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Diagnosing Growth Constraints in Central Asia: The Case of the Kyrgyz Republic

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Diagnosing Growth Constraints in Central Asia: The Case of the Kyrgyz Republic

Abstract

The Kyrgyz Republic is a transition economy. Its growth performance is constantly one of the lowest compared to other CIS countries. This bad performance is mainly due to a strong political instability and high corruption level. Despite being a leading reformer in the region, the Kyrgyz Republic has not done enough to solve key problems. This study employs the Growth Diagnostic approach proposed by Hausmann et al (2005) in order to identify the most binding constraints for economic growth. This paper finds that the high level of corruption, weak property rights, inefficient energy sector and low quality of the educational system are the most binding constraints for the Kyrgyz Republic's economic growth.

1. Introduction

The nature and principles of sustainable economic growth have always attracted the attention of researchers, experts from the business sector and policymakers. The implementation of effective policies for economic growth is increasing in importance, particularly for transition and developing economies. The Kyrgyz Republic is a former Soviet Union country; it is a lower-middle-income country with income per capita (GNI) of \$3,080 (**the World Bank, 2015a**). After the collapse of the USSR, the country faced the strongest economic decline in the region. According to the data of the Asian Development Bank (ADB), in 1995 GDP declined by 50% of the 1990s level and other macroeconomic indicators worsened too: hyperinflation, high unemployment and an increase in the population under the poverty level. Since becoming an independent country, in the 1990s it was a leading reformer compared to other former Soviet Union economies and the first country in the region to join the WTO in 1998. As a result, the country is the most open and liberalized economy in the region. The country implemented a number of reforms recommended by the Washington Consensus, but given its limited political power and economic resources, in fact only a few of these reforms were successfully implemented.

The key hypothesis of this study is that the Kyrgyz Republic has a number of constraints that restrict economic growth. In order to identify the most binding ones, the study employs the Growth Diagnostic approach of Hausmann et al (**2005**). The authors consider that economic growth can be achieved by removing these “binding constraints”. The Growth Diagnostic approach proposes a decision tree where the low level of private investment and entrepreneurship is considered to be the key problem. Focusing on a small number of binding constraints, instead of removing all possible distortions in a country that uses the conventional approach followed by the so-called Washington Consensus, is the most distinct characteristic of

the Growth Diagnostic approach (**Felipe & Usui, 2008**). This approach considers that growth constraints differ from country to country. Therefore, Growth Diagnostic studies and proposals are not limited to one country. Hausmann et al (**2005**) consider, in contrast to the Washington Consensus, that implementing the same economic growth strategy is not effective and successful for all economies. With respect to developing countries with administrative and political shortcomings, it is better to design targeted policy priorities addressing the most binding constraints.

Sartor (2007) pointed out that the approach does not suggest any scientific formula in its application; indeed it gives only a framework to build some hypotheses on critical constraints rather than a set of tools to test binding constraints. Felipe et al (**2011**) mentioned that there are a number of ways in which an analyst can proceed and conceptualize binding constraints for a given country. However, the Growth Diagnostic approach has become popular due to its systematic focus on constraint conceptualization. It is accepted and used by institutions and researchers to identify constraints for further prioritized policy design in less developed economies. For instance, the Growth Diagnostic approach was implemented in Bangladesh by the United States Agency for International Development (**USAID, 2014**). They identified the electricity sector and education as the most binding constraints for the country. Ulloa et al (2009) applied this approach in the Democratic Republic of Congo and based on the approach it is assumed that government failures, access to finance and the electricity sector are binding constraints.

In the case of the Kyrgyz Republic, this study concludes that the key binding constraints to growth are the widespread corruption and weak property rights, which lead to distortion of the system of law and the court system and contract enforcement in the country. Furthermore, the energy sector is inefficient, and productivity is low due to outdated equipment from the Soviet Union era and suffers from a shortage of qualified workers. The educational system is getting worse, the key problem being the low quality provided, rather than the number of educated people.

2. Literature Review

The Growth Diagnostics approach was developed by **Hausmann, Rodrik and Velasco (2005)**. It addressed identification of the factors constraining growth in a country. This approach provides a background for identifying the causes of low economic growth in a particular country. The authors believe that economic growth can be achieved by removing “binding constraints”. It proposes a growth model whose production function depends on factors such as capital, institutions, infrastructure, governance and geography. The Growth Diagnostics approach proposes a decision tree where the low level of private investment and entrepreneurship are

considered to be the causes of slow economic growth. The GD approach aims to identify binding constraints in order to implement better policy reforms. The key idea of this approach is that removing binding constraints will promote greater impact on growth rather than the traditional approach associated with a greater number of reforms, with the so-called Washington Consensus, which aimed to remove all distortions in a country. The authors argue that binding constraints differ from country to country. Hausmann et al (2005) propose an idea that developing countries' main obstacle to growth is a shortage of capital and underutilization of productive capacity (**Felipe & Usui, 2008**).

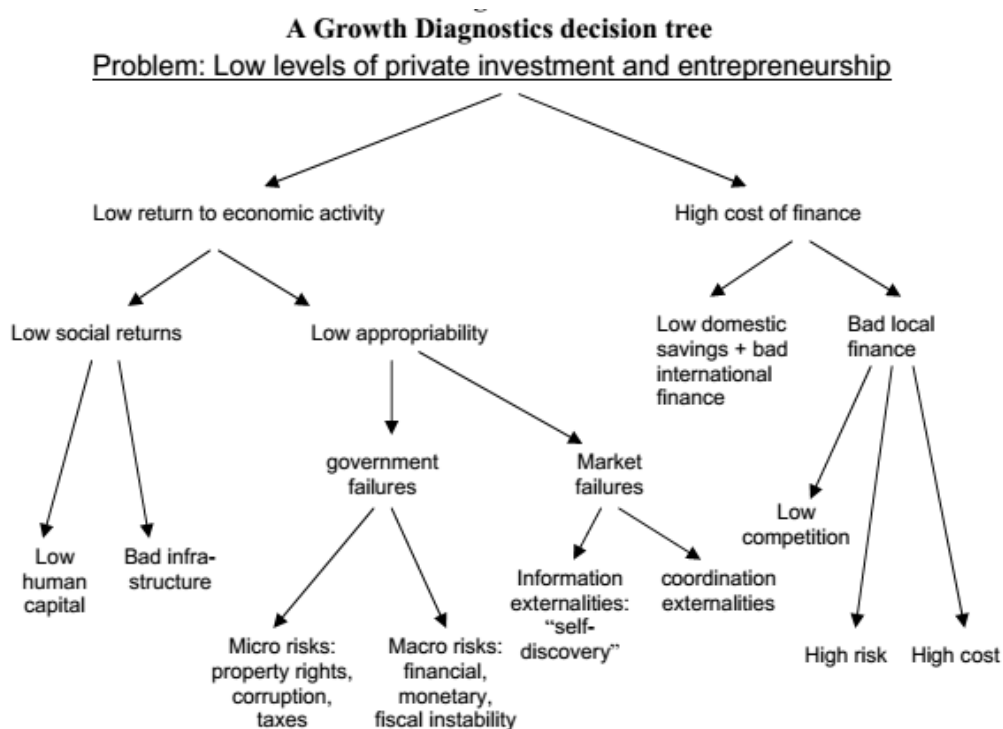
The application of growth diagnostics in a particular country is one of the ways to find new strategies for growth after the Washington Consensus became questionable during the last 20 years. The Growth Diagnostics approach comprises a number of determinants of growth and addresses the identification of which of these are the strongest obstacles to growth or the most binding constraints to achieving growth (**ADB, 2007**). The Growth Diagnostics approach can be presented by a function in which growth depends on the rate of social return to asset accumulation, the appropriability of this social return, and the cost of funds. According to **Hausmann et al (2008)**, this can be seen as the following equation:

$$g = \frac{\dot{c}_t}{c_t} = \frac{\dot{k}_t}{k_t} = \sigma[r(1-\tau) - \rho]$$

where g is the economic growth rate, c is the consumption per capita, k is the capital per capita, σ is the elasticity of intertemporal elasticity in consumption, r is the expected social return to investment, $(1-\tau)$ is the private appropriability of social return and ρ is the world interest rate (**Hausmann et al 2008**). The private appropriability of social return $(1-\tau)$ includes micro risks, macro risks and market failures. The high levels of micro and macro risks, as well as large market failure, may lead to a low level of private appropriability and hence to low private investment. The interest rate (ρ) consists of factors such as savings, domestic finance and external financial markets. The higher the costs of funds, the lower the private investment, taking into account the given social returns to investment and the private appropriability of social returns (**ADB, 2007**). This approach leads to two scenarios: (a) some countries are not growing because of the low level of the returns of assets or (b) because of the high costs of funds.

