energy rents were mostly used to consolidate autocratic regimes and to hinder further reforms (Bayulgen 2003; Cummings 2013). At the same time, Uzbekistan and Turkmenistan initially steered away from foreign investment (and partial economic liberalisation), because rents from the export of agricultural goods, gold and gas did not require this (Esanov *et al*. 2004; Pomfret 2006). Finally, scholars in RST studies discussed the countries' elites and the tight circles around the presidents at length (Franke & Gaerich 2011; Guliyev 2012; Kusznir 2012; Schatz 2012; Umbetalieva & Satpayev 2012).

Arguably, the most important contribution to the study of RST in Central Asia was Jones Luong and Weinthal's *Oil is Not a Curse* (2010), which argued that there is nothing inevitable about oil's effects on a country's economic and political performance. The key intervening variables are ownership structure, the source of rents and the policies enacted. They concluded, for instance, that 'Kazakhstan has managed both to redistribute the benefits of foreign investment from the petroleum-rich to the petroleum-poor regions and to institutionalise limits on expenditures that has at least created the possibility for the government to make better spending decisions' (Jones Luong & Weinthal 2010, p. 261). Furthermore, although Turkmenistan and Uzbekistan both decided to keep oil and gas in state hands, their different policies had quite different outcomes. While Turkmenistan 'launched an ambitious ten-year development plan in 1993 which was designed to achieve the country's potential as a "second Kuwait" as quickly as possible' (Auty 1997, p. 30), Uzbekistan pursued a different route. In sharp contrast to Turkmenistan, in the early 1990s Uzbekistan worked towards self-sufficiency in energy, which it achieved by 1995. It did so by prioritising oil and gas production from existing fields, alongside the increased use of hydropower, to satisfy internal demand, and sought international financing to build or upgrade local refineries rather than to seeking out and exploiting new reserves. Moreover, its decision 'to consume rather than to export its petroleum wealth has neither engendered positive socioeconomic outcomes in the short term nor improved its long-term development prospects' (Jones Luong & Weinthal 2010, p. 79).

Overall, rentier studies on Central Asia and beyond demonstrate very clearly why and how energy-rich states that depend on outside markets and revenues as well as investment for their survival are often ruled by authoritarian regimes (Kjærnet *et al*. 2008; Junisbai 2010; Kendall-Taylor 2012). However, traditional rentier studies did not look in any substantive depth at the ways in which state–energy markets dynamics have also presented elites of the energy-rich countries with a set of choices to achieving regional connectivity and cooperation such as: harmonising regulatory frameworks, coordinating the removal of trade barriers, monitoring the behaviour of member states, deterring

cheating, providing third-party dispute resolution, and generally reducing transaction costs (Ross & Voeten 2016, p. 2). An important exception is an article by Ross and Voeten (2016); while it primarily considers the issues of oil states and international cooperation, its main findings are also highly relevant to the discussion concerning regional cooperation and therefore provide a good starting point for further deliberation. According to Ross and Voeten, two economic incentives advance state participation in international institutions: the need to attract foreign direct investment, and the need to obtain access to outside markets. They argue that energy-exporting countries can achieve those aims without making commitments to external institutions and without making commitments to join intergovernmental organisations (IGOs). This is because oil exporters in particular find it easy to attract necessary foreign investment and access foreign markets, leaving them with few incentives to commit to institutions that require them to accede to international courts, accept legalised dispute resolution and engage in deeper regional integration. Such major energy exporters are only likely to become members of those IGOs that carry minimal obligations and have very low sovereignty costs such as OPEC. Furthermore, to the extent that energy-rich states need investment in their non-energy sectors, they can use their repatriated rent because most energy-rich states have difficulty absorbing revenues domestically. Also, energy-rich states can gain access to outside markets 'without granting reciprocal access to their trade partners, giving them less incentive to make costly commitments to broader trade regimes' (Ross & Voeten 2016, p. 4). The major oil producers, such as Russia, Iran and Venezuela, as well as Iraq or Libya, have been historically uncooperative and prone to defying global norms.

In the context of Central Asia, the analysis by Ross and Voeten is relevant to the case of gas-rich Turkmenistan, which has heavily depended on energy relationships with Russia and China for its economic survival and has avoided joining multilateral organisations, especially those related to security (Pannier 2020). Kazakhstan, another major energy producer in the region, has traditionally advocated for regional cooperation initiatives since the mid-1990s. It has participated in multilateral frameworks like the Central Asian Union, the Central Asian Cooperation Organisation and the Shanghai Cooperation Organisation as part of its strategy to enhance its standing as a regional leader. However, in practice, Kazakhstan has done little to facilitate trade with Kyrgyzstan, Turkmenistan and Uzbekistan. Non-tariff trade barriers remain high across the Central Asian region. Additionally, Kazakhstan's economy is heavily dependent on energy exports to external markets and is hampered by a lack of industrial diversification (Anceschi 2020).

RST studies also had little to say about the impact of rent income on non-energy-rich states and the issue of regional cooperation. The key elements that link energy-poor countries to energy-rich are remittances, such as those earned by Kyrgyz and Tajik workers in Kazakhstan and Russia. Remittances, which are received by private households and tend to be poorly tracked and thus untaxed by the government, have a relatively stabilising impact on state–society relationships as they alleviate pressure on the leaders of the resources-poor states to provide jobs or basic services; however, they do not make those states richer since few of the funds are reinvested in the local economy (Eromenko 2016; Prokhorova 2017; Murodova 2018). While remittances sent by migrant workers help their families and boost their consumption expenditure, they are not

conducive to the development of the financial sector and the establishment of new businesses in the Central Asian countries. Most country studies find that households spend their remittance income on consumer and durable goods, as well as health care and education (Fullenkamp *et al*. 2008). A large proportion of these remittances are spent on immediate needs, such as house renovation or construction and traditional ceremonies such as weddings (ILO 2010; Nasritdinov 2015; Wang *et al*. 2021). This supports the argument that the inflow of remittances is unlikely to expand regional trade volumes in Central Asia as it is not translated into investment for business activities. The remittances may, however, allow the autocratic regimes to redirect a greater share of their budgets towards wages for the upkeep of the state bureaucracy, which is often a vital part of their political base (Ahmed 2012, p. 162).

The fortunes of the countries in energy-rich regions are closely linked to the global boom and bust commodity cycles, which have grown more acute since the 2000s (Fullenkamp *et al*. 2008; Ahmed 2012, 2017; Bearce & Park 2019). This point is relevant to regional cooperation studies, since resource-poor countries have a lot to gain from regional connectivity and could act as important promoters of trade cooperation if their economies were more independent from the oil- and gas-rich countries (Wang 2014; Ploberger 2022). Thus, rent income creates conditions in which energy-rich states have no compelling reason to pursue policies that could result in greater trade cooperation; it also makes other states in the system weaker and less likely to act (Ahmed 2012, p. 160).

In the Central Asian case, this structural weakness has been reinforced by the fact that, although remittances do not flow directly to the state coffers, plutocratic elites have often actively sought to exploit their societies. In analysing rent and rentierism that involve non-resource assets (such as finance, real estate and the judiciary) and legal extraction by businesses, Sanghera and Satybaldieva have argued that neoliberal economic reforms after the fall of communism created and promoted rentier activities that have allowed elites—with very close ties to ruling regimes—to extract income based on the ownership and control of scarce assets (Sanghera & Satybaldieva 2020, pp. 506–7). In effect, in the case of Central Asia, states that quickly liberalised their economies in the early 1990s saw the emergence of the post-Soviet rentier class that 'obtained unearned income through usurious interest rates, excessive land and property rent, high revenues from subsoil assets and indefensible monopoly rent. The majority of the population made exorbitant payments for basic goods and services, resulting in impoverishment, misery and distress' (Sanghera & Satybaldieva 2021, p. 5). Thus, they claim that this new rentier class has more in common with its equivalents in the Western elites than with the citizens of Central Asian states.[4]

Sanghera and Satybaldieva illustrate how regional players, through predatory actions, have undermined the development of their countries. They also argue that projects such as China's Belt and Road Initiative and the Russia-led Eurasian Economic Union, rather than promoting development, have further contributed to creating and developing rentier capitalism in Kazakhstan and Kyrgyzstan: 'While the global powers have articulated competing discourses and strategies on economic development in the region, they have

[4]See also Christophers (2020).

largely achieved similar outcomes of rentierism' (Sanghera & Satybaldieva 2023, p. 1). The key beneficiaries are, again, domestic elites and foreign investors.

