

Central Asia at 25

Uuriintuya Batsaikhan and Marek Dabrowski

UURIINTUYA BATSAIKHAN
(uuriintuya.batsaikhan@bruegel.org) is an Affiliate Fellow at Bruegel

MAREK DABROWSKI
(marek.dabrowski@bruegel.org) is a Non Resident Fellow at Bruegel

The authors would like to thank Giuseppe Porcaro for creating maps and Roman Mogilevskii, Ben Slay, Simone Tagliapietra, Georg Zachmann, Suman Bery, Guntram Wolff and other Bruegel researchers for their comments on an earlier version of this paper.

Executive summary

CENTRAL ASIA, THOUGH referred to as a single region, consists of five culturally and ethnically diverse countries that have followed different political and economic transformation paths in the last 25 years since independence from the Soviet Union. Kazakhstan and Kyrgyzstan have in relative terms made strides in market reforms, while Turkmenistan and Uzbekistan still have not completed their transitions to a market economy and Tajikistan represents an intermediate case.

IN MANY RESPECTS, the historical legacy of the twentieth century and their unique geographical and geopolitical location have not helped Central Asian countries in their efforts towards economic development and integration.

AFTER EXPERIENCING MORE than a decade of growth based on hydrocarbon booms, Central Asian countries are faced with increasing challenges resulting from falling commodity prices, declining trade and lower migrant remittances. The main policy challenge is to move away from commodity-based growth strategies to macro-oriented diversification and adoption of a broad spectrum of economic, institutional and political reforms. However, structural diversification is easier said than done.

THE MAJOR OBSTACLES to political reform and economic diversification in the five Central Asian economies are internal and external geopolitical factors and deeply embedded institutional weaknesses within countries, particularly in areas where economic management interacts with authoritarian political systems and legal institutions. Our analysis suggests five key policy lessons that could serve as points of departure as these countries move ahead.

1 Introduction

At the end of 2016, the five countries of post-Soviet Central Asia – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – celebrated the twenty-fifth anniversary of their independence, after the breakup of the Soviet Union. It is a good occasion to examine where they stand now, the results of their transitions from centrally planned to market economies and the challenges the region faces. Central Asia also makes an interesting study because of its landlocked location and its historic legacy, including seven decades of communist rule and central planning. Moreover, Central Asia remains relatively understudied compared to other regions.

Despite their shared history, and being referred as a single region, the countries differ in their levels of political and economic development, cultural and ethnic composition and relations with the outside world.

In the 1990s, Central Asia experienced many of the same hardships of economic transition as central and eastern European and other former-communist countries, such as skyrocketing inflation, partial de-industrialisation and the collapse of Soviet-type welfare systems. Turkmenistan and Uzbekistan still have not completed their transitions to a market economy. Kazakhstan and Turkmenistan have joined the upper middle-income group, while Kyrgyzstan, Tajikistan and Uzbekistan remain in the lower-middle income category¹.

The Central Asia countries are landlocked, though Kazakhstan and Turkmenistan border the Caspian Sea, which is not an open sea (Figure 1)². Furthermore, the Soviet transportation network was concentrated on Russia and other Soviet republics, while connections with the outside world were almost non-existent. Despite some infrastructure investment in the last quarter of century, the lack of connectivity between Central Asia and the outside world remains a major obstacle to trade and economic development. This is also true of intra-regional trade relations, which are impaired by the incompatibility of individual economic regimes, continuous political tensions, prolonged conflicts in the neighbourhood (Afghanistan) and partly closed borders.

In addition, the recent decline in commodity prices has challenged, through trade, migrant remittances and financial market channels, Central Asia's commodity-based growth strategies of 2000s and first half of 2010s, creating new sources of social and political risks in individual countries.

In this Policy Contribution, we analyse the socio-economic and political developments in Central Asia and the policy challenges faced by this region. Our paper is based on available cross-country comparable statistical sources, primarily those offered by the international organisations of the United Nations system. However, there are numerous data gaps, in particular for Turkmenistan and Uzbekistan, whose national statistical methodologies and data availability do not meet international standards. In those cases, we leave the gaps rather than try to present incompatible data.

2 Historical background

In the nineteenth century, the Russian Empire conquered most of Central Asia except for the northern part of what is now Kazakhstan. Under Russian rule, Central Asia was split into the Governor-Generalships of Turkestan (with Tashkent as its capital) and Steppes (capital:

1 See <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>.

2 The legal status of the Caspian Sea and its territorial delimitation are the subject of international controversy. Russia and Iran consider it a lake rather than a sea (see Janusz-Pawletta, 2015).

Omsk). The Emirate of Bukhara and Khanate of Khiva remained autonomous under the Russian protectorate until 1920 when they were defeated by Bolsheviks.

In the 1920s and 1930s, under Soviet rule, the territorial division of Central Asia changed several times with the Soviet Union republic status of the five now independent states, and their current borderlines, emerging only in 1936.

Until the 1920s, the Central Asian economy retained its traditional agrarian/pastoral profile, which reflected the largely nomadic and rural character of the region's population. Industrialisation arrived in the Stalin era in the 1930s and was intensified during the Second World War when many industrial enterprises from the European part of the Soviet Union were evacuated to Central Asia. At the same time, large irrigation projects such as the Great Fergana Canal were implemented. Similarly to other parts of the Soviet Union, agriculture was forcibly collectivised in the early 1930s.

The human costs of the Soviet modernisation of Central Asia were enormous. They included several rounds of famine in the 1920s and 1930s, repression and terror in the 1930s, the building of a large network of labour camps (the so-called Gulag system) where political opponents from the entire Soviet Union were imprisoned and where they perished in large numbers, and mass-scale resettlements (*ssylka* in Russian) of populations from the European part of the Soviet Union. The latter affected social groups such as the *kulaks* (better-off farmers) and included the deportation of entire ethnic groups in the 1940s, including Volga Germans, Chechens, Ingush, Crimean Tatars, Crimean and Caucasian Greeks, Meskhetian Turks, Koreans, Karachays and Poles.

After the death of Stalin in 1953 and the partial dismantling of the Gulag system, the Soviet-type forcible modernisation and industrialisation continued but with the use of less coercive methods. These included the conversion of pastures ('virgin land' or *tselina* in Russian) in northern Kazakhstan into large-scale wheat farms, the building of the Main Turkmen and Karakum canals, and the operation of the Semipalatinsk Nuclear Test Site and the Baikonur Cosmodrome (both in Kazakhstan). Many of those projects caused severe environmental damage (such as the disappearance of the Aral Sea and radioactive pollution over large areas of Kazakhstan), which have not been overcome yet.

Unlike the Baltic and Caucasus regions, the Central Asia republics were not at the forefront of the national emancipation movements in the late Soviet era. Until November 1991, their leaders participated in negotiations on a 'renewed' Soviet Union agreement with the Soviet president Mikhail Gorbachev. However, once the Soviet Union was dissolved in December 1991, the local political elites (mostly former leaders of the republican structures of the Communist Party of the Soviet Union) grasped the opportunity and started to establish new authoritarian regimes (except Kyrgyzstan), based on national rather than communist ideologies.

The rapid and forcible industrialisation of the Soviet era (with a strong focus on military needs) was associated with huge structural distortions and microeconomic ineffectiveness. After the dissolution of the Soviet Union, many industrial enterprises in Central Asia lost their previous markets and were unable to compete under the new market conditions. Partial de-industrialisation in the post-Soviet period was thus no surprise.

After a painful transition period, growth picked up in 2000s, largely driven by growing exports of commodities such as oil and natural gas (Kazakhstan, Turkmenistan and Uzbekistan), aluminium (Tajikistan), gold (Kyrgyzstan), cotton (Tajikistan and Uzbekistan) and other metals (Kazakhstan).

3 Geography, geopolitics and economic integration

Uzbekistan is the most populous country with 31.3 million people, followed by Kazakhstan, 17.5 million, Kyrgyzstan, 6 million, Tajikistan, 8.5 million and the least populated Turkmenistan, 5.4 million.

Figure 1: Political map of Central Asia



Source: Bruegel.

For many reasons, geography and geopolitics in Central Asia are not helpful to the region's economic development.

First, the region is distant from the major centres of world economic activity: North America, Western Europe, East and South East Asia.

Second, all countries are landlocked (Kazakhstan is the largest landlocked country in the world and Uzbekistan is double landlocked, ie it borders only landlocked countries) with limited transportation connections inside and outside the region. Major Central Asia transportation routes built during the Soviet era crossed and re-crossed the borders of Soviet republics. The transformation of formerly intra-Soviet administrative borders into borders between newly independent Central Asian states, with border and custom controls and, quite frequently, with visa requirements, created a huge challenge to intra-regional trade and to the domestic movement of people and goods within individual countries, especially in the densely populated Fergana Valley shared between Kyrgyzstan, Tajikistan and Uzbekistan.