This is the start point of the Growth Diagnostics decision tree. The HRV decision tree presents a framework that helps to identify the most binding constraints to growth (Figure 1).

The authors suggest examining the branches of this decision tree in detail to identify the most critical constraints for economic growth.



(Source: Hausmann, Klinger and Wagner, 2008)

It starts with the question: what causes low levels of private investment and entrepreneurship? Is it low returns to economic activity or high costs of funds? The proximate reasons for low investment and growth can be the absence of capital that investors and entrepreneurs need for starting the business or expanding it, or investors and entrepreneurs do not want to invest as returns of investment are too low, or complementary factors of production such as infrastructure and human capital are insufficient or absent (**Enders, 2007**).

The application of the Growth Diagnostic approach in a particular country's economy can be based on national and international data sources and comparisons with similar comparator countries.

It is important to select an appropriate group of comparator countries. The core group of comparators must consist of countries that share similar characteristics with the country of interest, and should be at a similar stage of development, but it should also include good performers in the region, as well as regional averages for countries in different income groups. Constraints analysis typically relies on comparisons between conditions in the country of interest and those in relevant comparator countries – including a set of countries at a roughly similar level of development as well as other countries that have already achieved a level of development to which the country aspires (the World Bank, 2007).

Washington Consensus or Growth Diagnostics approach? By the end of the 1980s, Washington Consensus reform packages were being promoted as the most relevant market-oriented policy for developing economies, but by the late 1990s, it had become obvious that this “methodology” needed improvements in terms of governance and institutional framework. Economists suggested implementing a second generation of reforms aimed at paying more attention to the role of institutions and government (**ADB, 2007**). **Rodrik (2006)** pointed out that the most important issue is not to determine whether the Washington Consensus is still relevant; it is important to identify what can replace it. Furthermore, he argued that in market-oriented reforms, macroeconomic stabilization policies cannot be achieved with a unique set of rules and policy actions. According to the Washington Consensus, countries may develop by implementing a universal set of rules. This leads to the assumption that the more reforms the better the result. He argued that different countries have different ways of solving their problems of economic underdevelopment; increasing the level of private investment may require a different set of reforms depending on the level of development and constraints to growth. Countries should not copy successful reforms of other countries as each economy is specific (**Rodrik, 2006**). Policies and reforms should focus on the most binding constraints rather than try to implement a proposed list of reforms for all situations. In contrast to the Washington Consensus’s proposed general set of rules for economic growth, Rodrik, along with Velasco and Hausmann, proposed a Growth Diagnostics approach as a new tool to identify the most binding constraints to growth in the case of a particular country. Rodrik (2006) gave several arguments on the failure of the Washington Consensus to lead to economic growth. Firstly, he pointed out that the reforms that had been undertaken in Latin America and Africa led to stabilization of the crisis economic situation in these regions, but in the long run could not boost economic growth, as the Washington Consensus reforms were not properly focused on country-specific constraints. Secondly, he argued that the reforms needed time to show results, as any reforms require time. The problematic point about these reforms was that they were weak and did not focus on critical constraints, as growth responds faster to reforms addressed to critical weaknesses in a country. Thirdly, he considered that the countries that were able to achieve economic growth during the last few decades were those that combined their traditional policy with the Washington Consensus recommendations. He gave as an example the experience of such countries as South Korea and China. **Habermann and Padrutt (2011)** consider that decision-makers and policy designers need a more targeted approach that allows critical obstacles to economic growth, as well as priorities for reforms, to be defined.

The Growth Diagnostics approach proposed by Hausmann, Rodrik and Velasco (2005) has attracted much attention from other economists, academicians etc. The approach has several

criticisms; this gives the approach challenges to face in order to improve. This section of the paper focuses on some of the more relevant criticisms with respect to the Growth Diagnostics approach. In one point of view that addresses the methodology of the Growth Diagnostics approach, **Sartor (2007)** argued that the approach does not contain any scientific formula in its application, indeed it gives only a framework to build some hypotheses on critical constraints rather than on tools to test binding constraints. Therefore, identification of the most critical and binding constraints to growth within the Growth Diagnostics approach mostly depends on the person who applies this approach. According to **Leipziger and Zaghera (2006)**, the results of application mostly rely on the abilities and point of view of the analyst. Potential scenarios of economic reforms may differ depending on analysts' creativity. They argue that HRV framework is based on short-run considerations and it can lose its value as a tool for policy reforms. Current binding constraints are comparatively easy to identify, but it is difficult to predict future binding constraints and how current constraints may change tomorrow (Leipziger & Zaghera, 2006).

Felipe and Usui (2008) criticized the starting point of the HRV decision tree, as they considered that a low private investment level and entrepreneurship is not crucial for all countries, and some countries may have different causes of economic underdevelopment. They agree with the relevance of private investment to economic growth, but they argued that there are a number of countries that could grow without a high level of private investment. They argued that this approach deals with removing the most binding constraints but it does not deal with further policy reforms. It is also said that analysts may accept one constraint as a binding one, for which data are available, and reject others due to lack of data. In response to Felipe and Usui, **Hausmann et al (2008)** said that criticism of the starting point of the tree missed the fact that most developing economies aim to increase productive capacities. With regard to the imperfect data used by analysts to identify binding constraints, the authors said that the only way is to take into account these limitations when analysing signals. In terms of further policy reforms, Hausman et al (2008) commented that the aim of the HRV framework is to identify policies to boost economic growth, identifying the factors constraining growth in a country. Further policy design depends on the identified binding constraints and political system of a particular country. Despite the criticism of the HRV diagnostics approach, there are other arguments supporting the methodology. Among them, **Temple (2009)** considered that Growth Diagnostics allows the identification of clear policy priorities for a specific country's economic conditions and constraints to growth and hence becomes relevant for policy design in practice. In spite of criticism, **Felipe and Usui (2008)** also agreed that this approach can be helpful for policymakers to build a growth strategy in terms of limited resources. **Rodrik (2007)** said that developing countries have core problems such as shortage of capital and low productive capacities.

3. The Kyrgyz Republic's performance over the last 20 years

The Kyrgyz Republic's economy, before the establishment of the Commonwealth of Independent States (CIS), operated within the Soviet economic system, which had a planned economy. The CIS was formed in December 1991. The Kyrgyz Republic joined the CIS in March 1992. After the collapse of the Soviet Union, national borders and international trade controls were set up and the Soviet Union member countries were divided into small independent countries with their segmented market economies and limited economic growth potential. Before the disintegration of the Soviet Union, the CIS countries were interrelated in terms of production base due to the allocation of natural resources. After implementing market-oriented reforms in the 1990s, the country faced economic problems such as hyperinflation, high unemployment and increased poverty. With the aim of adopting a market-oriented economy, the government of the country implemented a number of structural reforms such as complete privatization of all enterprises in the country and restructuring of infrastructure sectors, and foreign trade was liberalized (the World Bank, 2014).

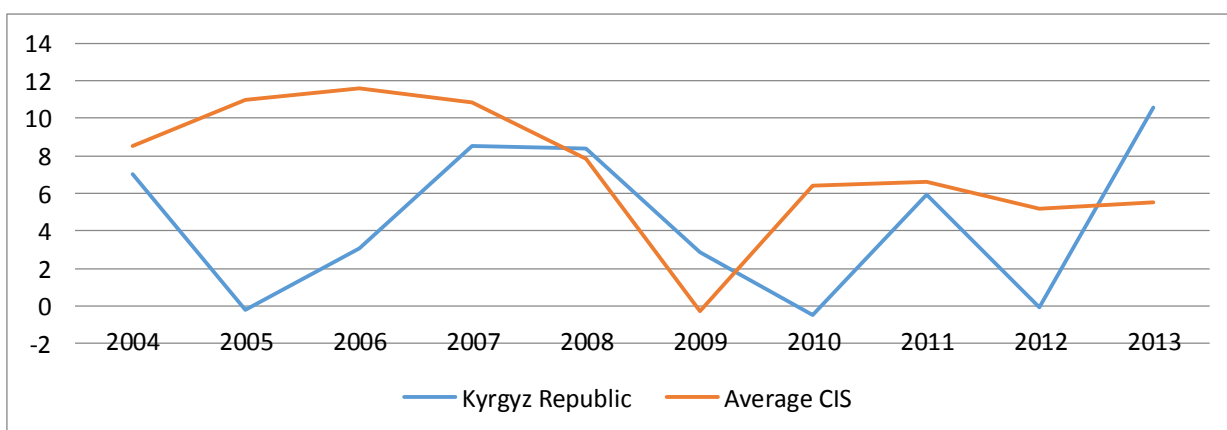


Figure 2. GDP growth rates in the Kyrgyz Republic and CIS countries.