Finally, the existing analysis of RST also does not account for the third group of countries that, to a degree, are dependent on remittances for their stability but are also relatively rich in some resources, such as Uzbekistan. Those states can follow two highly diverging paths: they can either join forces with energy-rich states or push for cooperation from which they will benefit economically (Hashimova 2009; Imamova 2021). Their choices will also depend on non-rentier factors such as political preferences, economic conditions, population size and geography.

To sum up, the collapse of the Soviet Union in 1991 unexpectedly catapulted resource-rich Central Asian republics into statehoods. The potential oil and gas revenues were seen as a salvation to economic ills; however, it was quickly pointed out that, given the experiences of other oil- and gas-rich countries and the political nature of Central Asia, the newly independent states were likely to follow a skewed political and economic development (Jones Luong & Weinthal 2001). In response, areas studies specialists adopted RST to analyse the new political and economic dynamics (Sabonis-Helf 2004; Meissner 2010). Since then, RST has never been questioned in the field, and very little effort has been made to understand how energy rents might shape the politics of entire regions, including the trade cooperation between different states. We therefore argue, as stated above, that Central Asia is a good case for exploring the impact that RST has had beyond national boundaries and on the regional order.

Central Asia and the energy-shaped regional order

Turkmenistan

The rentier nature of Turkmenistan developed during the Soviet era and reached its peak after independence. The era of the late 1970s and early 1980s, when natural gas started to dominate the republic's economy, was a turning point in the development of Turkmen rentierism. Turkmenistan SSR supplied roughly 24% of the natural gas used in the Soviet Union in 1970, and slightly less than 33% in 1975 (Ebel 2000, p. 4). Today, Turkmenistan is one of the top gas producers in the world. Outside of the natural gas industry, Soviet Turkmenistan's industrial base was severely underdeveloped, and what little modern industry there was (particularly textile businesses) only managed to survive because of central Soviet subsidies (Gleason 1991, 2003; Anceschi 2009). One of the early academic studies on the issue, in line with the RST, argued that Turkmenistan 'aim[ed] to use natural gas revenues to consolidate its institutional structure. It also seeks to gain popular support by providing free housing, electricity, water and bread. Like other rentier states, Turkmenistan's political legitimacy remains low and is bound to the state's ability to continue these welfare functions' (Kuru 2002, p. 54).[5] Arguably, today Turkmenistan is still the best example of a classical rentier state in the region (Anceschi 2009; Denison 2011, 2012).

[5]See also Cummings and Ochs (2002).

Turkmenistan's economy remains relatively undiversified as it continues to be driven primarily by natural gas exports (see Figure 1). In 2022, as indicated in Figure 2, liquified petroleum gas equalled 75% of Turkmenistan's total exports, leaving the economy vulnerable to fluctuations in natural gas prices on the international energy markets.

Turkmenistan has been experiencing a current-account balance surplus for many years owing to its large energy exports and import suppression policies (see Figure 3). Between 2011 and 2021, the country's balance of trade has varied from a low of US$2 billion in 2016 and highs of approximately US$7.5 billion in 2014 and 2019, but has always remained positive.

Today, Turkmenistan's trade performance is largely dependent on the health of the Chinese economy as China is the main destination for its exports and the largest trading partner (EIU 2022a) (see Figure 2). Since gaining independence, Turkmenistan has maintained an official policy of 'positive neutrality' and has held back from membership in multilateral organisations, including the Eurasian Economic Union. This combination of factors has made fostering deeper economic ties with neighbouring Central Asian countries less attractive for Turkmenistan. Nevertheless, since 2017 Turkmenistan has taken steps to strengthen its strategic partnership with Uzbekistan. As a result, economic cooperation between the two countries has expanded, with the bilateral trade volume reaching almost US$800 million in 2021, nearly a five-fold increase compared to 2017 (see Figure 4). Furthermore, breaking away from its traditional policy of non-alignment, Turkmenistan joined the Organisation of Turkic States as an observer in November 2021 (Nelson 2022). This could be seen as an enhancement of diplomatic activity from Turkmenistan with its neighbours in response to the Taliban takeover of Afghanistan in 2021.

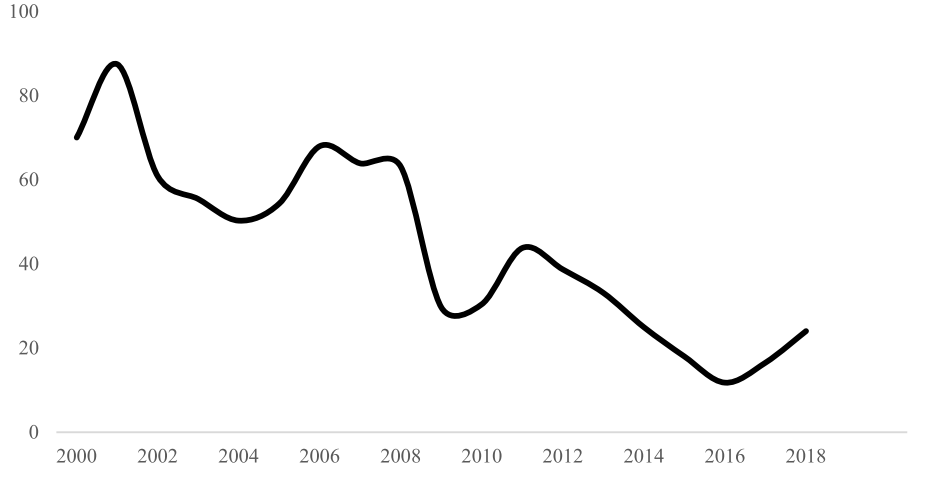

FIGURE 1. TURKMENISTAN: TOTAL NATURAL RESOURCE RENTS AS GDP PERCENTAGE

Source: 'Total Natural Resource Rents (% of GDP)', World Bank, 2019, available at: https://databank.worldbank.org/source/adjusted-net-savings/Series/NY.GDP.TOTL.RT.ZS, accessed 12 August 2024.

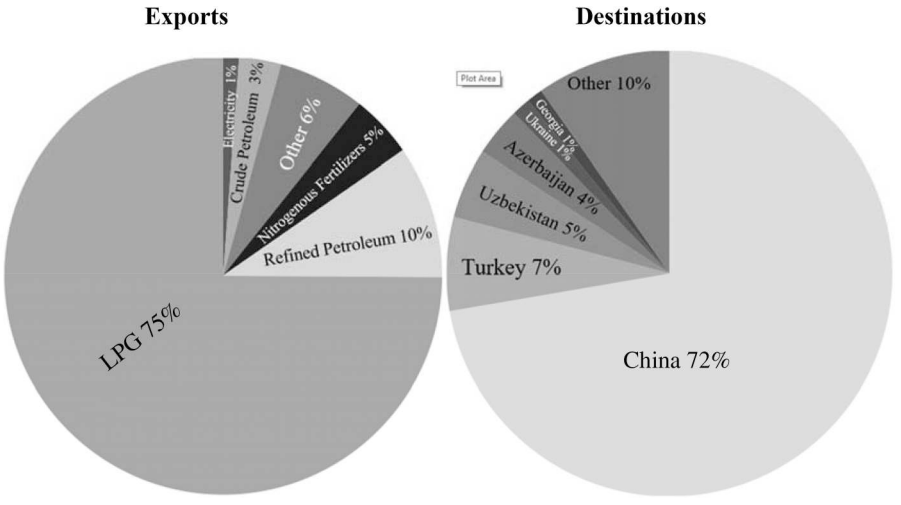

FIGURE 2. TURKMENISTAN'S TOP EXPORTED PRODUCTS AS % OF TOTAL EXPORTS BY VALUE AND THEIR DESTINATION

Source: 'Turkmenistan', Observatory of Economic Complexity, 2022, available at: https://oec.world/en/profile/country/tkm, accessed 1 May 2025.