Third, on various occasions Central Asian countries have suffered from political instability (underpinned by ethnic, sectarian, clan and regional conflicts and authoritarian regimes) and an even more unstable neighbourhood. It is sufficient to mention the Tajik civil war in the 1990s, ethnic riots in Osh (Kyrgyzstan) in 1990 and 2010, the popular uprising in Andizhan (Uzbekistan) in 2005, two revolutions in Kyrgyzstan (2005 and 2010), and occasional incursions by jihadists from Afghanistan in the late 1990s and early 2000s. Political ambitions and personal animosities between authoritarian leaders have additionally limited the opportunities for intra-regional cooperation.

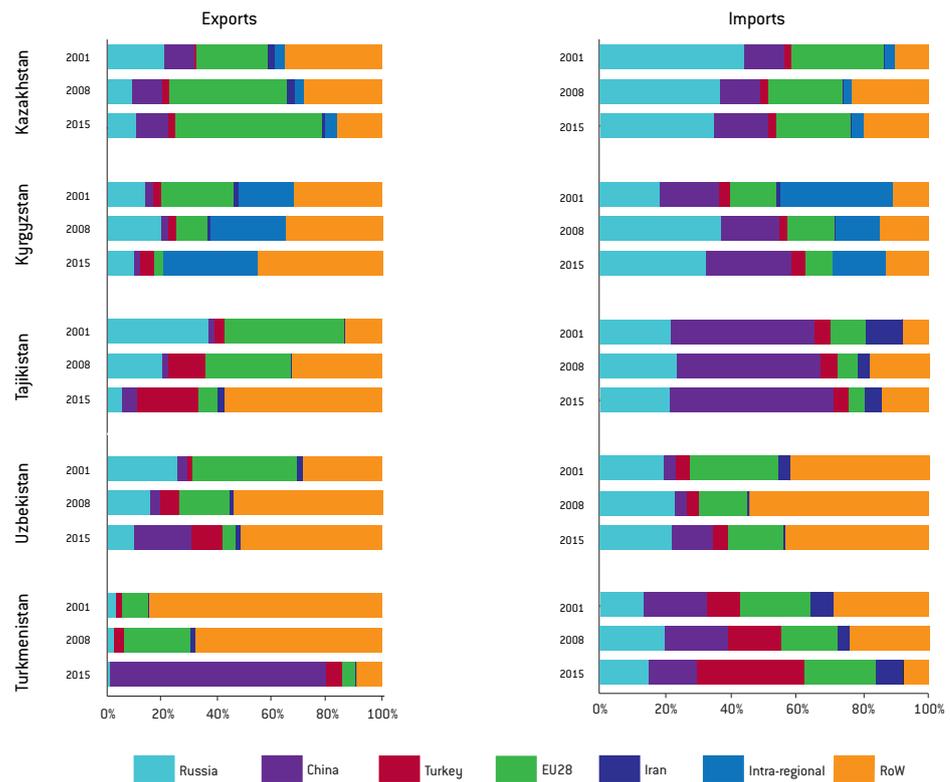
Central Asia's neighbourhood also poses numerous security risks and, therefore, places limits on the potential for trade, transit, investment and tourism. Risks include the continuous civil war in Afghanistan (since the mid-1970s), the separatist movement in the Xinjiang region of China, the India-Pakistan conflict in Kashmir, frozen conflicts in the Southern Caucasus and the long-lasting economic and political isolation of Iran.

Fourth, the Central Asian countries are not ethnically homogenous. The dominant ethnic groups amount to 63 percent of the population in Kazakhstan, 72 percent in Kyrgyzstan and between 80 and 85 percent in Uzbekistan, Tajikistan and Turkmenistan³. The Turkmen, Uzbek, Kyrgyz and Kazakh languages belong to the Turkish language family while Tajik belongs to the Persian family. However, Russian continues to play the role of regional lingua franca, especially in Kazakhstan and Kyrgyzstan.

Fifth, the region borders global and regional powers: Russia, China and Iran. Although Turkey does not border Central Asian countries, it seeks close economic, political and cultural links with them based on shared historical and language roots. The US as the global political and economic superpower has also been present in the region, especially at the time of the NATO-led combat mission in Afghanistan (2001-14) when Kyrgyzstan, Tajikistan and Uzbekistan hosted US military bases and offered transit and logistic support to NATO troops.

While Russia clearly dominated the region for the last two centuries, in the last twenty years China rapidly expanded its presence in Central Asia, especially in connection with large infrastructure investments (Box 1). As a result, Central Asian countries will face an increasingly difficult challenge of navigating between the two⁴. In addition, the increasingly nationalist and revisionist tendencies in Russian politics, especially in the context of annexation of Crimea and the ongoing Ukrainian conflict, have raised serious concerns in Kazakhstan, which has a large Russian-speaking minority and long land border with Russia, and in Uzbekistan, in relation to its autonomous Republic of Karakalpakstan (The Guardian, 2015).

Figure 2: Main trading partners' shares in total exports and imports



Source: Bruegel based on International Trade Centre. Note: missing are intra-regional trade data for Tajikistan, Turkmenistan and Uzbekistan, exports of natural gas from Turkmenistan to Russia and large part of Uzbek exports of gold and cotton. Iran's data is for 2005 instead of 2008 and 2011, instead of 2015, for all countries.

3 2012-14 census data for all except Uzbekistan, for which the most recent data is from 1996.

4 Hypothetically, the Shanghai Cooperation Council consisting of Russia, China and four Central Asian countries (all except Turkmenistan) should ease potential tensions and facilitate political, security and economic cooperation in the region. However, the actual role of this organisation remains limited.

All the Central Asian countries are relatively open to trade. The least open is Uzbekistan, reflecting its autarkic development strategy and largely unreformed economic system (see section 4). In terms of exports and imports (Figure 2), Russia's share tends to decrease over time while China's increases. The EU is the largest export market for Kazakhstan and the EU remains quite significant as a source of imports into Kazakhstan, Turkmenistan and Uzbekistan. Turkey is an important destination for Tajikistan's exports and source for Turkmenistan's imports (see also Mogilevskii, 2012).

Kazakhstan and Turkmenistan can benefit from the transit trade between China and Iran. In 2015, when sanctions on Iran were lifted, the first train from China arrived in Tehran after travelling through Kazakhstan and Turkmenistan, which took two weeks instead of one month for goods sent by sea.

The list of Central Asia's major trading partners reflects the geography and geopolitics of the region, as well as its institutional trade arrangements (Table 1). Only three countries out of the five belong to the World Trade Organisation: Kyrgyzstan (since 1998), Tajikistan (since 2013) and Kazakhstan (since 2015). The importance of the Commonwealth of Independent States (CIS), the organisation created by the former Soviet republics at the end of 1991 to retain free trade and visa-free movement of people, has decreased over time (Turkmenistan does not belong to the CIS). The Russia-led Eurasian Economic Union, which intends to create a single market, involves Kazakhstan and Kyrgyzstan. However, its member states have put little effort into it and its economic modernisation potential is limited. Recently, the Eurasian Economic Union has been negatively affected by geopolitical tensions related to the Russia-Ukraine conflict, such as the western sanctions imposed on Russia, Russia's trade countersanctions against the US and the EU (which have not been replicated by other Eurasian Economic Union members) and Russia's unilateral trade sanctions against Ukraine.

The intergovernmental Economic Cooperation Organisation (ECO) includes all Central Asia countries and their southern neighbours⁵. However, its preferential trade agreements involve only some of them. The ECO Framework Agreement on Trade Cooperation was signed in 2000 by Kazakhstan, Kyrgyzstan and Tajikistan but has been ratified only by Kazakhstan and Kyrgyzstan. The ECO Trade Agreement was signed in 2003 and entered into force in 2008. Of the Central Asian countries, only Tajikistan has signed and ratified this Agreement (as of 2016).

Table 1: Trade and economic integration

Organisation	Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan	Membership
World Trade Organisation	Yes	Yes	Yes	No	No	Uzbekistan is an observer
Commonwealth of Independent States	Yes	Yes	Yes	No	Yes	All former Soviet Union states except Baltics, Georgia, Turkmenistan and Ukraine
Eurasian Economic Union	Yes	Yes	No	No	No	Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia
Economic Cooperation Organisation	Yes	Yes	Yes	Yes	Yes	Afghanistan, Azerbaijan, Iran, Pakistan and Turkey

Source: Bruegel.