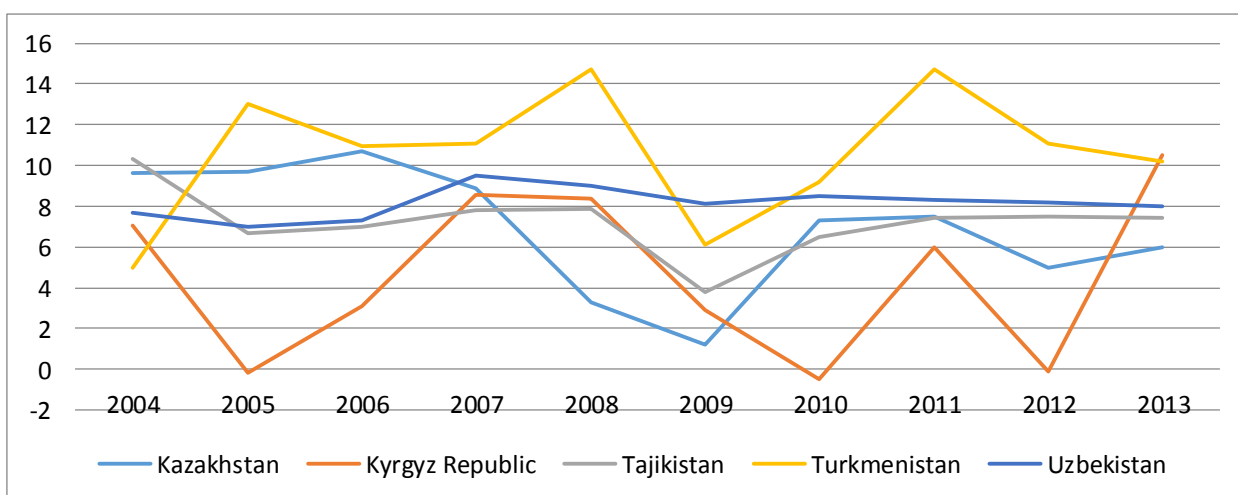


Figure 3. GDP growth rates in the Kyrgyz Republic and Central Asian countries.

Source: International Monetary Fund (2014)

As can be seen in Figure 2 the Kyrgyz Republic's growth performance from 2004 to 2014 was quite volatile and lower than CIS countries on average. Also, growth rates became negative in post-revolutionary periods in 2005 and 2010 because of a strong political instability due to the overthrow of the government¹. The revolutions resulted in destroying and closing companies operating in Bishkek, a lot of enterprises were not able to recover and had to close, political instability negatively influenced the investment climate, and investors were afraid of investing. The Kyrgyz Republic's economy demonstrated a negative growth rate in GDP after the revolution in 2010; GDP decreased to -0.5%, however the inflation rate reached 8.5%. The average GDP growth rates of other CIS countries were higher than in the Kyrgyz Republic (4.6%), except in Moldova (4.6%) and Russia (4.2%) in the period between 2004 and 2013. In addition, compared to other CIS countries, only the Kyrgyz Republic showed negative GDP growth rates in 2010 and 2012, while other CIS countries demonstrated a more sustained growth. Comparing the Kyrgyz Republic with Central Asian countries, the GDP growth rate was the lowest in the region in the period between 2004 and 2013 (see Fig. 3).

The Growth Diagnostic approach assumes that low capital formation caused by a low level of investment is a key reason for the low performance in developing economies. As this paper employs a Growth Diagnostic framework in the Kyrgyz Republic, it starts with an analysis of investment.

Methodology

The Growth Diagnostic methodology proposed by Hausman et al (2005) is applied to identify the most binding constraints. The analysis is based on qualitative and quantitative data on economic indicators at national and international levels. CIS countries such as Armenia, Azerbaijan, Georgia, Belarus, Kazakhstan, Moldova, Russia, Tajikistan, Turkmenistan and Uzbekistan were chosen as a comparator group of countries in order to formulate a plausible hypothesis about binding constraints. These countries were chosen based on several criteria: (a) their levels of economic development are similar, as all of them are in the group of developing economies; (b) all of them are landlocked countries; (c) and most importantly, they are former Soviet Union Republics and have similar historical, economic and political backgrounds.

¹The main causes of both revolutions were a strong dissatisfaction of people with the government regimes of Presidents as Akaev and Bakiev.

Many observers believed that the government crisis in the Kyrgyz Republic in 2005 was caused by the following factors: the difficult economic situation of the population, and conflicts between the "wealthier north" and the "poor south" exacerbated the dominance of "northerners" in power and control.

The causes of the second revolution were the very low standard of living, the ongoing struggle for power between the Kyrgyz clans of the north and south of the country, and the increase in the prices of some goods and services, such as electricity, gas and mobile services.

Data for this study were collected from research papers, publications, reports of the National Bank of the Kyrgyz Republic and statistical data published by the World Bank, IMF's World Economic Outlook, UNdata, Economic Freedom Network, Global Economic Forum, the Heritage Foundation, etc. The data for the research was collected for the time period 2004–2013. The results of the study were used to identify the most problematic factors for economic growth of the country.

This paper is organized as follows: section 2 provides a literature review on the Growth Diagnostic methodology, section 3 gives an overview of the economic development of the Kyrgyz Republic, and section 4 is an analytical part that provides analysis of the Kyrgyz Republic's economy. The final part provides concluding remarks.

4. Identification of the binding constraints to growth in the Kyrgyz Republic

4.1. Is the investment rate low in the Kyrgyz Republic?

Investment rates in the Kyrgyz Republic during the period 2006–2014 were below the average investment rates of the CIS countries. In comparison with the CIS countries, the investment rates of the Kyrgyz Republic are not the lowest, having on average 23.82% of GDP in the period from 2006 to 2014, the seventh position out of 11 countries. Furthermore, the investment rates of the country show a slowly growing trend, and during the last three years they have been above the average of the CIS countries (see Table 1). However, according to the latest data of the World Bank (2013b), the gross fixed capital formation annual growth rate was 2.6% in 2013. In comparison, Azerbaijan had 19.5%, Uzbekistan 13.2% and Belarus 7.5%. The Kyrgyz Republic's indicator was the lowest among comparator countries except for Armenia (-7.9%) and Russia (-0.1%)

Summing up, the overall investment rates in the Kyrgyz Republic are lower than in the comparator group of countries. Furthermore, it demonstrates the lowest growth rates of investment in the CIS countries.

Table 1. Total investment rates in the Kyrgyz Republic and comparator countries (% of GDP)

Country	2006–2008	2009–2011	2012–2014
Armenia	38.51%	30.08%	22.52%
Azerbaijan	23.74%	19.37%	23.12%
Belarus	36.22%	40.27%	36.53%
Georgia	30.44%	20.45%	27.01%
Kazakhstan	32.19%	26.79%	27.00%
Moldova	33.82%	21.85%	22.51%
Russia	23.52%	21.09%	22.23%
Tajikistan	17.80%	18.60%	15.19%
Uzbekistan	30.20%	30.85%	30.83%
Kyrgyz Republic	21.27%	23.63%	26.58%

the Average of CIS countries	28.77%	25.30%	25.35%
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Source: International Monetary Fund (2014)

4.2. Is access to finance the binding constraint to economic growth in the Kyrgyz Republic?

The Kyrgyz Republic's economy is a cash-based economy. According to the data of the National Statistic Committee of the Kyrgyz Republic (2014), only 30% of the population has bank accounts, but this has increased: in 2010, this number was only 5%. It is worth mentioning that firms prefer to operate in cash, because of unwillingness on their part to make their activities public. However, it seems that access to credit is not a major obstacle to growth for entrepreneurs (World Bank, 2013a). At this stage it is not clear whether the costs of finance are high because of low domestic savings or poor intermediation. Therefore the costs of financial intermediation and domestic savings are assessed in this study by analysing lending and deposit interest rates, domestic credit to the private sector and financial deepening.

Figure 4 shows that the Kyrgyz Republic has one of the lowest domestic savings rates in the region. The average rate of gross domestic savings of the Kyrgyz Republic in the period from 2010 to 2013 was negative (-8.7%) and lower than other CIS countries, excluding Tajikistan (-26.5%) and Moldova (-15.6%) for the same period, while Turkmenistan (81.5%), Azerbaijan (50.2%), Kazakhstan (39.3%) and Belarus (35%) had the highest gross domestic saving rates. The Kyrgyz Republic had negative gross domestic savings rates from 2005 until 2013. In 2009 was it 3.3% of GDP, whereas the CIS countries achieved on average 22.7% of GDP. Extremely low domestic saving rates can be partly explained by low growth rates and partly by low deposit interest rates in the country. In the period 2005–2013 the deposit interest rate on average was 4.5% (the minimum rate was 3.9% in 2008 and the maximum was 6.7% in 2004), and in 2013 it was 4.8.