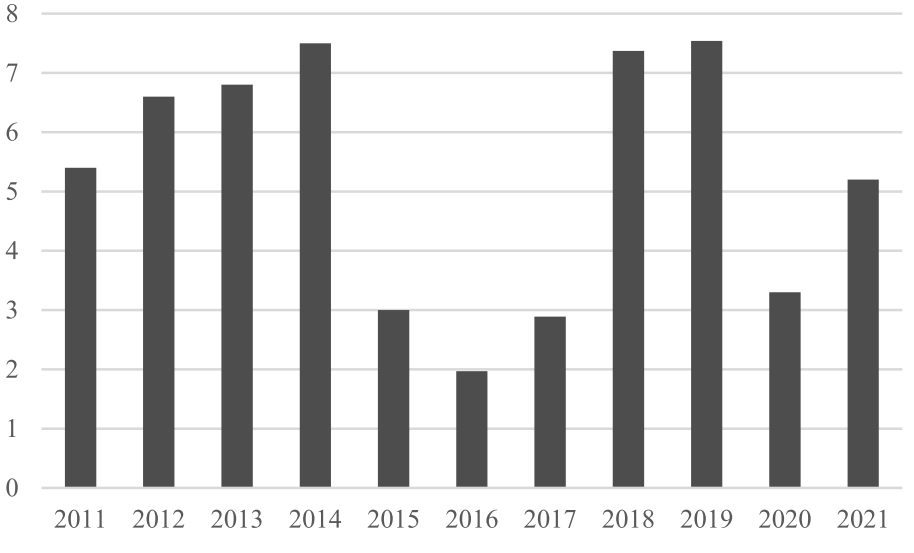

FIGURE 3. TURKMENISTAN: TRADE BALANCE OF GOODS (2011–2021; US$ BILLION)

Source: 'Turkmenistan: Trade Balance of Goods from 2013 to 2023 (in billion US dollars)', Statista, 2024, available at: https://www.statista.com/statistics/1034351/trade-balance-of-turkmenistan/#statisticContainer, accessed 12 August 2024.

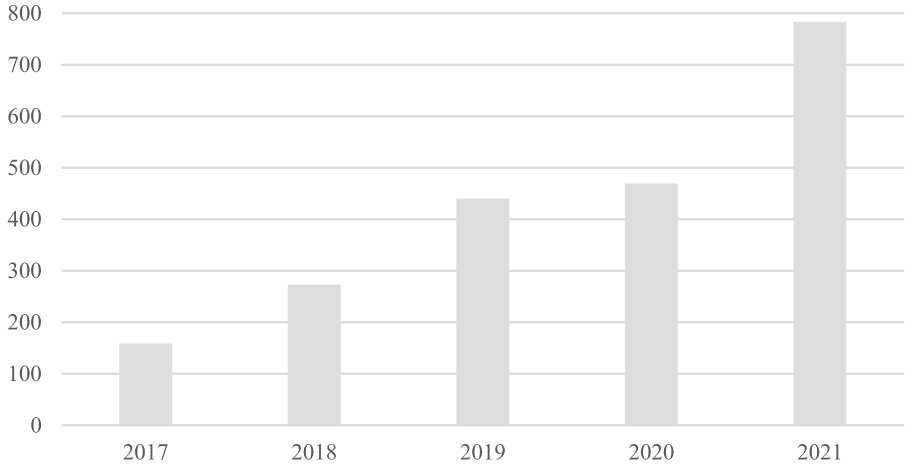

FIGURE 4. TURKMENISTAN–UZBEKISTAN: BILATERAL TRADE (2017–2021; US$ MILLION)

Source: 'Bilateral Trade Between Turkmenistan and Uzbekistan', International Trade Centre, 2021, available at: https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c795%7c%7c860%7c%7cTOTAL%7c%7c%7c2%7c1%7c2%7c1%7c2%7c1%7c1%7c1%7c1%7c1, accessed 12 August 2024.

Kazakhstan

Kazakhstan, another major energy producer in the Central Asian region, began its transformation towards rentierism from a very different starting point than Turkmenistan. The breakup of the Soviet Union hit Kazakhstan, a middle-income country in the early 1990s, more heavily than its southern neighbour, as its entire industrial structure was intertwined with that of Russia. In response to the crisis, the Kazakhstani regime decided to privatise large state companies, to very mixed effects, while turning its attention to oil and gas (McGlinchey 2003; Peck 2004). The oil and gas sectors were largely underdeveloped during Soviet times but they had the potential to attract foreign oil companies and much-needed foreign direct investment (Pomfret 2005; Ostrowski 2010). Rising oil prices in the 2000s increased Kazakhstan's dependence on resources and led the regime to abandon most other sectors of the economy. By the late 2000s, the transition to rentierism was complete (Nurmakov 2010). As Peters and Moore noted, 'authoritarian regimes adapt as different sources of external rent decrease or increase, seeking out new sources of external rent and devising new ways to deliver it to coalition members' (Peters & Moore 2009, p. 258).

Kazakhstan's economic growth is heavily dependent on fossil fuel exports. According to 2022 figures, crude petroleum made up 45% of its exports (see Figure 5). This has made Kazakhstan's economy vulnerable to the volatilities in the global commodity prices, in particular, oil. Natural resource mining products account for about two-thirds of Kazakhstan's exports. The goods imported are primarily the machinery and equipment that are needed to extract and refine natural resources (WITS 2020).

Kazakhstan's two sovereign wealth funds—the US$69 billion Samruk-Kazyna fund and the US$59.8 billion National Fund of the Republic of Kazakhstan—facilitate its access to

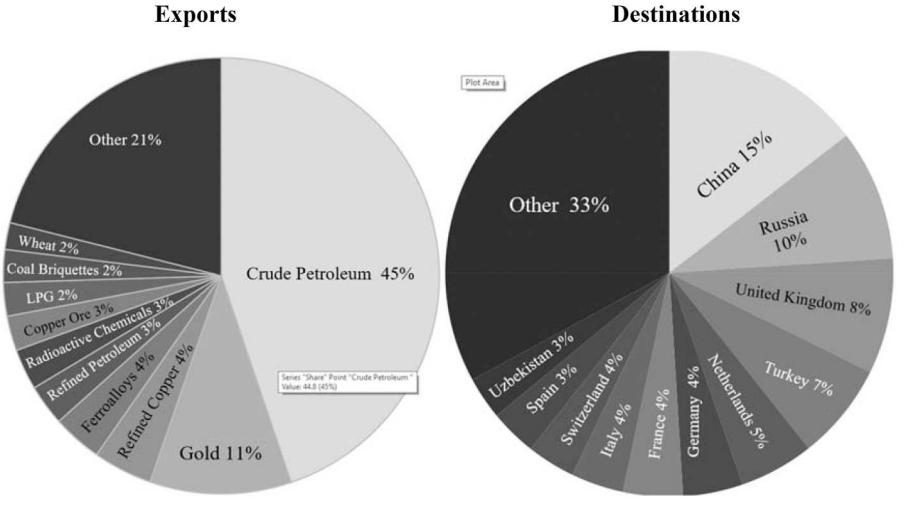

FIGURE 5. KAZAKHSTAN'S TOP EXPORTED PRODUCTS AS % OF TOTAL EXPORTS BY VALUE AND THEIR DESTINATION
Source: 'Kazakhstan', Observatory of Economic Complexity (OEC), 2022, available at: https://oec.world/en/profile/country/kaz, accessed 12 August 2024.

finance in the international bond markets. However, efforts to diversify the economy have been overshadowed by rents extracted from ample natural resources. In 2018, total natural resource rents amounted to almost 22% of Kazakhstan's GDP (see Figure 6). Petroleum