⁵ See <http://www.ecosecretariat.org>.

Interestingly, despite its increasing share of Central Asia's exports and imports, China has not advanced formal free trade arrangements with the region, and trades with its Central Asia partners on WTO terms.

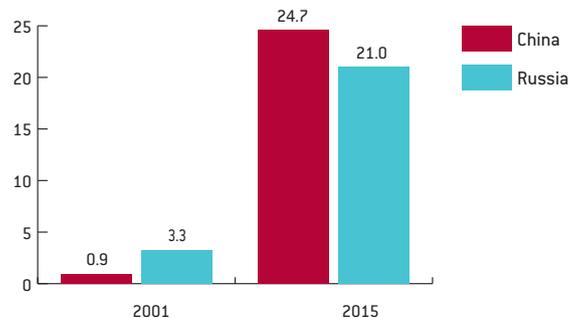
The EU concluded bilateral Partnership and Cooperation Agreements (PCAs) with each country, which offered the Most-Favoured Nation tariffs in bilateral trade relations, even before the accession of Central Asian countries to the WTO. In 2015, the new-generation Enhanced PCA between the EU and Kazakhstan was signed in Astana. Kazakhstan remains the most important economic and political partner of the EU in the region because of its role as an oil exporter. Tajikistan and Uzbekistan benefit from the Generalised System of Preferences (GSP) and Kyrgyzstan benefits from a more generous GSP+ scheme, granted to them by the EU on a unilateral basis⁶.

Box 1: China's role in Central Asia and the new Silk Road

The ancient Silk Road went through Central Asia with Samarkand and Bukhara (today in Uzbekistan) being among the biggest and most prosperous trading centres along the route. Today China is reviving the old trading route through its ambitious One Belt One Road project, which will develop infrastructure across Central Asia, South Asia and onto Europe. Three major belts/roads have been proposed: North, Central and South. The North Belt will go through Kazakhstan and Russia to Europe. The Central Belt will go through Central Asia, Western Asia, the Persian Gulf and the Mediterranean. Finally, the South Road will stretch from China to Southeast Asia, South Asia and the Indian Ocean. All Central Asian countries, except for Turkmenistan, are members of the Asian Infrastructure Investment Bank, which will fund this project along with the Asian Development Bank and other sources.

In the last decade, China has actively increased its presence in Central Asia through investments in energy and infrastructure. Total trade between China and Central Asian countries has surpassed Central Asia's trade with Russia (Figure 3), with commodities dominating.

Figure 3: Central Asia, total trade with China and Russia, \$ billions



Source: Bruegel based on Trademap (data for Central Asian countries). Note: Total trade is a sum of exports and imports.

China has been actively investing in oil and gas pipelines, roads and railways, and accompanying infrastructure (Figure 4). These projects include:

- **Oil:** China constructed the Kazakhstan-China oil pipeline, which came on stream in 2006; China's oil imports from Kazakhstan increased almost tenfold between 2005 and 2008.
- **Gas:** China has completed the construction of a major gas pipeline from Turkmenistan. A second pipeline, the Line D through Uzbekistan, Tajikistan and Kyrgyzstan is scheduled for construction, increasing China's gas imports from Turkmenistan even further (Farchy,

⁶ See <http://ec.europa.eu/trade/policy/countries-and-regions/development/generalised-scheme-of-preferences/>.

2016). The pipeline broke the previous dominance of Russia's Gazprom but at the cost of making Turkmenistan nearly totally dependent on China. Turkmenistan's exports to China constituted 1 percent of its total exports in 2009, increasing to almost 80 percent by 2015, almost all of which is natural gas; Turkmenistan's second largest trading partner, Turkey, takes only 5 percent of its total exports.

Figure 4: Map of the newly built and planned pipelines and railways in Central Asia



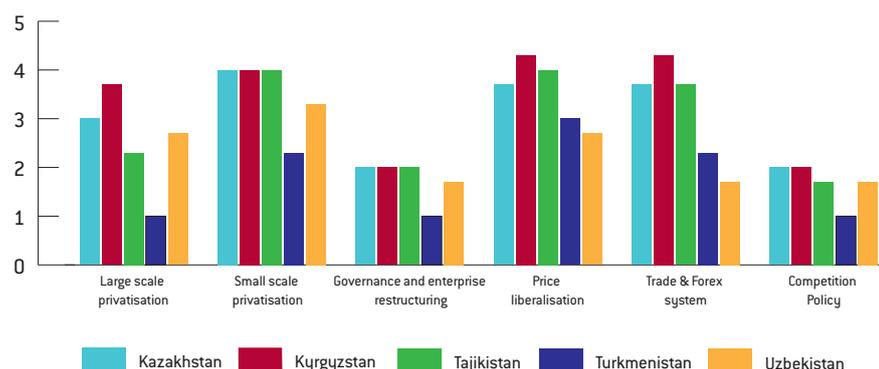
Source: Bruegel.

- **Railways and other infrastructure:** China committed to building the railway from Khorgos on the China-Kazakhstan border to the Aktau port on the Caspian Sea, including supplementary industrial and infrastructure projects in Khorgos as the hub. Another project, the China-Kyrgyzstan-Uzbekistan rail route is under discussion.

4 Reform progress and external support

After the collapse of the Soviet Union and its economic system in 1991, economic transition in Central Asia started with a delay and has progressed slowly and unevenly. One reason for the delay was the continuation of the common ruble area in 1992 and most of 1993 in which the single currency (Soviet ruble) was managed by several central banks (Dabrowski, 2016a). This led to very high inflation in the entire post-Soviet space, including Central Asia (Figure 11 in section 5). Kyrgyzstan was the first to introduce its own currency in May 1993 followed by Kazakhstan, Turkmenistan, Uzbekistan (all three in November 1993) and Tajikistan (May 1995).

Figure 5: European Bank for Reconstruction and Development Transition Indicators, 2014



Source: Bruegel based on EBRD (European Bank for Reconstruction and Development). Note: the scale goes from 0 (no reforms) to 4.33 (reforms completed).

As a result, macroeconomic stabilisation and market-oriented reforms in Kyrgyzstan and Kazakhstan started only in 1994-95. In Tajikistan they started a few years later, after the end of its civil war (1997). Turkmenistan and Uzbekistan resisted market transformation for much longer, and have tried to retain many of the instruments of a command economy. Figure 5, which shows the latest available EBRD transition indicators, reflects the uneven pace of economic reform. The scores of the two regional reform leaders – Kyrgyzstan and Kazakhstan – are similar to those of countries in south eastern Europe and the Caucasus but below those of the EU’s former-communist member states. Turkmenistan and Uzbekistan show little progress (except small-scale privatization in Uzbekistan). Tajikistan represents an intermediary case.

All Central Asian countries are doing poorly in the areas of governance and enterprise restructuring and competition policy, pointing to their limited progress in more complex institutional and legal reforms. This observation is confirmed by other available surveys and rankings.

Corruption remains a major problem in the region, particularly in Turkmenistan and Uzbekistan (Table 2). Corruption is an additional burden, especially on the poor, in terms of their access to public and private services. Corruption, nepotism and favouritism hinder private sector development, particularly of small and medium-sized enterprises. Furthermore, according to the Heritage Foundation (HF) Index of Economic Freedom (Table 2) only Kazakhstan and Kyrgyzstan have managed to achieve partial economic freedom (the HF category of ‘moderately free’). Tajikistan is rated as ‘mostly unfree’ (similarly to Russia) and the two other countries are considered ‘repressed’.

When we disaggregate the summary HF ranking into individual policy fields (Figure 6) most Central Asian countries score low in terms of property rights, freedom from corruption and financial freedom, which, among other things, reflect their low quality judicial systems and their inability to enforce contracts. Moreover, weak judicial systems discourage foreign investors and, therefore, are slowing down the modernisation of Central Asian economies. Generally, the business environment remains difficult and poses a big obstacle to the diversification of Central Asian economies away from their commodity dependence (see sections 5-6).

Kazakhstan and Kyrgyzstan have achieved some progress in building market-oriented financial sectors. Kazakhstan has attracted meaningful foreign investment into this sector. It has also the largest banking sector as measured by the ratio of credit to the private sector to GDP, which was 58.9 percent of GDP in 2007 but then declined as result of the 2007-08

banking crisis (Figure 7). The currencies of Turkmenistan, Uzbekistan and Tajikistan are not convertible even for current account transactions, resulting in multiple exchange rates. The financial sectors of Turkmenistan and Uzbekistan remain highly repressed.