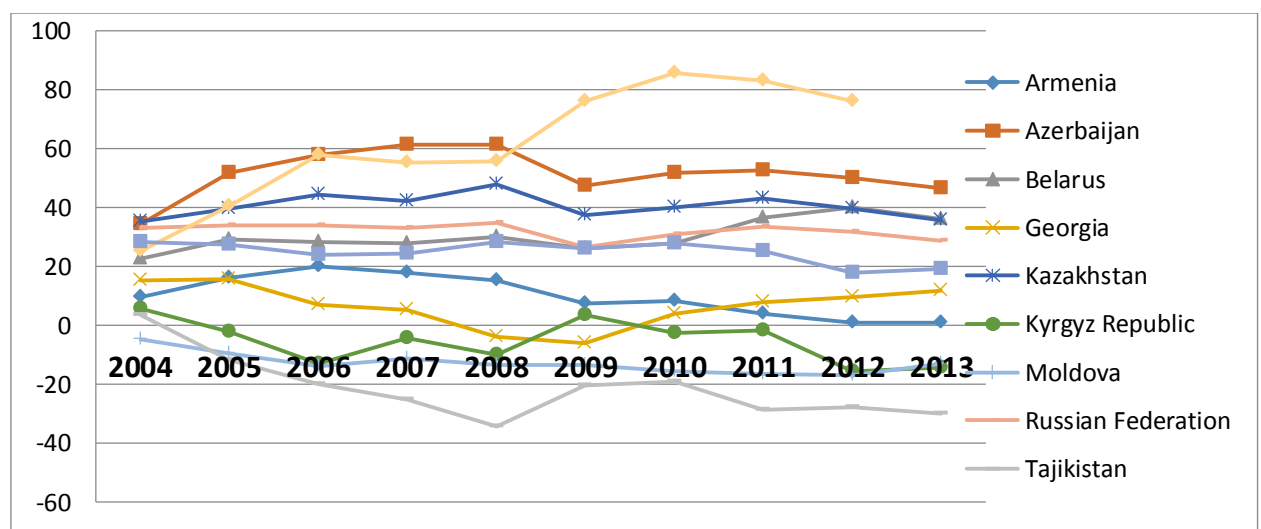


Figure 4 Gross Domestic Savings (% of GDP).

Source: The World Bank (2015b)

The financial deepening in the Kyrgyz Republic, measured as money and quasi money (M2) as a percentage of the GDP, is slightly lower than the average level of the CIS countries. However, there is a growth trend in the M2 to the GDP ratio from 28.4% in 2009 to 34.5% in 2013 (see Table 2). There is a lack of data on domestic credit to the private sector from 2008 until 2014, but it should be noticed that domestic credit to the private sector was below the average level of the CIS countries for the period 2004–2007, and it showed a strong growth tendency. For instance, in 2004 the indicator was 7.1% of GDP and this increased to 15.1% of GDP in 2007 (**the World Bank, 2015b**).

Table 2. Gross domestic savings in the Kyrgyz Republic and CIS countries

	Money and quasi money (M2) as % of GDP		Deposit interest rates		Lending interest rates	
	2009	2013	2009	2013	2009	2013
Armenia	25.9	36.2	8.7	10.2	18.76	15.99
Azerbaijan	23.8	33.4	12.2	9.9	20.03	18.21
Belarus	27.7	30.4	10.7	20.3	11.68	19.13
Georgia	26.5	36.6	10.8	9.7	17.87	13.59
Kyrgyz Republic	28.4	34.5	3.9	4.9	23.03	16.25
Moldova	54.1	62.4	14.9	7.2	20.54	12.29
Russian Federation	49.2	55.8	8.6	5.6	15.31	9.47
Tajikistan	18.2	21.0	7.6	6.6	22.62	24.33

Source: IMF (2014) and the World Bank (2013b)

According to the data of the World Bank, lending interest rates were at the average level of the CIS countries and surveyed firms considered that access to finance was not an obstacle to doing business in the Kyrgyz Republic (**the World Bank, 2013a**). The Asian Development Bank (**2010**) reported that access to credit was a binding constraint for doing business in 2009. It was indicated that the interest rate spread was one of the highest compared to other CIS countries (19.9% in 2007). Currently, the interest rate spread has significantly decreased to 11.3% (see Table 3). In addition, the lending interest rate was 25.3% in 2007 and had decreased to 16.3% in 2013, while the deposit interest rate hardly changed (5.04% in 2007 and 4.9% in 2013). Taking into account the results of the World Bank surveys (2013a) and the decrease in interest rate spread from 19.9% (2007) to 11.3% (2013), it could be concluded that access to finance was a constraint in the past but it is not so now.

To further research the demand side of access to credit, demand for loans in the Kyrgyz Republic is analysed based on data from the World Bank Enterprise Surveys (**2013a**). According to the data, 40% of firms answered that they did not need loans and only 3.9% of firms were denied credit. Furthermore, the value of collateral needed for a loan (% of the loan amount) is comparatively lower than in other CIS countries.

The interest spread between lending and deposit rates is a reliable indicator of financial intermediation efficiency and competition in the banking system. If the interest spread is low it indicates that the financial system is efficient and competitive (Sen & Kirkpatrick, 2011). As Table 3 shows, the Kyrgyz Republic's interest rate spread achieved the second highest position among all countries in 2013. During the whole period considered, except in 2012, the Kyrgyz Republic had the highest spread. But such a high spread is not because of too high lending rates; on the contrary, lending rates are below the average lending rates in the CIS countries, but deposit interest rates are too low and the Kyrgyz Republic has the lowest rates. For example: in 2013, the Kyrgyz Republic's deposit interest rate was 4.8%, while the average deposit rate in the CIS countries was 9.9%. Bearing in mind that surveyed firms identified access to finance as a minor obstacle to growth and these upward trends in M2 to the GDP, the domestic credit to the private sector and downward trend in interest rate spread exclude domestic finance as the most binding constraint to growth. Thus, if the cost of finance was a constraint to growth in the past, it is less likely to be so in the future.

Table 3. Interest rate spread (lending rate minus deposit rate, %)

Country Name	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Armenia	13.7%	12.2%	10.7%	11.3%	10.4%	10.1%	10.3%	8.5%	7.7%	5.8%
Azerbaijan	6.5%	8.5%	7.3%	7.6%	7.5%	7.8%	9.1%	8.1%	8.1%	8.3%
Belarus	4.2%	2.1%	1.2%	0.3%	0.0%	1.0%	0.1%	0.3%	-2.8%	-1.1%
Kyrgyz Republic	22.6%	20.8%	17.6%	19.9%	15.9%	19.2%	27.4%	33.8%	7.5%	11.4%
Moldova	5.8%	6.0%	6.2%	3.8%	3.1%	5.6%	8.7%	6.9%	5.8%	5.1%
Russian Federation	7.7%	6.7%	6.4%	4.9%	6.5%	6.7%	4.8%	4.0%	3.6%	3.9%
Tajikistan	10.1%	13.1%	14.6%	12.0%	14.2%	15.0%	14.8%	14.2%	13.4%	17.8%
Georgia	15.0%	10.1%	6.9%	6.9%	6.8%	7.1%	5.8%	3.5%	4.1%	3.9%

Source: The World Bank (2015b)

Access to international finance is not the most important constraint to growth in the country at the present moment. Despite the country's risk performance due to political instability, civil war and corruption, the Kyrgyz Republic's attractiveness for foreign direct investment is increasing year by year and it achieved the second highest position among the countries considered. The average level of foreign direct investment was 8.7% of GDP for the period 2011–2013 and it is twice higher than the average level of other CIS countries (4.26%) for the same period of time (see Table 4). The Kyrgyz Republic had a negative national saving rate at -13.1% of GDP in 2013, and a high current account deficit, at -23.3 per cent of GDP (the World Bank, 2013b). In addition, firms in the Kyrgyz Republic possibly face higher costs of borrowing from international capital markets due to the higher risk premium linked to political uncertainty. Both

the large current account deficits and the higher risk premium faced by firms in the country when borrowing from international capital markets would suggest that access to international finance may be a problem for investors in the Kyrgyz Republic. However, as Table 4 shows, the Kyrgyz Republic's economy receives very large amounts of official development assistance (8.2% of GDP, the average for 2011–2013) and remittances (29.9% of GDP, the average for 2011–2013). Most remittance inflows are used in residential investment and for the purchase of imported consumer goods. If access to international finance was an important constraint to growth in the Kyrgyz Republic, we would expect that the increase in remittance flows that occurred over the 2000s would have gone into productive investment. But this has not been the case in the Kyrgyz Republic. The average external debt was 90.3% of GNI for the period 2005–2013. Furthermore, 42.7% of all external debt was concessional and long-term (95.5%). Interest rates and maturities were more favorable than for other comparator countries, as the average interest rate on the new external debt commitments is 1.76%, which is lower than the average rate of the CIS countries (2.04%).