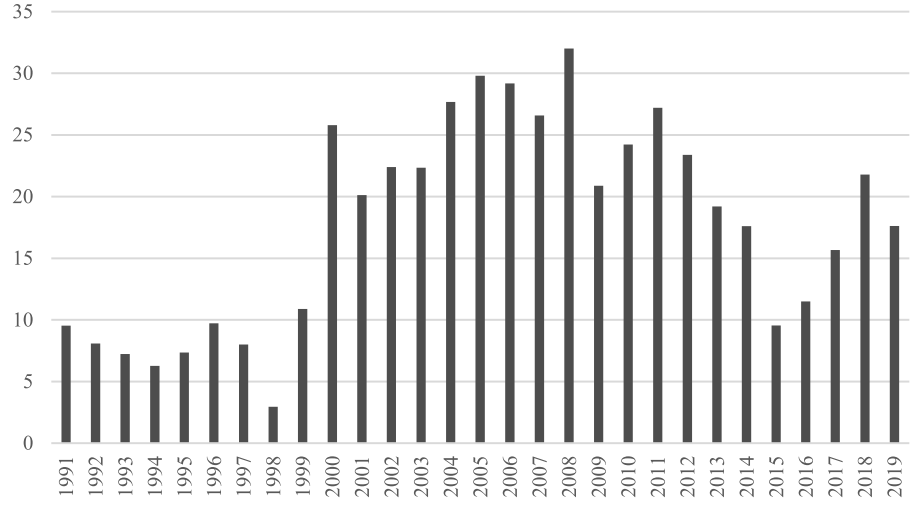

FIGURE 6. KAZAKHSTAN: TOTAL NATURAL RESOURCE RENTS AS GDP PERCENTAGE
Source: 'Total Natural Resources Rents (% of GDP)—Kazakhstan', World Bank, 2021, available at: https://data.worldbank.org/indicator/NY.GDP.TOTL.RT.ZS?locations=KZ, accessed 12 August 2024.

and other related industries are dominated by state-owned enterprises and serve as a major source of government revenues. This overreliance on the extractive sector has not only slowed down the development of the private sector by crowding out private initiatives but has also led to a weak performance of non-petroleum industries (Atakhanova & Howie 2022).

Kazakhstan, unlike Turkmenistan, never abstained from joining regional bodies: as early as 1994 it became a member of the Central Asian Union, which was an initial attempt to create the conditions for regional integration between Central Asian states. However, the Kazakhstani commitment to cooperation produced very few results. As Annette Bohr points out, 'in 2015 Kazakhstan's combined trade with Kyrgyzstan, Turkmenistan and Uzbekistan accounted for a mere 3.7 per cent of its total volume of foreign trade, this share having increased by less than 1 percentage point in 14 years' (Bohr *et al*. 2019, p. 70). Furthermore, non-tariff trade barriers amongst the states remained very high, and no organisation emerged to formulate a specifically Central Asian response to urgent issues (OECD 2023). Kazakhstan's weak commitment to cooperation can be explained by the country's unusual transformation from a middle-income country into a full-blown rentier state (Pomfret 2021). In short, the further Kazakhstan's economy moved into the direction of dependency on oil and gas revenues, the weaker its commitment and interest in regional cooperation became.

Kyrgyzstan

Kyrgyzstan's economy, like Kazakhstan's, was badly affected by the collapse of the Soviet Union, but unlike Kazakhstan, the country is not rich in exploitable and exportable natural resources (Gleason 2001b). Because of this, in the early 1990s Kyrgyz post-Soviet elites decided to liberalise the country's economy and—at least partially—its political system (Pomfret 2006, pp. 82–3). This move allowed the post-Soviet regime to secure enough foreign aid and/or rent from various Western governments and agencies, making the transition out of the Soviet Union manageable. However, outside sources of rent subsequently dried up, and in the second decade of independence, the Kyrgyz state began to rely increasingly on remittances and rents from the lease of the territory for its survival (Lewis 2008, pp. 123–24). The Manas Air Base, operated by the United States from late 2001 until 2014, was the second largest source of income for the Kyrgyz government for a number of years. In addition, the Russian-controlled Kant Air Base, which was established in 2003 and remains in operation, generates approximately US$5 million annually for the Kyrgyz state (Hartley & Walker 2013).

The economy of Kyrgyzstan is excessively dependent on gold exports and remittances sent by its citizens working abroad, especially in Russia (see Figure 7). From the early 2000s, remittances climbed steadily, from just under US$500 million in 2006 to US$2 billion in 2012, reaching a high of US$2.6 billion in 2018. Gold and other precious metals constitute about 13% of the country's export structure (see Figure 8). Amongst the Central Asian countries, Kyrgyzstan has the second lowest GDP *per capita* after Tajikistan. Furthermore, it is the most indebted nation in the region, its total external debt accounting for 85% of its GDP (EIU 2022b). This carries a high risk of sovereign default.

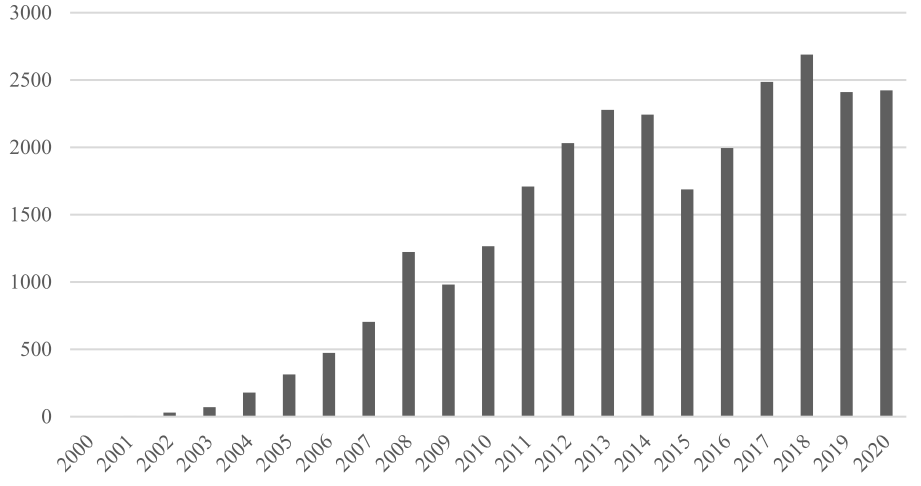

FIGURE 7. KYRGYZSTAN: PERSONAL REMITTANCES RECEIVED (2000–2020; US$ MILLION)

Source: World Development Indicators, World Bank 2020, available at: https://databank.worldbank.org/source/world-development-indicators/Series/BX.TRF.PWKR.CD.DT, accessed 1 May 2025.

The sustainability of economic growth in Kyrgyzstan is also hampered by the shadow economy. According to Tilekeyev (2021), informal economic activities amount to about 30% of Kyrgyzstan's GDP. Furthermore, between 2011 and 2020, personal remittances from migrants accounted for approximately 30% of Kyrgyz GDP (see Figure 9).

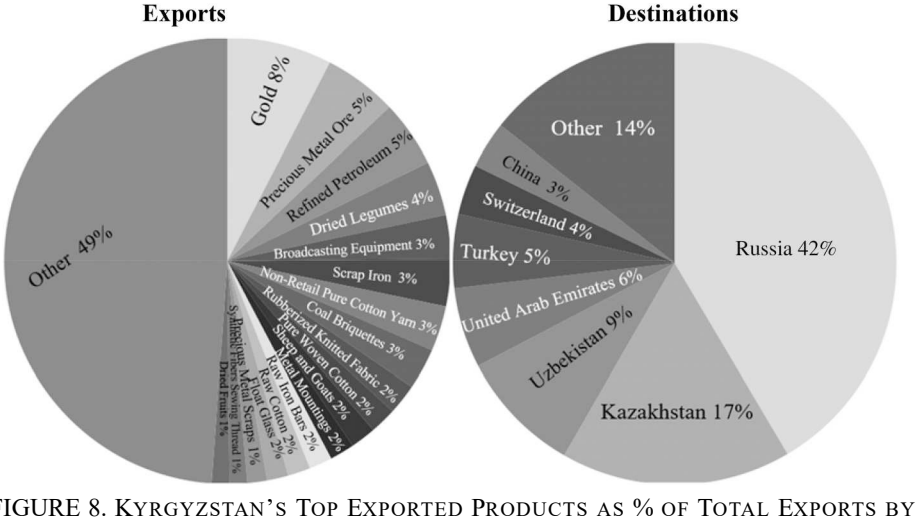

FIGURE 8. KYRGYZSTAN'S TOP EXPORTED PRODUCTS AS % OF TOTAL EXPORTS BY VALUE AND THEIR DESTINATION

Source: 'Kyrgyzstan', Observatory of Economic Complexity (OEC), 2022, available at: https://oec.world/en/profile/country/kgz, accessed 12 August 2024.