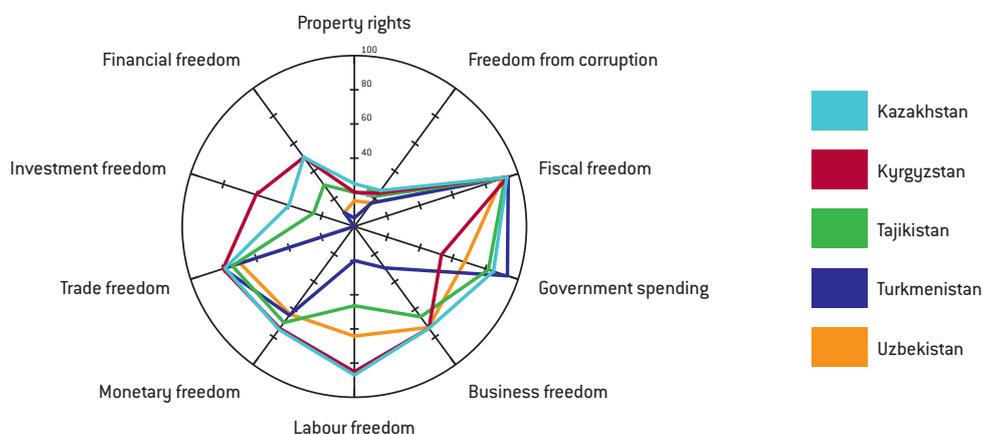
Table 2: Governance indicators, 2015

Country	Heritage Foundation Index of Economic Freedom, world ranking and status, 2015		Transparency International, Corruption Perception Index (100 = very clean), 2015
	World Rank in Economic Freedom	Status	
Kazakhstan	69	Moderately free	28
Kyrgyzstan	82	Moderately free	28
Tajikistan	140	Mostly unfree	26
Turkmenistan	172	Repressed	18
Uzbekistan	160	Repressed	19

Source: Bruegel based on Heritage Foundation and Transparency International.

The largely authoritarian character of the political systems in Central Asia is the main cause of their poor governance and business climate, and their insecure property rights and rule-of-law deficit. According to the Freedom House Freedom in the World 2017 report⁷, only Kyrgyzstan is rated as ‘partly free’, while the others are ‘not free’. Uzbekistan and Turkmenistan belong to the group of the 10 most politically oppressive countries in the world, alongside North Korea and Eritrea.

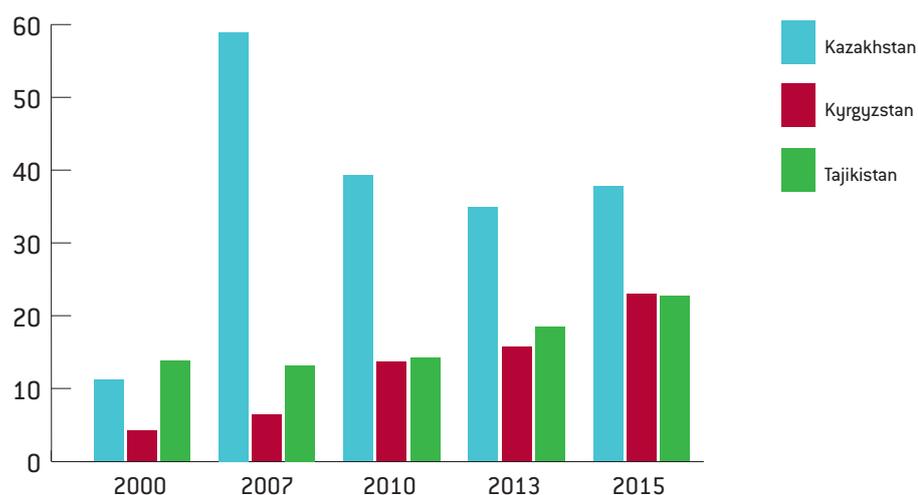
Figure 6: Heritage Foundation Index of Economic Freedom by components, 2015



Source: Bruegel based on Heritage Foundation.

⁷ <https://freedomhouse.org/report/freedom-world/freedom-world-2017>.

Figure 7: Domestic credit to the private sector as percent of GDP



Source: Bruegel based on World Bank World Development Indicators (updated 23 March 2017). Note: data for Tajikistan and Uzbekistan is missing.

External parties could play a significant role in supporting reforms in Central Asia, as they did for the central and eastern Europe region. Unfortunately, a disadvantageous geographic location and geopolitics have limited these opportunities (section 3).

Although the two big powers directly bordering the Central Asia region – China and Russia – provide financial and development aid it largely serves their national and geopolitical interests. The same is true of investment from China and Russia, the major part of which is provided by state-controlled corporations or companies that are close to their respective governments. Often these projects lack transparency.

To lesser extent, the same is true of the two other regional players – Turkey and Iran. None of these neighbours is interested in supporting more political freedom or deeper institutional reforms in Central Asian countries.

The roles played by the US and EU in the region have remained limited. Both provide technical assistance but its scale has reduced over time. The US interest in the region declined after NATO's combat mission in Afghanistan ended. The extent of future US engagement under the Trump administration remains unclear.

The EU's interests are also limited. In the first period of post-communist transition, the EU through its external policy tried to follow a common regional approach to all CIS countries, including via the single development aid framework – the Technical Assistance to Commonwealth of Independent States (TACIS). However, with the start of the European Neighbourhood Policy (ENP) in 2004, the Central Asia region, which remained outside this policy framework, was moved into a general basket of developing countries, also in terms of technical assistance programmes. The EU's relations with the region are governed by 'The European Union and Central Asia: Strategy for a New Partnership' adopted in 2007⁸ and by bilateral PCAs (section 3).

Occasionally, Kyrgyzstan and Tajikistan have received EU Macro-Financial Assistance (in the form of loans and grants) as a supplement to their International Monetary Fund programmes (see the next paragraphs). Given Kazakhstan's and Kyrgyzstan's membership of the Eurasian Economic Union, the EU cannot offer them negotiations on free trade agreements, as it has done with Georgia, Moldova and Ukraine. The same limitation in terms of opportunities for free trade arrangements with the EU applies to Turkmenistan and Uzbekistan, which

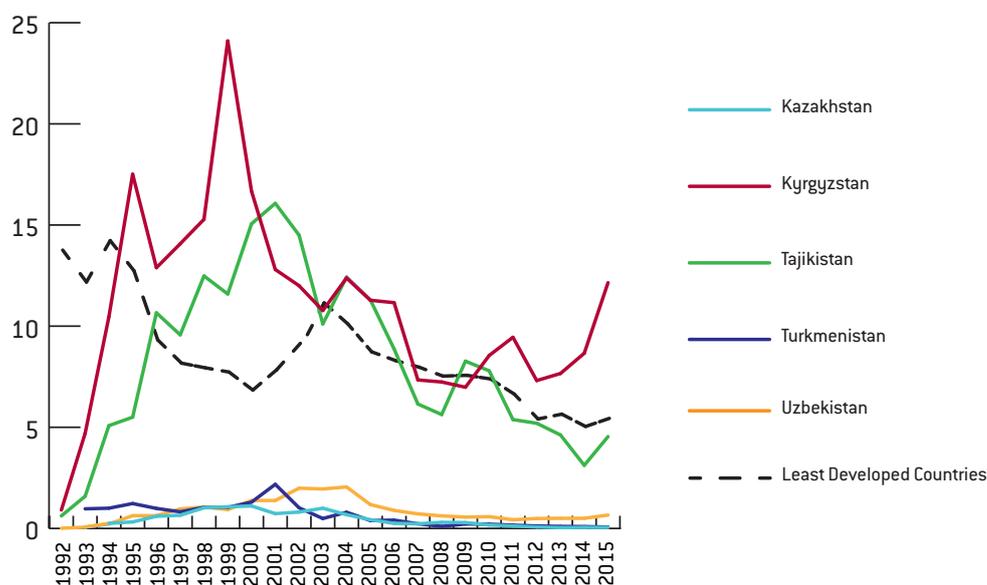
⁸ https://eeas.europa.eu/sites/eeas/files/st_10113_2007_init_en.pdf.

are not WTO members and have not completed basic market reforms. Thus, the potential EU toolkit of policies that could support economic and political transition in Central Asia is limited.