The World Economic Forum (2014) Competitiveness Survey ranked the Kyrgyz Republic's credit rating 96th globally, which is the third lowest position among other CIS countries. Despite this comparatively low rating, the country has an upward trend in terms of credit rating; for instance, the Kyrgyz Republic reached only a position of 133rd out of 144 in 2012.

Table 4. International financing

Countries	Foreign direct investment, net inflows (% of GDP)		Net ODA received (% of GNI)		Remittances received (% of GDP)		External debt stocks (% of GNI)		Average interest on new external debt commitments (%)
	2008–2010	2011–2013	2008–2010	2011–2013	2008–2010	2011–2013	2008–2010	2011–2013	2011–2013
Armenia	7.5%	5%	3.9%	3%	17%	19.3%	50.2%	73.4%	2.4%
Azerbaijan	7%	6%	0.5%	0.3%	2.9%	2.7%	12%	13.9%	1.4%
Belarus	3.3%	4%	0.2%	0.2%	1%	1.6%	41.2%	56.2%	4.1%
Georgia	8.6%	6%	7%	4.2%	9.6%	11.3%	74.6%	83.7%	2.8%
Kazakhstan	10%	6%	0.2%	0.1%	0.1%	0.1%	97.7%	76.5%	3.3%
Kyrgyz Republic	6.8%	8.7%	7.6%	8.2%	23.7%	29.9%	85.4%	96.2%	1.8%
Moldova	6%	3.4%	5.4%	5.4%	25.5%	24.1%	65.5%	72.5%	1.4%
Tajikistan	2.4%	1.6%	7.3%	5%	0.4%	0.3%	52.8%	47%	1.7%
Turkmenistan	15.2%	9.3%	0.2%	0.1%	41.8%	47.1%	3.4%	1.6%	0.2%

Uzbekistan	3.1%	2.3%	0.6%	0.5%	-	-	19%	17.6%	1.3%
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Source: The World Bank (2015b)

4.3. Is social return on economic activity low in the Kyrgyz Republic?

This part of the paper focuses on analysis of low social returns to economic activity, which could occur due to poor geography, weak human capital or lack of appropriate infrastructure. According to Hausmann et al (2005), poor geography, bad human capital and poor infrastructure may reduce social returns. The Kyrgyz Republic has the second richest hydro resources in Central Asia after Tajikistan, with a high hydro energy potential. Despite the fact that the country has abundant hydro resources that could allow its energy sector to be an exporter in the region, the Kyrgyz Republic's energy sector faces difficulties related to its low efficiency. The low efficiency of the energy sector may be due to weak institutions and ineffective management rather than the deficit of water resources.

In terms of the country's location, the Kyrgyz Republic is a major transportation corridor between Russia, China and other Central Asian countries and its proximity to a neighbourhood market means that geography is not a major constraint to growth. The Kyrgyz Republic's natural resources comprise significant fields of gold, coal, mercury and bismuth as well as small deposits of oil and gas resources. But the Kyrgyz Republic exports mainly gold, agricultural and light industry products, and re-exports oil. Consequently, a lack of natural resources cannot be considered as a binding constraint to growth in the Kyrgyz Republic.

Infrastructure is a constraint, which includes transport infrastructure, energy and power sector performance, and the quality of roads. In the case of the Kyrgyz Republic, mountainous topography makes transportation more difficult and costly, but the availability of sufficient water resources makes costs of energy lower. Roads and railways are important, especially for domestic and international trade. This part of the study examines the quality and capacity of transport and roads in the Kyrgyz Republic. Transport infrastructure can be considered a potential constraint to growth in the Kyrgyz Republic. More important problems exist concerning the quality of the transport infrastructure. According to the report of the World Economic Forum (2014), the Kyrgyz Republic achieved 113th position out of 144 countries for the quality of its transport infrastructure, which comprises the quality of roads, railways and air transport (Table 5). This position is significantly lower than that of other CIS countries except Tajikistan (120). It should be mentioned that in 2009 the Kyrgyz Republic was ranked 122nd. Despite this low ranking, according to the data of the World Bank (2013a), only 13.9% of the surveyed firms identified transport infrastructure as an obstacle for business. But the proportion of firms identifying it as an obstacle is the third highest compared to the comparator countries.

Some improvements and measures have been already carried out regarding the quality of the roads in the Kyrgyz Republic. Many projects have been funded by international and donor organizations. One of the most important and current projects is CAREC, which aims to improve main regional roads and build an international transport corridor connecting with China and other Central Asian countries. It is expected that the realization of transport infrastructure projects will facilitate domestic and international trade and reduce transportation costs in the country. A good transport infrastructure may contribute to strengthening regional cooperation, increasing competitiveness and facilitating access to other markets. However, it does not mean that these improvements will bring good enough conditions for economic growth, as it needs a complex approach, and other measures should be taken. Bearing in mind the Kyrgyz Republic's tendency to improve the quality of roads in accordance with the ranking of the Global Economic Forum and the results of BEEPS surveys, transport infrastructure is not a key binding constraint to growth for the Kyrgyz Republic.

Table 5. Quality of transport infrastructure

Country	Quality of overall infrastructure		Quality of roads		Quality of railway infrastructure		Quality of air transport infrastructure	
	index	rank	index	rank	index	rank	index	rank
Armenia	61	4.4	80	3.7	68	2.6	72	4.3
Azerbaijan	47	4.8	69	4	37	3.8	44	5
Georgia	54	4.6	65	4	33	3.9	84	4.1
Kazakhstan	62	4.4	113	3	28	4.2	85	4
Kyrgyz Republic	96	3.6	123	2.7	67	2.6	123	3.2
Moldova	86	3.8	140	2.1	61	2.8	102	3.7
Russia	74	4.1	124	2.7	26	4.3	79	4.1
Tajikistan	107	3.4	109	3	53	3	91	4

Source: Global Economic Forum (2014)

In order to fully assess the infrastructure of the Kyrgyz Republic, this part of the study analyses the energy sector in the Kyrgyz Republic. No economy could achieve sustained economic growth without efficient energy supply. According to the data of **the World Bank (2015 b)**, 100% of the population have access to electricity, but the energy sector of the country still has a number of problems related to low efficiency and outdated equipment and a shortage of skilled workforce. Despite the fact that the Kyrgyz Republic is the country with the richest water resources, it has had problems related to energy production in recent years. As Table 6 shows, the Kyrgyz Republic has a twice lower electricity output than the average of the CIS countries (Russia is not included). The Kyrgyz Republic's electricity output is slightly higher than the electricity output of Armenia, Georgia and Moldova, but significantly lower than that of

Kazakhstan, Belarus and Azerbaijan. The comparison suggests that any industrialization efforts must include increasing the electricity output. The level of water in the main Toktogul Reservoir is shrinking each year, which does not allow energy production to be increased. Another reason for such a low energy production is the low investment in this sector: equipment is outdated and most of the equipment is from the Soviet period and has not been changed. Table 6 shows that electricity production is decreasing, while the consumption level is almost the same, with a slight increase. The Kyrgyz Republic has experienced significant losses related to the transmission and distribution of electricity. As Table 6 shows, they comprise almost 29% of all output of electricity, which is twice higher than the average percentage of losses of all other CIS countries. As a comparison, Russia had 10.9% for the same period, Kazakhstan 8.9 % and Tajikistan 16.5%.