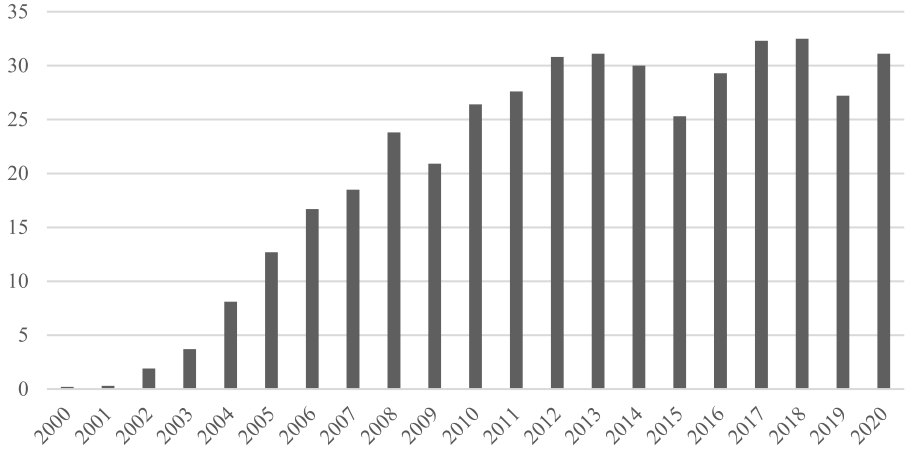

FIGURE 9. KYRGYZSTAN: PERSONAL REMITTANCES RECEIVED (2000–2020; US$ MILLION)

Source: 'World Development Indicators', World Bank 2020, available at: https://databank.worldbank.org/source/world-development-indicators/Series/BX.TRF.PWKR.CD.DT, accessed 1 May 2025.

Tajikistan

The economy of Tajikistan, the poorest republic of the Soviet Union, was almost completely devastated and looted during the civil war of the early 1990s (Akiner 2006; Heathershaw 2009). Tajikistan was sustained by remittances from migrant workers as well as by foreign aid. It was also estimated that in the 2000s one third of the population was dependent on the drugs and weapons trade (Pomfret 2006; Nakaya 2009).

Tajikistan's dependency on migrant remittances, which reached 25% of GDP in 2005 and, after almost reaching 45% in 2008 and 2013, settled back at around 30% in 2020 (see Figure 10) and the export of precious metals (36%) and critical minerals (32%) (see Figure 11) represent a challenge for successful economic growth. The country's export basket is dominated by low value-added goods such as gold, raw aluminium and raw cotton. The living standards are the lowest amongst the Central Asian nations with its GDP *per capita* (PPP) amounting to $5,101 in 2021 (EIU 2022c). Agriculture is a leading sector in the Tajik economy, making up 22.6% of its GDP and contributing to about 53% of employment (EIU 2022c). Raw materials and agricultural products constitute a significant proportion of the goods in the export baskets of almost all Central Asian countries. Due to this homogeneity, the share of Tajikistan's trade with its neighbours in Central Asia is negligible compared to its trade with countries outside the region.

The economies of Kyrgyzstan and Tajikistan are the reverse of Turkmenistan and Kazakhstan. Both countries rely overwhelmingly on labour remittances sent home by Kyrgyz and Tajik workers in Russia and Kazakhstan. In essence, their internal stability is indirectly linked to the oil and gas prices, which shape the economic fate of Russia and

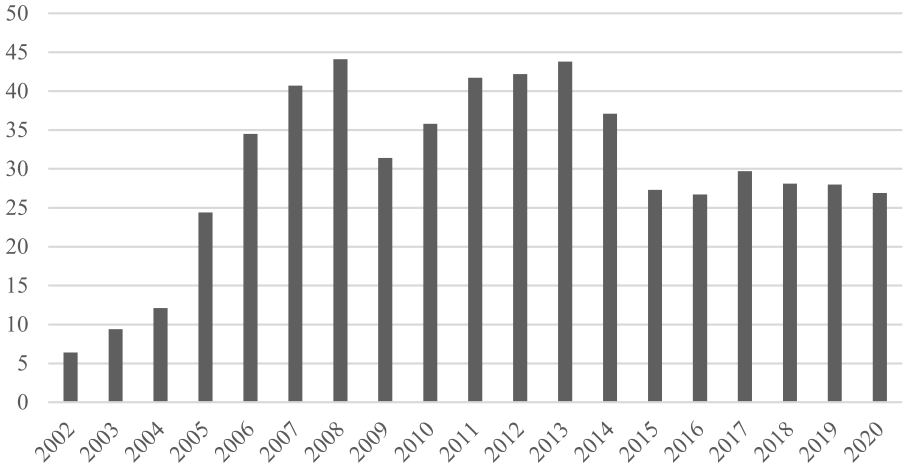

FIGURE 10. TAJIKISTAN: PERSONAL REMITTANCES RECEIVED (2000–2020; US$ MILLION)

Source: 'World Development Indicators', World Bank 2020, available at: https://databank.worldbank.org/source/world-development-indicators/Series/BX.TRF.PWKR.CD.DT, accessed 1 May 2025.

Kazakhstan and, in turn, determine the level of remittances that Kyrgyz and Tajik workers can send home (see Figure 12). The precarious position of both countries within the regional economic landscape significantly limits their ability to manoeuvre concerning regional connectivity and cooperation (Patnaik 2019).

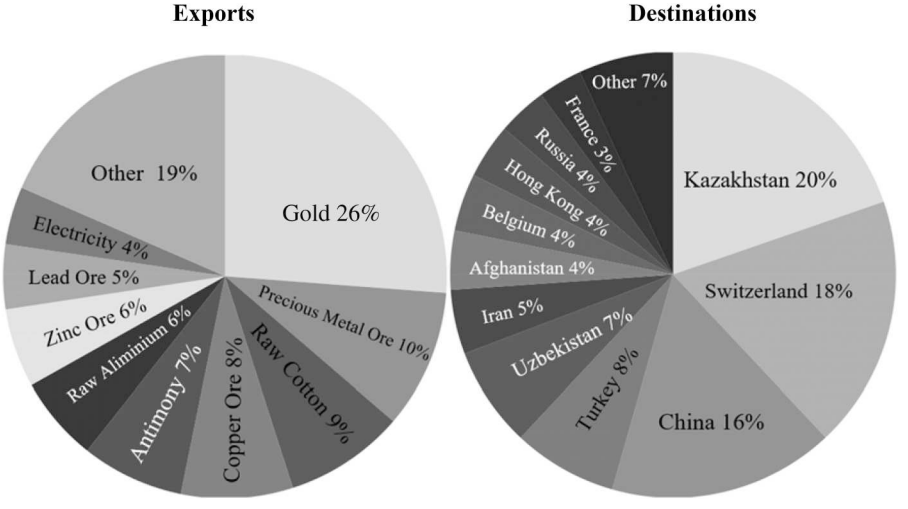

FIGURE 11. TAJIKISTAN'S TOP EXPORTED PRODUCTS AS % OF TOTAL EXPORTS BY VALUE AND THEIR DESTINATION

Source: 'Tajikistan', Observatory of Economic Complexity, 2022, available at: https://oec.world/en/profile/country/tjk, accessed 12 August 2024.

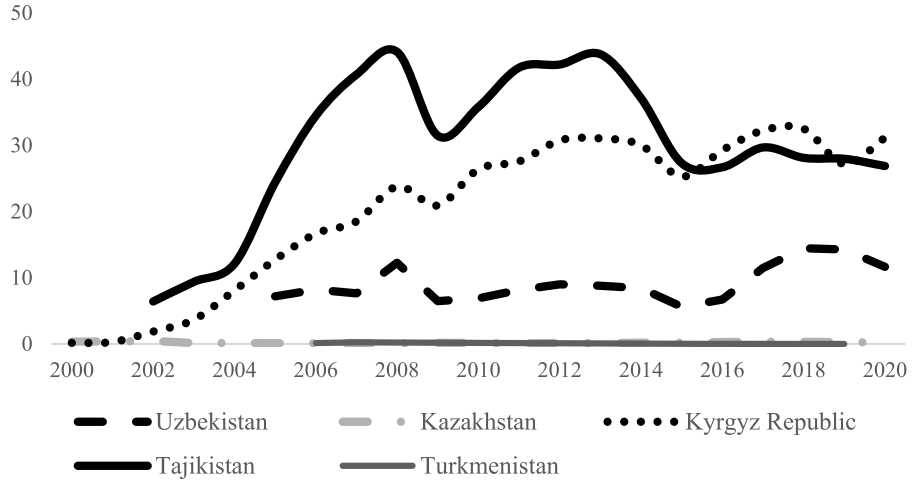

FIGURE 12. CENTRAL ASIA: PERSONAL REMITTANCES (GDP PERCENTAGE; 2000–2020)

Source: 'World Development Indicators', World Bank 2020, available at: https://databank.worldbank.org/source/world-development-indicators/Series/BX.TRF.PWKR.CD.DT, accessed 1 May 2025.