In the context of the limited engagement of bilateral donors⁹, the IMF, World Bank, various UN agencies and the Asian Development Bank, have provided major financial and technical support to modernisation in Central Asia, particularly in terms of eradicating poverty and infrastructure investment. This has included IMF, World Bank and Asian Development Bank lending on concessionary terms to Kyrgyzstan and Tajikistan. Turkmenistan's and Uzbekistan's relationships with the IMF and World Bank are less developed because of their non-market economic systems and information closeness. Because they have reached upper-middle-income status (section 5), Kazakhstan and Turkmenistan are no longer eligible to participate in most development aid programmes.

Overall, Kyrgyzstan and Tajikistan have received the largest amount of official development assistance (ODA) as a share of gross national income in the region (Figure 8), on a level comparable with the group of least developed countries to which they belonged during most of the analysed period. The peak for ODA came at the end of 1990s (Kyrgyzstan) and early 2000s (Tajikistan) and has since gradually declined for the entire region (except for Kyrgyzstan where it grew again after 2013). In Kazakhstan and Turkmenistan, ODA almost disappeared after 2005.

Figure 8: ODA as a percentage of gross national income



Source: Bruegel based on OECD DAC2a database. Note: The list of least developed countries contains 48 countries (see: <http://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf>).

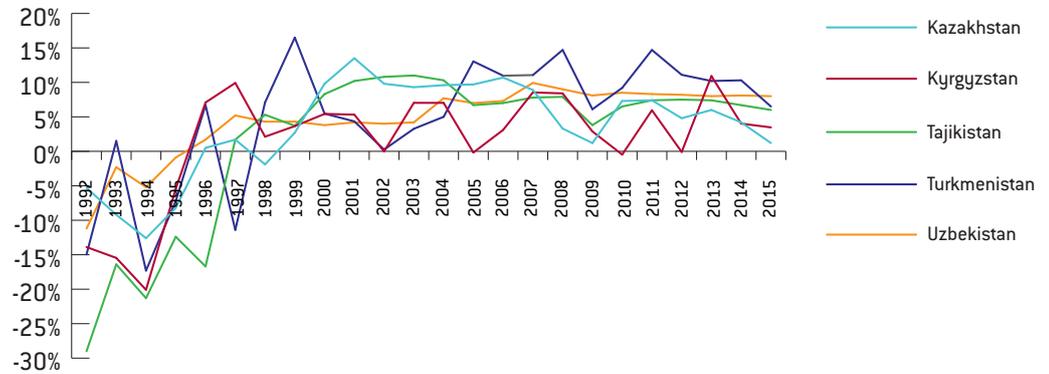
5 Economic and social performance since independence

In the first half of the 1990s, Central Asian countries went through a painful process of correction of huge macroeconomic imbalances and structural distortions inherited from the Soviet era. They also had to adapt to the partial loss of the Soviet Union market (especially in the military-industrial sector) and the termination of direct and indirect transfers from Russia.

⁹ With the exception of Japan, which has financed some infrastructure projects in Kyrgyzstan and Tajikistan on concessionary terms.

Growth recovery started in 1995-97 (Figure 9) but accelerated only in the 2000s with new investment in hydrocarbons and other mineral resources and the start of the global commodity boom. However, annual growth rates have remained volatile, largely because of fluctuations in global commodity prices.

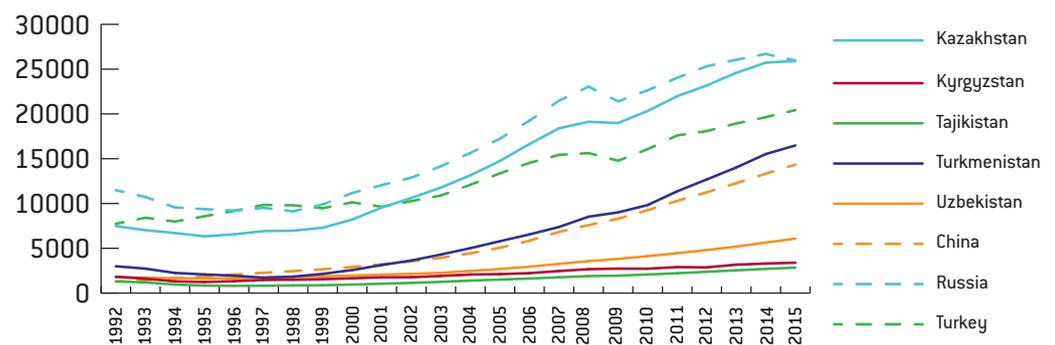
Figure 9: Year-on-year GDP growth rate, percent



Source: Bruegel based on World Bank WDI.

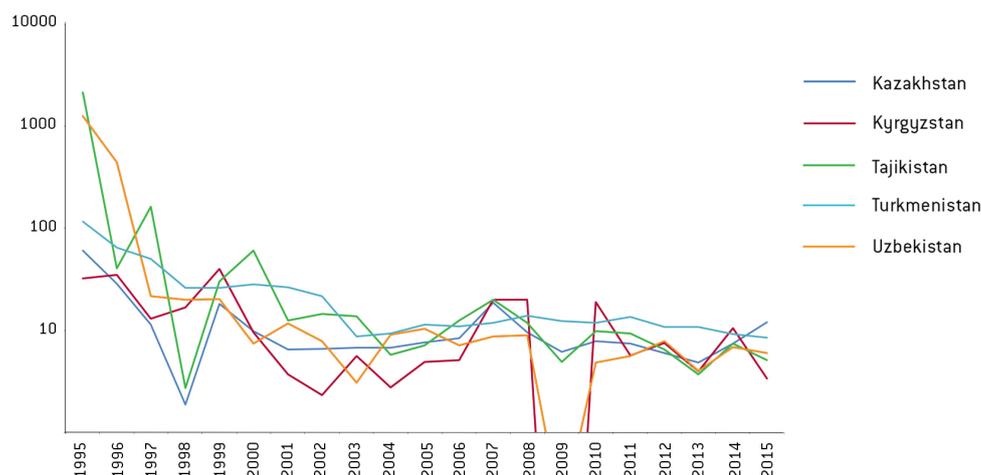
Figure 10 summarises economic progress since independence. After the period of output decline in the first half of the 1990s, GDP per capita in current international dollars in PPP terms has systematically increased in all Central Asian countries. However, only Kazakhstan and Turkmenistan have managed to grow rapidly, thanks primarily to the hydrocarbon bonanza. Both countries continue to have higher GDP per capita in PPP terms than rapidly growing China. Kazakhstan overtook Turkey (at the beginning of the twenty-first century) and caught up with Russia in 2015. Uzbekistan, Kyrgyzstan and Tajikistan grew at a slower pace. As result, the income per capita differences between those two subgroups of Central Asian countries have increased in the last 15 years.

Figure 10: GDP per capita in PPP terms, current international \$, 1992-2015



Source: Bruegel based on IMF World Economic Outlook database, October 2016. Note: IMF staff estimates for Turkmenistan (2005-15), Uzbekistan (2014-15) and Tajikistan (2015).

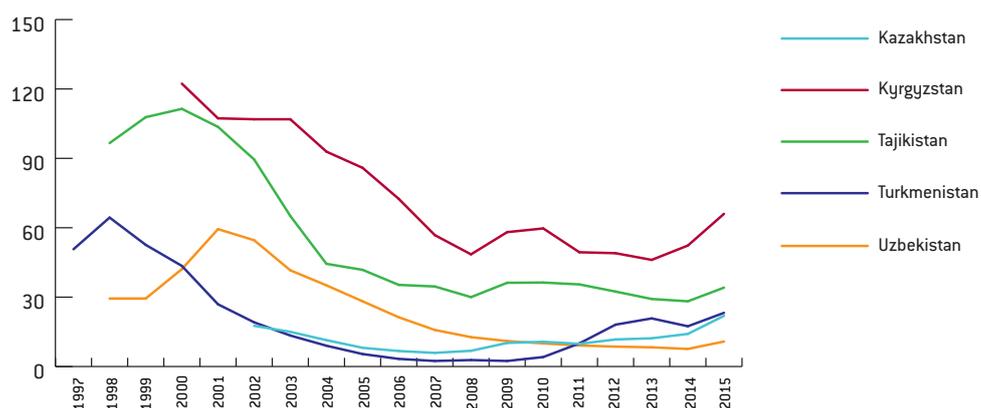
Figure 11: Inflation, end of period, percent (logarithmic scale), 1995-2015



Source: Bruegel based on the IMF World Economic Outlook database, October 2016.