Table 6. Electricity production and consumption in the Kyrgyz Republic

	2004	2005	2006	2007	2008	2009	2010	2011
Production	15141	14891	14523	14830	11789	11083	12100	15158
Consumption	7238	7950	7917	7858	7516	6786	7297	9053
%	47.8%	53.4%	54.5%	53%	63.0%	61.2%	60.0%	59.7%
Losses	30.2%	28.56%	28.2%	31%	31.3%	30%	26.3%	22%

Source: The World Bank (2015b)

According to **BEEPS (the World Bank, 2013a)**, a significant proportion of surveyed firms (34.9%) identified electricity as a major constraint to growth. This number is higher than the 4% of 2005. As Table 7 indicates, the percentage of firms that identified electricity as a major constraint to their growth is the highest compared to other CIS countries. Surveys suggest that an unreliable electricity supply is a problem for firms. Table 7 shows that the duration of the electricity outages in the Kyrgyz Republic is, on average, 2.1 hours, significantly higher than in other CIS countries, except Tajikistan (3.9). Furthermore, the number of electrical outages per month is 0.9, which is two times higher than in comparator countries, except Tajikistan and Uzbekistan. The average losses due to electricity outages in the Kyrgyz Republic are far higher than in most CIS countries (4), but this number is twice lower than in Tajikistan and Uzbekistan. The rest of the CIS countries have significantly lower percentages of losses in total sales. According to the data of the Global Economic Forum, the Kyrgyz Republic has a poor quality of electricity supply – at 2.9 out of 7, it is ranked 115th out of 144 countries. In comparison with the chosen comparator countries, the Kyrgyz Republic demonstrates a significantly low score, while others have, on average, 4.9 (Tajikistan is not included as it has a lower score than the Kyrgyz Republic). Although the government is undertaking some measures to improve the energy production and supply, they are not sufficient at this stage. In conclusion, all the above-

discussed problems make an inefficient energy sector a binding constraint to growth for the Kyrgyz Republic.

Table 7. Energy sector as a constraint on firm growth (percentage of firms)

Country	Number of electrical outages in a typical month	Duration of electrical outage	Average losses due to electrical outages (% of annual sales)	Percent of firms identifying electricity as a major constraint	Quality of electricity supply (1–7 (best))
Armenia	0.3	0.3	0.2	7.9	5.1
Azerbaijan	0.5	0.4	1	0.7	4.9
Belarus	0.1	0.2	0.3	13.4	n/a
Georgia	1	0.7	2.2	31.1	5.2
Kazakhstan	0.5	1	1.4	14.7	4.7
Kyrgyz Republic	0.9	2.1	4	34.9	2.9
Moldova	0.4	1.3	0.7	19.7	4.4
Russia	0.3	0.9	2	23.1	4.8
Tajikistan	6.1	3.9	9.2	26.8	2.6
Uzbekistan	5.7	1.8	6.6	11.8	n/a

Source: The World Bank (2013a)

A high quality of human resources is one of the key components of a growing economy. In the case of the Kyrgyz Republic, this component needs improvements. A shortage of good human capital could be a possible constraint to growth. If firms operating in a country have a lack of skilled and qualified workforce, it will be a constraint for them to succeed. According to the data of the World Bank (2013a), an “inadequately educated workforce” is one of the binding constraints for local firms, as 33.5% of surveyed firms identified a lack of qualified workers as a major constraint, and this percentage is the highest compared to the comparator group of countries (see Figure 5). This could mean that human capital is a binding constraint to growth in the Kyrgyz Republic. On the other hand, the results of the surveys show only the opinions of the surveyed firms; this means that a lack of qualified workforce could be a constraint only for the surveyed firms, but not for all. In order to identify whether human capital is a binding constraint, the study needs a more in-depth analysis.

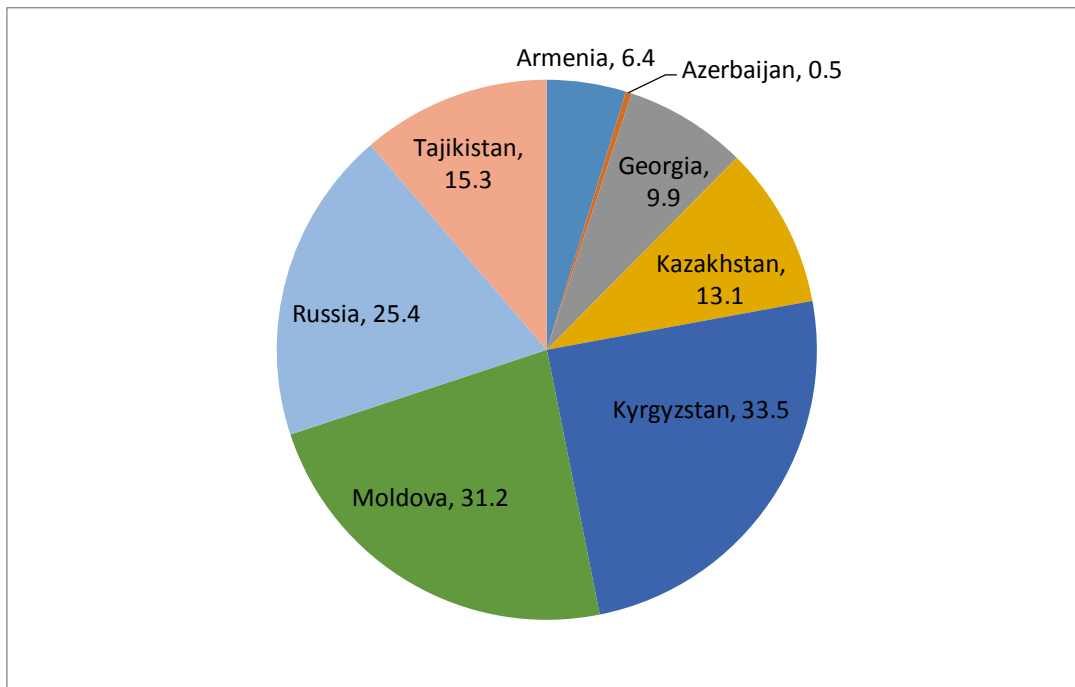


Figure 5 "Inadequately educated workforce" as a constraint on firm growth (percentage of firms).

Source: The World Bank (2013a)

The national statistics on unemployment data presented in Table 8 indicate that workers with a higher level of education are more likely to be employed than those with a lower educational level. This means that the workers of the country are undereducated, implying that human capital needs more qualification.

Table 8. Unemployment by education level in the Kyrgyz Republic

Unemployment by level of education	2008	2009	2010	2011	2012	2013
Tertiary	6,123	6,596	7,964	7,117	7,506	7,468
Secondary vocational	13,728	12,932	13,379	12,610	12,052	11,982
Secondary general	40,278	34,886	33,864	33,651	32,901	31,844
Incomplete secondary	7,049	6,965	8,196	7,696	7,908	7,103

Source: The National Statistical Committee of the Kyrgyz Republic (2014)

It is difficult to assess the quality of education, but the evidence that the Kyrgyz Republic has a lack of human capital is also supported by the reports of the Global Competitive Forum (2014), which assessed the education quality of the country as being very low. The Global Competitive Forum reported that the quality of the educational system in the Kyrgyz Republic is weak, with the country ranking 123 out of 144 countries. Furthermore, according to the Global Competitive

Forum's data, the Kyrgyz Republic's educational system is low when compared internationally. The Kyrgyz Republic has the lowest score among comparator countries at 2.9 out of 7; this score is significantly lower than the scores of other CIS countries, e.g. Kazakhstan 3.6; Russia 3.5 and Armenia 3.5 (see Table 9).

Table 9. Quantitative and qualitative assessment of the education system in the Kyrgyz Republic and CIS countries

	Quality			Enrolment rate, gross %		
	Primary education	The educational system	Maths and science education	Primary	Secondary	Tertiary
Armenia	3.7	3.5	4.2	84.1	95.9	46
Azerbaijan	3.1	3.1	3.3	89.1	100.3	20.4
Georgia	3.5	3.2	3.4	98.3	86.8	27.9
Kazakhstan	4.1	3.6	4.1	85.6	97.7	44.5
The Kyrgyz Republic	3	2.9	3	90.5	88.2	41.3
Moldova	3.8	3.2	4	87.9	88.2	40.1
Russia	4.2	3.5	4.3	96.2	95.3	76.1
Tajikistan	3.7	3.8	3.8	98.4	87	20.5

Source: Global Economic Forum (2014)

In comparison with the comparator group of countries, enrolment in primary school is at an average level, while enrolment in secondary level is slightly lower than other countries' enrolment rates. Enrolment in tertiary education level is not the worst in the region, but it is significantly lower than the enrolment rates in Russia and Armenia (see Table 9). Findings suggest that the Kyrgyz Republic has a bigger skilled labour force than Azerbaijan, Georgia and Tajikistan, but significantly smaller than Russia, Kazakhstan and Armenia. In the case of the Kyrgyz Republic, the enrolment rate is not binding, as it has a sufficient number of skilled workers, but it still needs measures to improve and increase the qualification of workers. The most problematic part is the quality of education in the country. The Global Competitiveness Forum assessed the quality of the educational system of the Kyrgyz Republic as the worst compared to comparator countries with a score of 2.9 out of 7, while other countries demonstrate a better quality of primary education, maths and science education and the overall educational system. The interpretation is that the Kyrgyz Republic has a sufficient number of qualified workers, but they are not satisfied with the quality of their education level, thus the investment in staff and training is higher than the average of the compared countries.