Uzbekistan

As the most unusual case in the Central Asian context, the Uzbek economy displays some rentier characteristics yet it partly depends on remittances for its internal stability. Cotton production expanded rapidly in Soviet Uzbekistan during the 1950s and 1960s, and by the 1980s the republic was considered a 'monocultural economy', with about 65% of the arable land devoted to cotton production (Spechler 2008). At the same time, it is important to note that at the time of independence, the economy of Uzbekistan was more diversified than that of other Central Asian republics. This included agriculture, light and heavy industry, and basic product industries (Gleason 2003, p. 117). However, in the face of post-Soviet turmoil, the Uzbek regime largely abandoned other industries in favour of cotton development. Other important sectors of the post-Soviet Uzbek economy were the trade in gold and energy—mainly petroleum gas—which in 2022 accounted for 5% of exports (see Figure 13). Gas was transported through Russia's Gazprom pipeline network through Kazakhstan (Spechler & Spechler 2009, pp. 358–59).

Until the mid-2010s, Uzbekistan was often described as experiencing the so-called 'cotton curse'. Millions of impoverished rural residents used to work to grow and harvest cotton, often receiving little or no compensation for their efforts. As a result, young men would strive to escape the cotton farms, leading to a wave of migration both to urban areas and abroad to Kazakhstan and Russia. Between 2004 and 2008, as many as 2.5 million Uzbeks left the country and in 2008, remittances accounted for 13% of the Uzbek economy (International Crisis Group 2010, p. 3). The sharp decline in oil prices between 2014 and 2015 significantly impacted the Russian economy and resulted in nearly a halving of remittances sent from Russia to Uzbekistan. This decrease was particularly

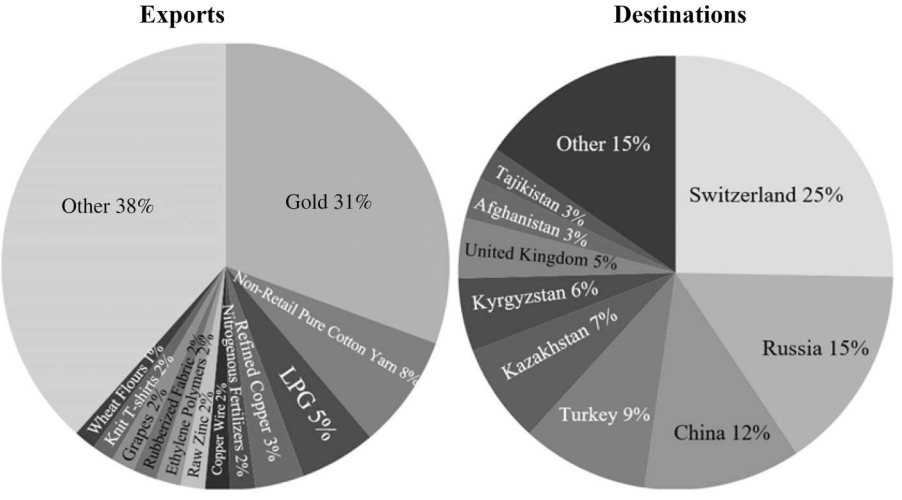

FIGURE 13. UZBEKISTAN'S TOP EXPORTED PRODUCTS AS % OF TOTAL EXPORTS BY VALUE AND THEIR DESTINATION

Source: 'Uzbekistan', Observatory of Economic Complexity, 2022, available at: https://oec.world/en/profile/country/uzb, accessed 12 August 2024.

significant, as in 2014 remittances accounted for approximately a quarter of Uzbekistan's gross domestic product (Trilling 2015).

When Shavkat Mirziyoyev succeeded Islam Karimov as a new president in 2016, he launched economic reforms. Amongst these, currency liberalisation and tax reforms are arguably the most significant economic reforms that have been carried out to create ground for more open trading relations and to attract foreign direct investment. However, other economic reforms, announced after 2018, such as reforms in customs, banking and the privatisation of state-owned enterprises, have not been fully realised yet. The government's new development strategies continue to be concentrated on diversifying the economy, aiming to shift it away from natural resources and raw materials to higher value-added sectors, and on downsizing the share of the public sector in the economy (IMF 2022).

Economic growth patterns in Uzbekistan are driven by primarily labour-intensive sectors including agriculture, manufacturing and construction (Anderson *et al*. 2020). Agriculture plays a significant role in the Uzbek economy; in 2020, it accounted for nearly 25% of its GDP and generated a quarter of the employment in the total labour force (World Bank 2020). In 2020, the amount of migrant remittance flows was equivalent to 11.7% of GDP—a figure higher than that of Kazakhstan and Turkmenistan, but lower than that of Tajikistan and Kyrgyzstan (see Figure 12).

Over recent years, Uzbekistan has worked to strengthen ties with its Central Asian neighbours. It has taken concrete actions to improve regional cooperation, enhance diplomatic connections, and settle long-standing border conflicts. This change has increased prospects for regional commercial cooperation and connectivity. Moreover, by lowering trade restrictions and easing customs regulations, Uzbekistan has made visible progress towards trade liberalisation. These steps are meant to facilitate trade cooperation in Central Asia (OECD 2023).

Data and methodology

This research employs both bilateral trade and country-specific data collected from various datasets, including the World Bank's World Development Indicators, the United Nations Conference on Trade and Development, International Trade Centre, World Governance Indicators (WGI) and the State Committee of the Republic of Uzbekistan on Statistics for the period 2002–2020. The gravity model of trade is used to estimate the regional bilateral trade flows across the five Central Asian countries. This model considers the volume of trade between a pair of countries as an increasing function of their economic size or economic output per person and a decreasing function of the geographical distance between them (Frankel & Rose 2002). In the gravity model, trade estimates are acquired by using fixed and random effects.

We extend the gravity model by adding other explanatory variables that could explain the changes in the bilateral trade volumes. These variables include the product concentration index of exports, total natural resource rents as a percentage of GDP, migrant remittances and population size (see Table 1). In our empirical analysis, we divide the countries into two pairs: first, Uzbekistan and resource-rich countries—Kazakhstan/Turkmenistan; and second, Uzbekistan and remittance-dependent countries—Kyrgyzstan/Tajikistan.

An extended gravity equation of trade for Uzbekistan compared to Kazakhstan and Turkmenistan:

$$\begin{aligned}\ln\_\mathrm{BTF}_{(a,b)} = {} & \beta_0 + \beta_1 * \ln(\mathrm{GDP_a}) + \beta_2 * \ln(\mathrm{GDP_b}) + \beta_3 * \ln(\mathrm{dist}_{a,b}) \\ & + \beta_4 * \mathrm{Ex\_concentration}_a + \beta_5 * \mathrm{Ex\_concentration_b} + \beta_6 * \mathrm{TnR}_a \\ & + \beta_7 * \mathrm{TnR}_b + \beta_8 * \mathrm{Insitutional\ quality}_a + \beta_9 * \mathrm{Institutional\ quality}_b \\ & + \beta_{10} * \mathrm{Pop}_a + \beta_{11} * \mathrm{Pop}_b + \varepsilon \end{aligned} \quad (1)$$

An extended gravity equation of trade for Uzbekistan compared to Kyrgyzstan and Tajikistan:

$$\begin{aligned}\ln\_\mathrm{BTF}_{(a,b)} = {} & \beta_0 + \beta_1 * \ln(\mathrm{GDP}_a) + \beta_2 * \ln(\mathrm{GDP}_b) + \beta_3 * \ln(\mathrm{dist}_{a,b}) \\ & + \beta 4 * \mathrm{Ex\_concentration}_a + \beta_5 * \mathrm{Ex\_concentration}_b + \beta_6 * \mathrm{Remit}_a \\ & + \beta_7 * \mathrm{Remit}_b + \beta_8 * \mathrm{Insitutional\ quality}_a + \beta 9 * \mathrm{Institutional\ quality}_b \\ & + \beta_{10} * \mathrm{Pop}_a + \beta_{11} * \mathrm{Pop}_b + \varepsilon \end{aligned} \quad (2)$$

Gross Domestic Product *per capita* (GDP p.c.), product concentration index of exports, total natural resource rents as a percentage of GDP, remittances and population size are considered as country-specific variables in the analysis. The GDP *per capita* provides a more accurate indication of the income and purchasing power of people living in a country. Bilateral trade flows can be better linked with the relative economic power of individuals, which might affect consumption behaviours and the demand for commodities, by employing GDP *per capita* rather than aggregate GDP in the gravity model.