Other macroeconomic indicators have behaved similarly to growth rates. The turbulent 1990s, especially the first half, were characterised by three- or even four-digit inflation in Tajikistan and Turkmenistan (Figure 11) and three-digit government debt as a share of GDP in Kyrgyzstan and Tajikistan (Figure 12). Part of that debt was owed to Russia, another part to the World Bank, other international development institutions and official creditors. The period of the global commodity boom (2000-08) was marked by high growth rates, annual inflation in the range of 8-10 percent, fiscal consolidation and growing international reserves. Then the global financial crisis of 2008-09 led to slower growth and some deterioration in fiscal accounts and balance of payments. Finally, the decline in commodity prices in 2014 further deteriorated the macroeconomic environment. The currencies of all Central Asian countries sharply depreciated (in particular, the Kazakhstani tenge), inflation went up, fiscal balances and balance of payments deteriorated, and growth further slowed down (Dabrowski, 2016b).

Figure 12: General government gross debt, percent of GDP, 1997-2015



Source: Bruegel based on the IMF World Economic Outlook database, October 2016.

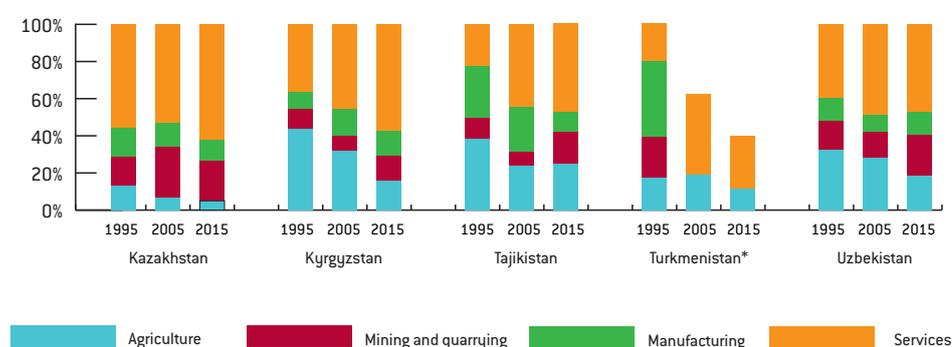
Kazakhstan (since 2000) and Turkmenistan (since 2008) used the boom years to create oil and gas-related sovereign wealth funds. However, their transparency remains either low (Kazakhstan) or non-existent (Turkmenistan)¹⁰. Furthermore, the Kazakhstan National Fund has served, to a great extent, as the source of financing for large infrastructure projects and

¹⁰ See <http://www.swfinstitute.org/sovereign-wealth-fund-rankings/>.

other public investment rather than as a reserve fund for rainy days. Kazakhstan has also used an increasing part of its oil revenues for current spending purposes. As result, its fiscal break-even oil price, ie the price at which the fiscal balance is zero, went up from \$65.4 per barrel in 2009-13 to \$88.1 in 2015, exactly at the time when oil prices sharply declined to the level below \$50 per barrel. Turkmenistan managed to bring down its fiscal break-even oil price from \$81.6 per barrel in 2009-13 to \$50.4 in 2015 (IMF, 2016, Table 5).

Despite its decreasing importance, agriculture continues to contribute around a quarter of value added in Tajikistan and Uzbekistan (Figure 13). All Central Asian countries recorded an expansion of mining and quarrying, especially Kazakhstan, Uzbekistan and probably Turkmenistan (for which data is missing, see Figure 13), attributable to the oil and natural gas industry. Manufacturing in Central Asia is concentrated in labour-intensive sectors, such as food and textiles. The service sector remains relatively underdeveloped, except in Kazakhstan and Kyrgyzstan.

Figure 13: Value added by sector, percentage of GDP



Source: World Bank. Note: Industry is disaggregated between (1) mining and quarrying, and (2) manufacturing. (*) Comparative share of both sectors for Turkmenistan is missing for 2005 and 2015.

Agriculture's share in total employment (Table 3) is higher than in total value added (Figure 13), indicating that a substantial part of labour force is locked in this low-productivity sector. In Kyrgyzstan, for instance, the share of agriculture in total value added is 16 percent while its share in total employment is almost twice as high. The situation is similar in Tajikistan. Since natural resource extraction is capital rather than labour intensive, it does not have the capacity to create significant employment. As result, employment in the industry sector (dominated by mining and quarrying) is small compared to agriculture and services. Underdevelopment of the services sector could be explained by the fact that between half and three quarters of the population in Central Asian countries lives in rural areas (Table 5).

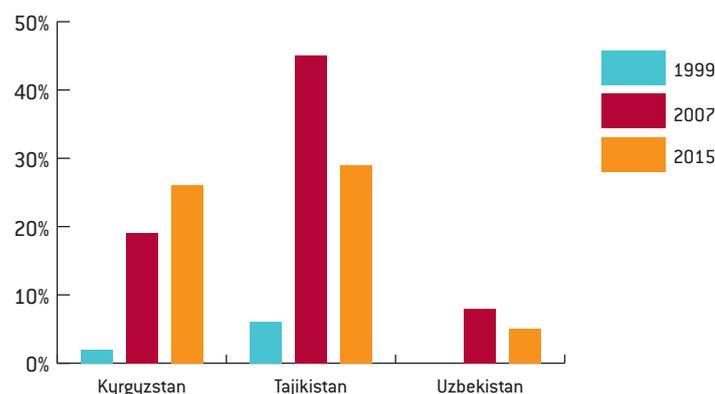
Table 3: Employment by sectors, percent of total employment

Country	Year	Agriculture	Industry	Services
Kazakhstan	1999	26.7	20	53.2
	2013	24.2	19.8	56
Kyrgyzstan	1999	52.4	11.6	36.1
	2013	31.7	20.2	48.1
Tajikistan	2004	55.5	17.9	26.2
	2009	52.9	15.6	31.1
Uzbekistan	1999	38.5	19.4	35.2
	2013	-	-	-

Source: Bruegel based on World Bank. Note: data for Turkmenistan is missing. Industry includes manufacturing; because of data limitations no separate data is available.

Remittances from migrants play an important role in the economies of Tajikistan, Kyrgyzstan and Uzbekistan (Figure 14). Russia is the major receiving country for migrant labour from Central Asia (UNDP, 2015). Turkey and Kazakhstan also attract migrants from Central Asia. For Tajikistan, remittances account for approximately one-third of GDP. Remittances help low-income households escape poverty and also boost consumption and growth in the receiving economies, help finance their large trade deficits and contribute to the development of their financial sectors.

Figure 14: Personal remittances received, percent of GDP



Source: Bruegel based on World Bank. Note: earliest possible data for Tajikistan is 2002 instead of 1999.

However, labour migration is not without social and economic costs. It involves the loosening family ties, brain drains, migrants being employed below their skill levels and integration problems in the receiving countries. Individuals from remittance-receiving households are less likely to enter labour market, putting additional pressure on the domestic supply of labour (Justino and Shemyakina, 2012). Better policies are needed to reduce the potential negative effects of labour migration in both sending and receiving countries, and to foster closer cooperation between them.

As we have noted, the early years of transition from central planning in Central Asia involved substantial social hardship. In 1990s, in all Central Asian countries except Kazakhstan, the poverty headcount rates at \$1.90 and \$3.10 a day (in 2011 PPP) were high or very high (Table 4). In the 2000s, as a result of rapid growth, these rates started to decline systematically, apart from in Tajikistan, where they remained high and increased again in the 2010s. There is no data for Turkmenistan (since 1998) or Uzbekistan (since 2003). Most likely, however, the share of their populations living below both World Bank absolute poverty thresholds in Turkmenistan decreased as result of the hydrocarbon boom.