There is a significant lack of data for recent years. According to the latest available data on public spending on education as a percentage of GNI (2011), the Kyrgyz Republic has the second highest percentage in the region. Furthermore, this is increasing year by year (Figure 6).

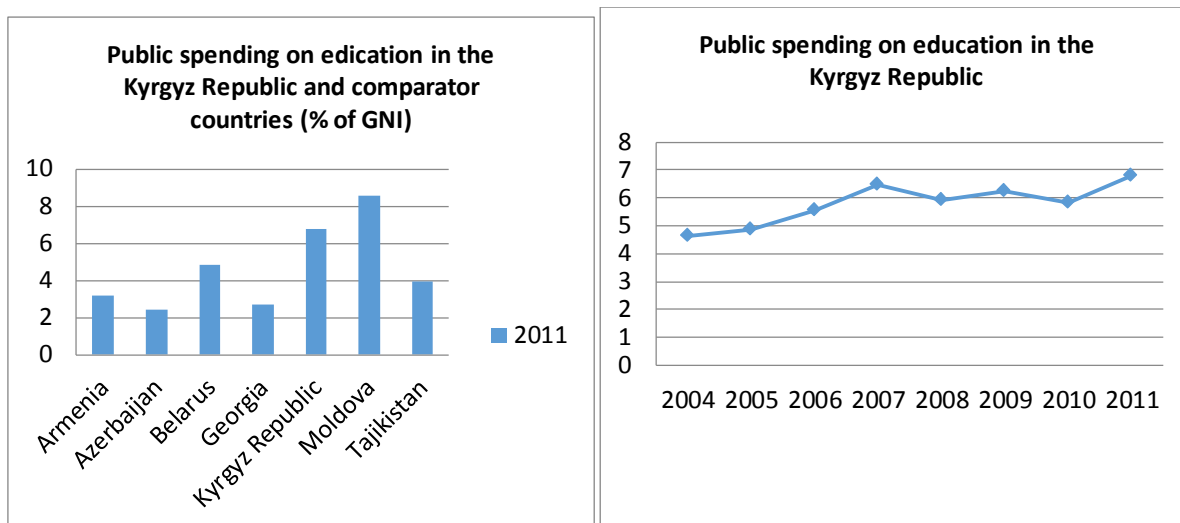


Figure 6 Public spending on education.

Source: The World Bank (2015b)

Workers' qualifications can also be improved not only in the frame of traditional educational institutions and organizations, but also there are training centres and some courses at the workplace. According to the score of the Global Competitiveness Forum (2014), the Kyrgyz Republic's score on the local availability of specialized research and training services is at the average level compared to comparator countries (see Figure 6). The investment of firms in staff is analysed to get clearer results. The Kyrgyz Republic is ranked 110 out of 144 countries. Firms are trying to invest in their staff and make efforts to enhance their qualifications. The interpretation is that the lack of human capital is a possible binding constraint and the firms see workers' qualifications as being inadequate and try to improve this situation by investing in training.

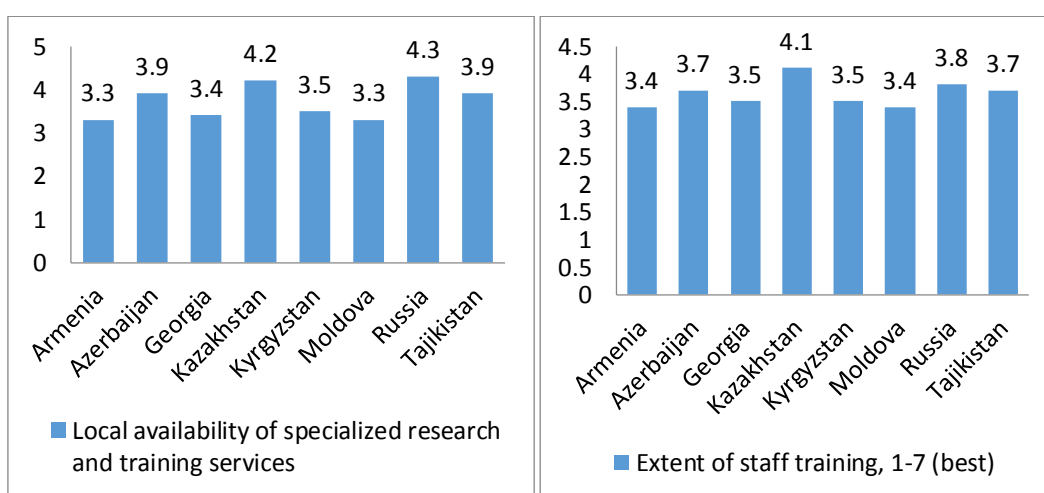


Figure 7 Research and training services.

Source: Global Economic Forum (2014)

The interpretation of all these statistics and the results of surveys is that the Kyrgyz Republic has difficulty in hiring highly qualified staff, as people with a higher education are more likely to be

hired than those with a lower level of education, and firms have to organize training to enhance workers' qualifications. On the other hand, there is another issue related to the preferred study programmes. The youth of the country prefer to study economics, law, commerce and business, but there is a significant lack of students who prefer to study technical professions, mechanics, engineering etc. World Bank surveys do not identify what kind of qualifications for workers they need. The Kyrgyz Republic's government should take measures to restructure the education system, analyse what kind of qualifications are required by firms and try to provide skilled workers with the required qualifications. Another problem related to the lack of qualified workers is that salaries are too low in the country. So people decide to migrate to other countries, for example Russia and Kazakhstan, in order to earn more money. There is a high level of migration of skilled and unskilled workers to other countries. Summing up, firms in the Kyrgyz Republic have the capacity to hire people both with the required qualifications and the willingness to train at the company, but almost half of the surveyed firms identified inadequate labour as a major obstacle to growth. Difficulties related to a lack of human capital exist, along with relying on data from international sources, and it is concluded that human capital is a binding constraint to growth in the Kyrgyz Republic.

4.4. Is government failure a binding constraint?

Macroeconomic distortions in monetary and fiscal policies strongly influence interest rates, the level of inflation and the formation of government revenue for the public sphere such as education, infrastructure and social care. Fiscal deficit requires more government borrowing and results in high interest rates and increased costs of finance. Long-term high inflation rates may lead to high costs of doing business. Macro risks matter when the government's ineffective macro policy leads to enhanced probability that the country will face macro crisis in the future. If potential future macro risks are considerable, this may depress private investment, as investors are unwilling to invest in the economy with potential high inflation rates, thereby increasing interest rates. If such macro risks are considerable, it may become a binding constraint for a country in the future.

Fiscal balance shows the difference between government revenue and government expenditure. It is a major document that demonstrates the general financial position of the government. According to the data of ADB (2014), as Figure 8 shows, the Kyrgyz Republic improved its financial position from -11.5% in 1995 to -0.7% of GDP in 2013 (Figure 9). The country's fiscal deficit level and its overall variation over the last few years was above the average level of comparator countries and it has shown significant improvements as it ranged from -4.9% in 2010 to -0.7 in 2013. In comparison, Georgia's deficit ranged from -5.6% in 2010 to -2.1% in 2013, while Kazakhstan ranged from -2.4% in 2010 to -2.1% in 2013. It should be

taken into account that the Kyrgyz Republic has a sustainable tendency to decrease its fiscal deficit and its comparatively low level indicates that fiscal deficit is not binding.

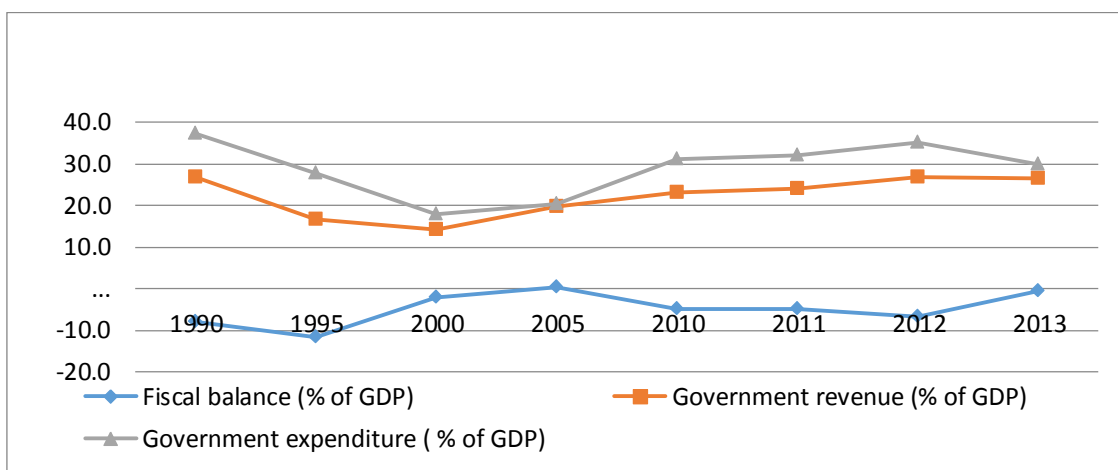


Figure 8 Fiscal balance of the Kyrgyz Republic.