Geographical distance is another factor affecting bilateral trade flows. Total natural resource rents include the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents and forest rents (World Bank: Metadata Glossary 2023). Fixed and random effects models are

TABLE 1
VARIABLES AND SOURCES OF DATA

Variables	*Definitions*	*Source*
$LnBTF_{a,b}$	The volume of bilateral trade flows between the host and destination countries.	International Trade Centre, available at: https://www.trademap.org/Index.aspx, accessed 17 July 2023.
LnGDP *p.c.*$_a$	Gross Domestic Product *per capita* of host country in natural logarithm form.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.
LnGDP *p.c.*$_b$	Gross Domestic Product *per capita* of country destination in natural logarithm form.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.
$LnDist_{a,b}$	The geographical distance (kilometres) between the host and destination countries in natural logarithm form.	DistanceFromTo, available at: https://www.distancefromto.net/, accessed 17 July 2023.
$Ex\_concentration_a$	Product concentration index of exports for the host country.	United Nations Conference on Trade and Development (UNCTD), available at: https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=120, accessed 17 July 2023.
$Ex\_concentration_b$	Product concentration index of exports for the destination country.	United Nations Conference on Trade and Development (UNCTD), available at: https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=120, accessed 17 July 2023.
TnR_a	Total natural resource rents as % of GDP for the host country.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.
TnR_b	Total natural resource rents as % of GDP for the destination country.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.
Institutional quality	The average of six WGI indicators: voice and accountability; rule of law; government effectiveness; regulatory quality; control of corruption; and political stability and absence of violence.	World Development Indicators, available at: https://info.worldbank.org/governance/wgi/, accessed 17 July 2023.
$Remit_a$	Migrant remittances received by the host country.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.
$Remit_b$	Migrant remittances received by the destination country.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.
Pop_a	Population of host country.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.
Pop_b	Population of destination country.	World Development Indicators, available at: https://databank.worldbank.org/source/world-development-indicators, accessed 17 July 2023.

TABLE 2
FIXED AND RANDOM EFFECTS REGRESSIONS WITH ROBUST AND DRISCOLL–KRAAY STANDARD ERRORS: AN EXTENDED GRAVITY MODEL (UZBEKISTAN–KAZAKHSTAN–TURKMENISTAN)

	Two-way fixed effects regression with Huber–White standard errors	*Two-way random effects regression with Huber–White standard errors*	*Two-way fixed effects regression with Driscoll–Kraay standard errors*	*Two-way random effects regression with Driscoll–Kraay standard errors*
Variables	Bilateral trade flows	Bilateral trade flows	Bilateral trade flows	Bilateral trade flows
GDPpc_UZB	−22.97	−22.97	0	
	(22.74)	(23.75)	(0)	(0)
GDPpc_KAZ–TKM	4.503***	4.503***	4.503*	4.503*
	(8.13e-06)	(3.03e-07)	(2.504)	(2.504)
Distance	–	−218.9***	−4.354*	−218.9**
		(1.13e-05)	(2.435)	(93.25)
Export_concentration UZB	−9.476	−9.476	0	0
	(8.131)	(8.493)	(0)	(0)
Export_concentration KAZ–TKM	0.515***	0.515***	0.515	0.515
	(8.30e-06)	(1.56e-07)	(1.356)	(1.356)
Natural resource rents UZB	0.0589	0.0589	0.0190	10.22**
	(0.0683)	(0.0714)	(0.0288)	(4.307)
Natural resource rents KAZ–TKM	−0.0412***	−0.0412***	−0.0412**	−0.0412**
	(2.66e-07)	(6.97e-10)	(0.0174)	(0.0174)
Institutional quality_UZB	−5.574	−5.574	0	0
	(10.67)	(11.14)	(0)	(0)
Institutional quality_KAZ	3.435***	3.435***	3.435**	3.435**
	(2.14e-05)	(4.51e-08)	(1.235)	(1.235)
Population UZB	2.19e-06	2.19e-06	−8.25e-07	4.10e-05**
	(3.47e-06)	(3.62e-06)	(4.75e-07)	(1.73e-05)
Population KAZ–TKM	1.48e-06***	1.48e-06***	1.48e-06*	1.48e-06*
	(0)	(0)	(7.08e-07)	(7.08e-07)
Year fixed effects	Yes	Yes	Yes	Yes
Constant	80.34	1,604***	0	0
	(97.70)	(102.0)	(0)	(0)
Observations	35	35	35	35
R-squared	0.972			

Notes: Robust standard errors in parentheses; ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

estimated. The fixed effects results are robust to standard errors when Driscoll–Kraay standard errors are undertaken. The Driscoll–Kraay standard errors are used to solve heteroskedasticity, autocorrelation and general forms of cross-sectional dependence problems.[6]

Findings

Our extended regression equation includes the product concentration index of exports, total natural resource rents as a percentage of GDP, remittances and population size along with

[6]The Driscoll–Kraay standard errors are derived from Driscoll and Kraay (1998), who established the consistency of the standard errors as both cross-sectional (N) and temporal (T) dimensions increase.

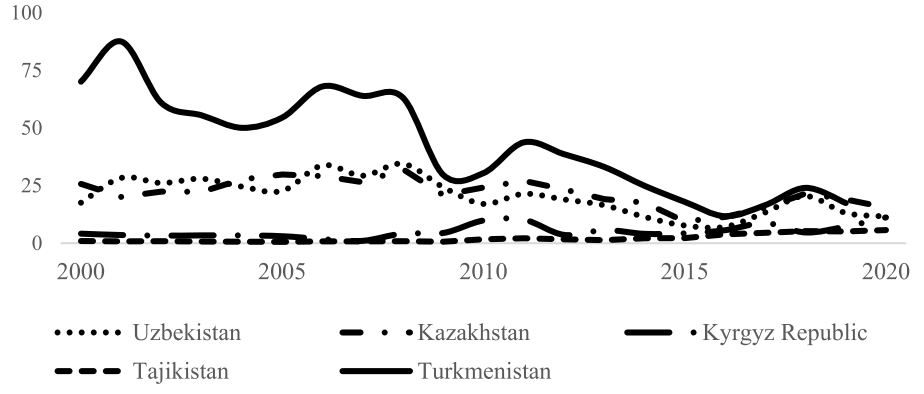

FIGURE 14. CENTRAL ASIA: TOTAL NATURAL RESOURCE RENTS (2000–2020; GDP PERCENTAGE)

Source: 'Total Natural Resources Rents (% of GDP)', World Bank 2020, available at: https://databank.worldbank.org/source/adjusted-net-savings/Series/NY.GDP.TOTL.RT.ZS, accessed 1 May 2025.

standard variables that are used in the gravity model of trade literature: bilateral trade flows, gross domestic product *per capita* (GDP p.c.) of the trading countries and the geographical distance between them. In Table 2 we provide the regression results for both pairs of countries separately.

The results of our first regression show that an increase in the GDP *per capita* of Kazakhstan and Turkmenistan positively and significantly affects bilateral trade flows between them and Uzbekistan. This is in line with the theoretical expectations of the gravity model. However, growth in Uzbekistan's GDP *per capita* seems to have little influence on bilateral trade flows. Meanwhile, the distance reflects the transportation costs connected with trade and thus negatively affects the bilateral trade volumes. Our findings confirm the negative relationship between the distance and bilateral flows.