Table 4: Poverty headcount ratio at \$1.90 and \$3.10 a day (2011 PPP) (% of population)

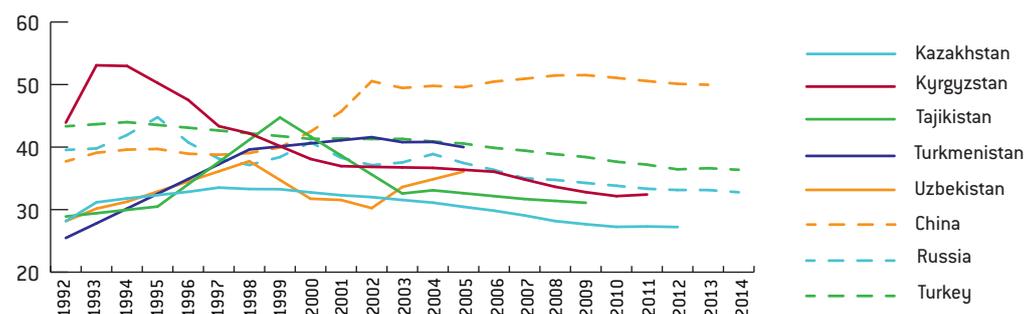
Country	at \$1.90 a day					at \$3.10 a day				
	1993	1998	2003	2007	2013	1993	1998	2003	2007	2013
Kazakhstan	6.5	6.3 ^c	4.5	0.5	0.0	23.1		21.3	3.7	0.3
Kyrgyzstan	44.3	30.6	28.1	9.9	3.3	63.9	51.5	67.6	33.6	24.0
Tajikistan		54.4 ^b	30.8	10.4	22.6		86.1 ^b	64.8	32.7	60.8
Turkmenistan	80.9	42.3				94.2	69.1			
Uzbekistan		45.5	66.8				69.2	87.8		
China	57.0	40.5 ^b	32.0 ^d	14.7 ^e	1.9	82.3	67.2 ^b	56.4 ^d	33.0 ^e	11.1
Russia	2.4	1.7	1.1	0.2	0.0 ^f	10.1	7.3	5.1	1.2	0.5 ^f
Turkey	2.6 ^a		3.7	1.4	0.3	12.1 ^a		13.2	6.3	2.6

Source: Bruegel based on World Bank. Notes: a = 1994, b = 1999, c = 1996, d = 2002, e = 2008, f = 2012.

Overall, cross-country differences in poverty statistics reflect differences in levels of GDP per capita (Figure 10). The same observation applies to the comparison with Central Asia's three major economic partners – China, Russia and Turkey.

The first period of transition was also marked by increasing income inequalities (Figure 15). However, since 2000, Kazakhstan has succeeded in bringing its Gini coefficient below 30, Tajikistan and Kyrgyzstan have stabilised it between 30 and 35, ie below the high levels recorded in China, Russia and Turkey. That is, income inequality in three Central Asia countries resembles that in EU economies rather than in other former Soviet Union and developing countries. Recent data for Turkmenistan and Uzbekistan is not available.

Figure 15: Gini coefficient of income inequality



Source: Bruegel based on Standardized World Income Inequality Database (SWIID) by Solt (2016), last updated July 2016, <http://fsolt.org/swiid/>.

About half of the populations of Kazakhstan and Turkmenistan and slightly above 35 percent of the populations of Kyrgyzstan and Uzbekistan live in urban areas. In Tajikistan, this share is even smaller – 26.8 percent in 2015, having hardly changed since the beginning of the twenty-first century (Table 5). This corresponds with the still high poverty level in that country (Table 4) because of low productivity in agriculture and other employment in rural areas (Table 3 and Figure 13). The low urban population share also means constrained access to public services, quality education, healthcare and business opportunities. On the other hand, if large swathes of the rural population start migrating to urban areas, it can result in increased pressures on already-constrained public services and might lead to social and political tensions.

In the Soviet era, health services were provided largely by the state-owned health institutions and financed by the state budget, but informal out-of-pocket payments by patients and their families played an important role. After transition to a market system, healthcare is financed from three major sources – out-of-pocket financing by households, general budget financing and social health insurance systems (Leive, 2010).

Despite attempts to legalise and cap the amounts of patients' co-payments for healthcare services, the practise of informal payments and bribes remains widespread in the region (Scheil-Adlung and Kuhl, 2011). If one adds costs of medicines, which are rarely subsidised or refunded, total out-of-pocket payments for healthcare constitute substantial financial burdens for households, particularly low-income households.

Public health insurance financed by mandatory contributions from employees and employers was introduced in Kyrgyzstan in 1996, and Kazakhstan in 2016 (Rechel et al, 2012). However, this mechanism is not easy to operate in Central Asian countries where a large part of the population is either engaged in the informal sector or works abroad. Kazakhstan is the only country where voluntary private health insurance plays some role.

Since the beginning of the 2000s, male and female life expectancy have increased, especially in Kazakhstan, Kyrgyzstan and Tajikistan (Table 5). Child mortality has decreased, in particular in Kazakhstan and Kyrgyzstan, in line with progress accomplished in the rest of the developing world. Fertility rates have increased in Kazakhstan and Kyrgyzstan, while they slightly decreased in other countries. They remain high (over 3) in Tajikistan and Kyrgyzstan, which can be partly explained by the large share of population living in rural areas.

Table 5: Other socio-economic indicators, %

Indicators	Kazakhstan		Kyrgyzstan		Tajikistan		Turkmenistan		Uzbekistan		Lower-middle income countries	Upper-middle income countries
	2001	2015	2001	2015	2001	2015	2001	2015	2001	2015	2015	2015
Unemployment rate (percent of active labour force)	10.4	4.1	7.8	8.1	12.0	10.9	11.3	10.5	10.9	10.6	5.3	5.9
Urban population (percent of total)	55.5	53.2	35.3	35.7	26.5	26.8	46.1	50.0	37.3	36.4	39.0	64.1
Fertility rate (births per woman)	1.9	2.7	2.4	3.2	3.9	3.5	2.8	2.3	2.5	2.2	2.8	1.8
Under 5-mortality rate (per 1000 live births)	41.2	14.1	46.4	21.3	86.6	44.8	79.2	51.4	61.4	39.1	52.6	18.5
Life expectancy (male)	60.5	67.1	65.0	66.5	60.3	66.2	60.2	61.5	63.8	65.0	65.5	72.4
Life expectancy (female)	71.3	75.9	72.6	74.5	68.0	73.2	68.0	69.9	70.4	71.8	69.1	76.8
Health expenditure (percent of government expenditure)	8.4	10.9	11.9	11.9	6.4	6.8	13.7	8.7	9.6	10.7	6.7	n/a

Source: Bruegel based on World Bank's World Development Indicators. Note: most recent data available.

Table 6: Education, gross enrolment ratios, %

Level of education/ gender		Kazakhstan		Kyrgyzstan		Tajikistan		Turkmenistan		Uzbekistan		Lower- middle income countries	Upper- middle income countries
		2000	2015	2001	2014	2001	2015	2001	2014	2001	2011	2014	2014
Primary	Female	96.7	110.6	94.7	107.0	91.2	98.4	-	88.6	102.6	95.7	106	104.1
	Male	96.1	110.5	96.7	108.3	98.3	98.0	-	90.1	102.1	98.0	103.8	106.7
Secondary	Female	95.4	111.0	85.4	91.2	67.8	-	-	83.7	85.0	94.9	64.7	94.4
	Male	91.5	107.3	85.4	90.4	81.7	-	-	86.9	87.9	95.9	65.9	91.9
Tertiary	Female	34.1	51.7	41.1	52.1	10.2	21.1	-	6.2	12.0	6.9	22	47.7
	Male	29.4	40.5	39.3	39.9	25.1	31.5	-	9.7	15.0	10.9	22.5	40.3

Source: Bruegel based on World Bank WDI.

Overall, Central Asia's high share of population under the age of 14 and continued population growth (which is rapid in some countries) point to favourable demographic perspectives with an ample supply of young labour in the coming decades (in contrast to other former Soviet Union countries, Europe and East Asia). Moreover, Central Asian secondary education enrolment is high (Table 6), reflecting the positive legacy of the Soviet education system. While the tertiary education system is not without imperfections, in Kazakhstan and Kyrgyzstan almost half of the respective age cohorts enrol in universities, with female enrolment exceeding male enrolment. At the other end of the regional spectrum, Turkmenistan and Uzbekistan have tertiary enrolment rates below 10 percent. The challenge for Central Asian countries is to retain young talent, strengthen links between education and the labour market and improve the quality of education at all levels (Chubrik *et al*, 2011).

6 The way ahead and policy lessons

The decline in the prices of oil, natural gas, metals and agricultural raw materials in the second half of 2014 meant Central Asia suffered a huge adverse shock. The vulnerability of Central Asian economies to changes in the world commodity markets was exposed and the need for their structural diversification towards more manufacturing and services became even more urgent (see Linn, 2016).

In any economy, policies aimed at structural diversification are not easy to conceptualise, coordinate and implement. The right approach is to rely on market forces, including international trade and investment, rather than administrative dirigisme, government planning and public investment (except in infrastructure, for which public authorities have an important role to play). However, in Central Asia where memories of central planning and dominant public ownership are relatively fresh, there is a natural temptation towards etatism and dirigisme (often associated with corruption and favouritism). This is particularly

the case for reform laggards Turkmenistan and Uzbekistan. Going in the direction of more state control would mean welfare losses and would further the region's marginalisation in the world economy.