Furthermore, the resource-abundant characteristics of the Central Asian countries (see Figure 14) cast new light on the question of whether there is a negative relationship between the rents accrued from resources and intra-regional trade. Figure 14 shows how dependence on natural resource rents has evolved differently across the region—while Turkmenistan experienced a significant decrease, Kazakhstan and Uzbekistan show only a modest decline, and Kyrgyzstan and Tajikistan consistently remain below 10%. This divergence implies that the degree of resource reliance may affect each country's incentive to engage in regional trade. Resource rent can weaken trade performance and hinder countries' economic growth (Sachs & Warner 1995). Intra-regional trade agreements generate different outcomes depending on the resource endowments of the participating countries. Regional free-trade agreements could generate trade for resource-poor countries, in the form of lower-cost imports, leading to increased trade volumes overall with their resource-rich neighbours (Carrère *et al*. 2012). Yet, the removal of trade barriers under regional trade agreements sometimes leads to a trade diversion for resource-rich countries, as they substitute imports from more efficient producers in the

world to a less efficient regional trade partner. This lowers the trade gains for them and leaves little incentive to be the driver of regional trade integration schemes.

Our regression results suggest that an increase in the natural resource rents of Kazakhstan and Turkmenistan negatively affects the volume of bilateral trade flows, whereas a growth in Uzbekistan's natural resource rents has no significant impact on bilateral trade flows. Rents extracted from natural resources are not conducive to regional trade cooperation as overreliance on natural resources puts the governments of resource-rich countries in a comfortable position in terms of managing the economy, thereby making them reluctant to diversify their exports and expand regional trade cooperation.

Institutional quality is another factor that can facilitate greater bilateral trade. A better institutional environment, reflected in lower levels of corruption and improved governance, reduces transaction costs and bureaucracy, and increases bilateral trade flows (Álvarez *et al*. 2018). The number of trade activities and export levels between countries are often higher when institutions are stronger. The positive effect of institutional quality on bilateral trade is more pronounced in developing countries than in their developed counterparts. According to our findings, an increase in the institutional quality of resource-abundant countries, namely Kazakhstan and Turkmenistan, contributes to the growth of trade flows.

The lack of export diversification and highly similar export structures between countries can lead to lower bilateral trade volumes between them (Amurgo-Pacheco & Pierola 2008; Karkanis & Fotopoulou 2022). However, the findings of the regressions suggest that changes in the export structure of Uzbekistan and its resource-rich neighbours have not had a significant impact on their trade relations. Finally, population growth seems to promote larger trade activities between these countries, as each newborn individual represents a new consumer and contributes to higher consumption demands for imported goods.

As demonstrated in Table 3, our regression results for the pair of Uzbekistan and remittance-dependent countries show that bilateral trade increases when the income *per capita* of Kyrgyzstan and Tajikistan is higher, while it is insensitive to changes in Uzbekistan's income *per capita*. There are mixed views on the role of remittances in bilateral trade flows between countries. Some studies argue that there is a positive feedback loop between remittances and trade in countries where a significant portion of remittances is invested in running family businesses (Schiff 1994; Metelski & Mihi-Ramirez 2015; Farzanegan & Hassan 2020). Remittances can also serve as a form of rent that indirectly stabilises elite rules in rent-based economies. A rise in the number of rents can make rentier countries reluctant to increase their bilateral trade flows with their trading partners (Warnecke-Berger 2021). Our regression results are consistent with both strands of the literature, as they indicate that higher remittances in Uzbekistan positively and significantly affect bilateral trade flows, while the opposite is true for the remittance-reliant countries Kyrgyzstan and Tajikistan.

However, changes in institutional quality have no significant impact on bilateral trade flows in this sample. The results also show that there is a negative relationship population growth of Uzbekistan and its bilateral trade flows with Kyrgyzstan and Tajikistan. This might be explained by Uzbekistan's structural changes, such as the shift from agriculture to manufacturing and services. During this transition, placing the priority on growing

TABLE 3
FIXED AND RANDOM EFFECTS REGRESSIONS WITH ROBUST AND DRISCOLL–KRAAY STANDARD ERRORS: AN EXTENDED GRAVITY MODEL (UZBEKISTAN–KYRGYZSTAN–TAJIKISTAN)

	Two-way fixed effects regression with Huber–White standard errors	*Two-way random effects regression with Huber–White standard errors*	*Two-way fixed effects regression with Driscoll–Kraay standard errors*	*Two-way random effects regression with Driscoll–Kraay standard errors*
Variables	Bilateral trade flows	Bilateral trade flows	Bilateral trade flows	Bilateral trade flows
GDPpc UZB	−26.76	−26.76**	−26.76***	−26.76***
	(10.32)	(10.83)	(1.486)	(1.486)
GDPpc KYG–TJK	8.068	8.068	8.068***	8.068***
	(4.846)	(5.082)	(2.206)	(2.206)
Distance	–	20.28***	−38.17***	−38.17*
		(2.178)	(11.14)	(19.48)
Export_concentration UZB	−8.083	−8.083***	−8.083**	−8.083**
	(2.571)	(2.697)	(3.507)	(3.507)
Export_concentration KYG–TJK	1.527	1.527	1.527	1.527
	(1.312)	(1.377)	(2.764)	(2.764)
Remittance UZB	7.29e-10	7.29e-10***	7.29e-10***	7.29e-10***
	(1.85e-10)	(1.94e-10)	(1.91e-10)	(1.91e-10)
Remittance KYG–TJK	−1.89e-09	−1.89e-09***	−1.89e-09***	−1.89e-09***
	(5.45e-10)	(5.72e-10)	(3.60e-10)	(3.60e-10)
Institutional quality UZB	3.601	3.601***	3.601**	3.601**
	(1.181)	(1.239)	(1.613)	(1.613)
Institutional quality KYG–TJK	−4.958	−4.958***	−4.958**	−4.958**
	(1.041)	(1.092)	(1.751)	(1.751)
Population UZB	2.94e-06	2.94e-06***	2.94e-06***	2.94e-06***
	(9.54e-07)	(1.00e-06)	(4.98e-07)	(4.98e-07)
Population KYG–TJK	−5.54e-06	−5.54e-06**	−5.54e-06***	−5.54e-06***
	(2.14e-06)	(2.24e-06)	(1.64e-06)	(1.64e-06)
Constant	120.5	347.4**	0	347.4***
	(35.49)	(153.0)	(0)	(56.24)
Observations	22	22	22	22
R-squared	0.947			

Notes: Robust standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

domestic sectors and reducing reliance on imports temporarily disrupt trade patterns with neighbouring countries.

Conclusion

Classic rentier states often have large financial wealth at their disposal, which are extracted from unearned sources such as natural resources and other valuable commodities rather than productive economic activities. Although rents can help governments maintain political control and regime stability, they impede economic diversification as they are associated with a dependence on natural resources and remittances, which discourages governments to promote the growth of other sectors of the economy. This has significant economic and

political implications that could shape the policies of countries on regional cooperation and connectivity.

In the context of Central Asia, resource-rich Kazakhstan and Turkmenistan prefer exporting their natural resources to global markets instead of increasing regional trade with their neighbours because of higher profits from selling resources internationally. Similarly, reliance on remittances limits the incentives of resource-poor countries in Central Asia to work for regional trade cooperation. Remittance revenues end up being spent on domestic consumption only, rather than the development of domestic industries, thereby restricting the capacity of remittance-dependent countries to expand trade volumes with their neighbours. In this regard, Tajikistan and Kyrgyzstan lack an enabling environment for the expansion of regional trade with their neighbours as remittance inflows to these countries have not contributed to the development of new industries (Gao *et al*. 2021; Murakami *et al*. 2021).

Uzbekistan, a country that is neither as resource-rich as Kazakhstan and Turkmenistan nor as heavily dependent on remittances as Tajikistan and Kyrgyzstan, represents a grey area in the RST. In this article, we have pushed the boundaries of RST by looking into the way rents shape the dynamics of regional cooperation through the lens of the abovementioned three types of states. We argued that Uzbekistan could be the main beneficiary and driver of greater regional cooperation for several reasons. First, depleting natural resource reserves and unstable levels of remittance inflows to the country necessitate the development of new industries. Second, it has the largest population and the most diversified economic structure amongst the Central Asian countries, providing significant potential for regional trade and cooperation. Furthermore, the market-oriented reforms it has undertaken in recent years call for greater trade and investment with its neighbours. Third, as a double-landlocked country with no direct access to sea routes, it is economically better off with an increased volume of intra-regional trade amongst other Central Asian countries. Considering these strengths and needs, we argued that Uzbekistan is best positioned to be a driving force for promoting economic integration and intra-regional trade facilitation in Central Asia.

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