Market-oriented diversification requires a supportive macro- and microeconomic environment. The decline in commodity prices led to nominal and real depreciation of Central Asian currencies, especially the Kazakhstani tenge. In theory, this could improve the international competitiveness of the non-commodity sector. However, given the geographical structure of non-commodity exports (to Russia and Kazakhstan, whose currencies depreciated more than those of other Central Asian countries), this did not happen. In some countries, policies to keep official exchange rates over-appreciated at the cost of foreign exchange restrictions (section 4) made things even worse. That is, product diversification needs to be accompanied by geographical diversification of trade, underpinned by liberal trade policies and full current account convertibility.

Looking at the microeconomic environment, economic agents in non-commodity sectors must be able to develop and expand their businesses with minimum administrative obstacles, low transaction costs and protection of their property rights. This requires, in turn, improvements in the business climate and governance, which means adopting a broad spectrum of economic, institutional and political reforms.

The list of required reform measures differs between countries but also contains a common agenda for the entire region.

Turkmenistan and Uzbekistan must complete basic market reforms: domestic price liberalisation, reducing explicit subsidies for food, energy and water, and cross-subsidisation (in public utilities), unification of exchange rate and current account convertibility, trade liberalisation, WTO accession, greater privatisation and elimination of barriers to private entrepreneurship, both domestic and foreign, and building financial market infrastructures.

On the other hand, all Central Asian countries, Kazakhstan and Kyrgyzstan where reforms are more advanced, face the same challenges of oppressive and predatory post-Soviet states¹¹. These are deeply rooted corruption, rent seeking, state capture, administrative harassment of business and more broadly, a high degree of business uncertainty and insecurity over property rights. The situation looks particularly bad in all areas where economic management interacts with authoritarian political systems and legal institutions, especially those related to the judiciary, law enforcement agencies and public administration. Resolving these problems will not be possible without at least partial political reforms. If the above-mentioned dys-functionalities and pathologies continue, they might ultimately provoke social and political instability and lead to political radicalisation.

Closer intra-regional cooperation would also improve the business and investment climate. Given the region's remote geographical location, its complicated borders, infrastructure inherited from Soviet times and cultural proximity (section 3), unrestricted movement of goods, services, people and capital between Central Asian countries would greatly contribute to their economic development. Closer cooperation would also help Central Asian countries to jointly promote their interests vis à vis those of their major neighbours.

Overall, our analysis suggests some general policy lessons, which may also apply to countries outside the Central Asia region:

- 1. Geography matters.** Central Asia's remote geographic location (far from major centres of world business activity), landlocked situation and underdeveloped transportation infrastructure do not help the region's integration into the world economy and therefore their economic development, even if a given country/region is well-endowed with natural resources and educated labour.
- 2. Geopolitics also matters.** Geographic disadvantage matters even more if it is associated with adverse geopolitical factors – an unstable neighbourhood with unresolved conflicts,

¹¹ The same challenge is shared by other former Soviet Union countries, including Russia and Ukraine.

limited appetite for intra-regional cooperation, assertive policies of regional powers and limited interest from the two global powers (the US and EU), which traditionally support democratic and market reforms.

3. **Importance of institutional legacy.** The total absence of the traditions of modern capitalist economies, political freedom and democracy in Central Asia has not helped its political and economic transition since independence. However, such a historical background cannot be seen as the fatal factor, which will be in force forever. Good policies can help overcome poor institutional legacies, as happened, for example, in some Asian countries.
4. **Authoritarianism does not help in economic reforms.** Our analysis suggests that there is a correlation between progress in political and economic reforms in the Central Asia region, as elsewhere in transition economies. The least politically free regimes (Turkmenistan and Uzbekistan) are also economically the least free, with several remnants of centrally-planned systems. On the other hand, politically partly-free Kyrgyzstan is a regional leader in economic reform. In all Central Asian countries, hard or soft authoritarianism is an obstacle to reform of predatory post-Soviet institutions, and to the establishing of the rule of law and the fight against corruption, nepotism and rent seeking.
5. **Natural resources are both a blessing and a curse.** The presence of mineral resources, especially hydrocarbons, helped Central Asian countries to grow rapidly, to eradicate poverty and to start large infrastructure projects, despite their geographic, geopolitical and institutional disadvantages and, in some cases (Turkmenistan), in the absence of genuine market reforms. However, resource booms have their limits, as shown by the 2014-15 decline in commodity prices. Furthermore, the presence of large natural resource rents creates obstacles (via the real appreciation of the exchange rate) to the development of internationally competitive manufacturing and service sectors. It also encourages corruption and helps to consolidate authoritarian regimes.

References

- Chubrik, A., M. Dabrowski, R. Mogilevsky and I. Sinitsina (2011) 'The impact of the global financial crisis on public expenditures on education and health in the economies of the former Soviet Union,' *CASE Network Report* 100, available at http://www.case-research.eu/en/download/3534?file=uploads%2Fzalacznik%2F2017-01-29%2F35207126_CNR_2011_100_0.pdf
- Dabrowski, M. (2016a) 'Post-Communist Transition and Monetary Disintegration,' *CESifo Forum* Vol. 17, No. 4: 03-11, available at <https://www.cesifo-group.de/DocDL/forum-2016-4-dabrowski-ruble-zone-collapse-december.pdf>
- Dabrowski, M. (2016b) 'Currency crises in post-Soviet economies — a never ending story?' *Russian Journal of Economics*, Vol. 2, No.4: 302-326, available at <http://dx.doi.org/10.1016/j.ruje.2016.08.002>
- Farchy, J. (2016) 'New Silk Road will transport laptops and frozen chicken,' *Financial Times*, Special Report, available at <https://www.ft.com/content/e9d35df0-0bd8-11e6-9456-444ab5211a2f>
- The Guardian* (2015) 'Uzbekistan separatist movement threatens ancient culture,' *The Guardian*, 5 February, available at <https://www.theguardian.com/world/2015/feb/05/uzbek-separatist-movement-threatens-ancient-culture>
- IMF (2016) *Regional Economic Outlook: Middle East and Central Asia*, October, available at <http://www.imf.org/external/pubs/ft/reo/2016/mcd/eng/pdf/mreo1016.pdf>
- Janusz-Pawletta, B. (2015) *The Legal Status of the Caspian Sea, Current Challenges and Prospects for Future Development*, Springer, available at <http://www.kaspinfo.com/atom/491>
- Justino, P. and O.N. Shemyakina (2012) 'Remittances and labor supply in post-conflict Tajikistan,' *IZA Journal of Labor & Development*, Vol.1, No. 1: 1-28, available at <https://izajold.springeropen.com/track/pdf/10.1186/2193-9020-1-8?site=izajold.springeropen.com>
- Leive, A. (2010) 'Economic transition and health care reform: the experience of Europe and Central Asia,' *IMF Working Paper*, WP/10/75, available at <http://www.imf.org/~media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/wp/2010/wp1075.ashx>
- Linn, J.F. (2016) 'Creating a Competitive and Innovative Manufacturing and Services Economy,' in Nag,

- R.M., J. F. Linn and H.S. Kohli (eds) *Central Asia 2050: Unleashing the Region's Potential*, Emerging Market Forum
- Mogilevskii, R. (2012) 'Trends and Patterns in Foreign Trade of Central Asian Countries,' *University of Central Asia's Institute of Public Policy and Administration*, Working Paper No. 1, available at <http://www.ucentralasia.org/Resources/Item/344>
- Rechel, B., M. Ahmedov, B. Akkazieva, A. Katsaga, G. Khodjamurodov and M. McKee (2012) 'Lessons from two decades of health reform in Central Asia,' *Health policy and planning*, Vol. 27, No. 4: 281-287, available at <https://academic.oup.com/heapol/article-pdf/27/4/281/1657666/czr040.pdf>
- Solt, F. (2016) 'The Standardized World Income Inequality Database,' *Social Science Quarterly*, Vol. 97, No. 5: 1267-1281
- Scheil-Adlung, X. and C. Kuhl (2011) 'Social Security for All: Addressing inequities in access to health care for vulnerable groups in countries of Europe and Central Asia,' *Social Security Policy Briefings 8*, International Labour Office, available at http://www.ilo.org/wcmsp5/groups/public/---ed_protect/--soc_sec/documents/publication/wcms_secsoc_25201.pdf
- United Nations Development Programme (2015) 'Labour Migration, Remittances, and Human Development in Central Asia,' *Central Asia Human Development Series*, UNDP, Regional Bureau for Europe and the Commonwealth of Independent States & the Eurasian Development Bank, available at <http://www.eurasia.undp.org/content/dam/rbec/docs/CAM&RHDpaperFINAL.pdf?download>