Source: ADB (2014)

Fiscal balance and the public debts of a country have a considerable effect on inflation. Figure 8 shows that the inflation rate in the Kyrgyz Republic during the analysed period from 2004 until 2013 had been considerably lower than the average inflation rates of the comparator group of countries, except for 2008 (24.5%) and 2011 (16.5%). Such a high rate of inflation was due to high political instability related to the overthrow of the government and civil war in the south of country. Inflation rates in the Kyrgyz Republic, with respect to the comparator group of countries, are lower than the average rate of the CIS countries and do not demonstrate big fluctuations each year. Reports by ADB and the Kyrgyz Republic's National Bank consider that the inflation rate is currently under control. As inflation rates in the Kyrgyz Republic are comparatively low and have little variation (except in 2008 and 2011), this evidence suggests that the inflation rate is not binding, but the government should continue to control and monitor it and take necessary measures in order to avoid difficulties in the future.

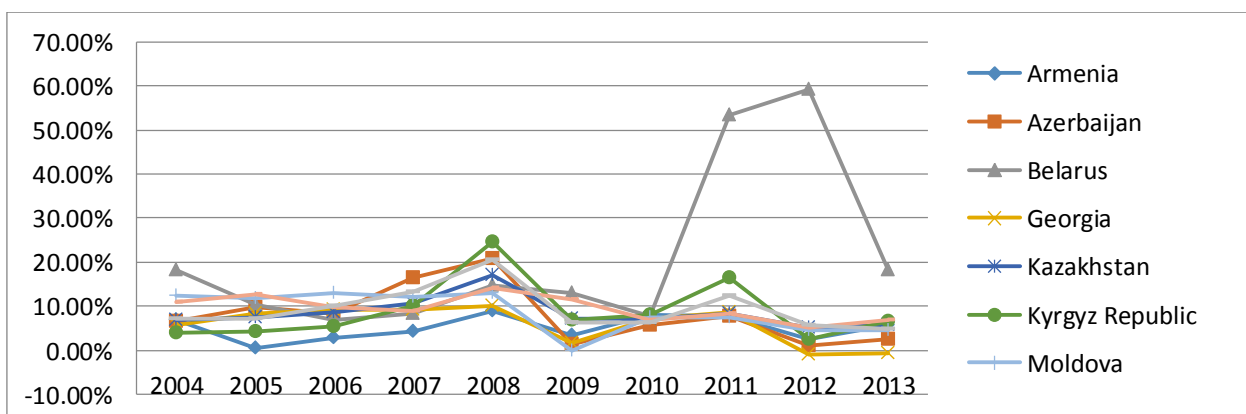


Figure 9 Inflation rates and consumer prices (annual %).

Source: The World Bank (2015b)

The monetary policy and exchange rate influence the trade relations of a country. An unstable exchange rate may depress investment, as investors may find exchange risk one of the most important factors. A stable exchange rate reduces the risk for investors.

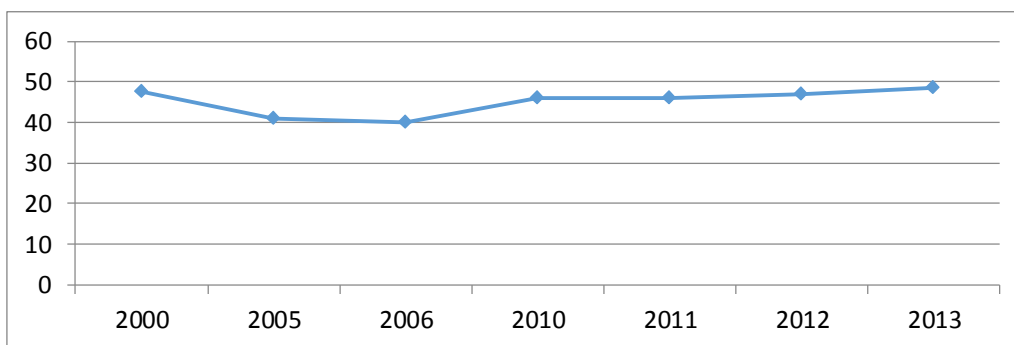


Figure 10 Exchange rate (LCU per US\$, period average).

Source: The World Bank (2015b)

As Figure 9 shows, the Kyrgyz Republic experienced only a small variation in the exchange rate of the national currency to the US dollar during the whole analysed period. This evidence indicates that lower fluctuations provide a more stable macroeconomic situation for investors. Summing up, the exchange rate is not likely to be binding and risky for the economy.

A country's international reserves show the total amount of gold and foreign exchange that the government holds. The availability of sufficient international reserves determines the ability of the country to pay back its foreign debt. One of the ways to assess a country's international reserves is to count the ratio of reserves to imports, which shows how many months a country needs to cover the current level of reserves. Figure 11 shows that the total international reserves of the Kyrgyz Republic have sustainable growth and increased almost twice from 2008 to 2013.

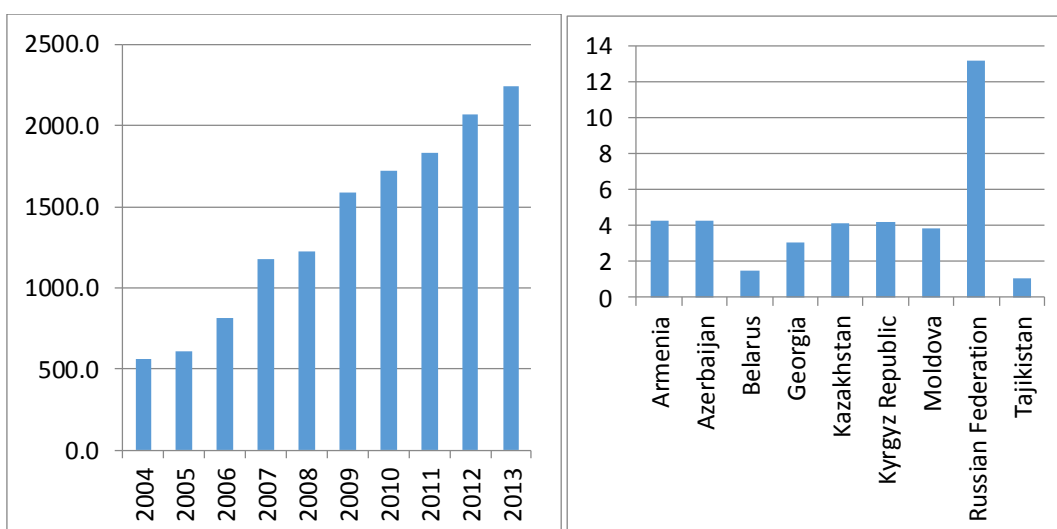


Figure 11 International reserves (a) and ratio of international reserves to imports.

Source: ADB (2014)

According to the data of ADB (2007), the Kyrgyz Republic's ratio of international reserves to imports is at the same level as other countries in the comparator group of countries (except Russia). During the last 10 years it has narrowly fluctuated and has had a slight tendency to increase. Summarizing the analysis above, it is concluded that macroeconomic environment is not a binding constraint to growth for the Kyrgyz Republic: the fiscal balance of the country is comparatively small and at the average level of comparator countries, the inflation rate is narrowly fluctuated, the exchange rate is stable and predictable enough, and international reserves are at a sufficient level.

Microeconomic risks may occur due to high taxation rates, ineffective tax management, difficulties in obtaining a licence and permission, a high level of corruption or weak protected property rights. In the case of the Kyrgyz Republic, some of these micro-risk factors are a potential binding constraint to growth. Corruption is an economic problem all over the world, and the Kyrgyz Republic is no exception. Transparency International's Corruption Perceptions Index (2014) ranks the Kyrgyz Republic 136th out of the 176 countries and territories assessed. Corruption in the Kyrgyz Republic is widespread and, according to the data of Transparency International's Corruption Perception Index (CPI), the Kyrgyz Republic's score is the fourth highest in the region and slightly higher than the average of the CIS countries (see Figure 12).

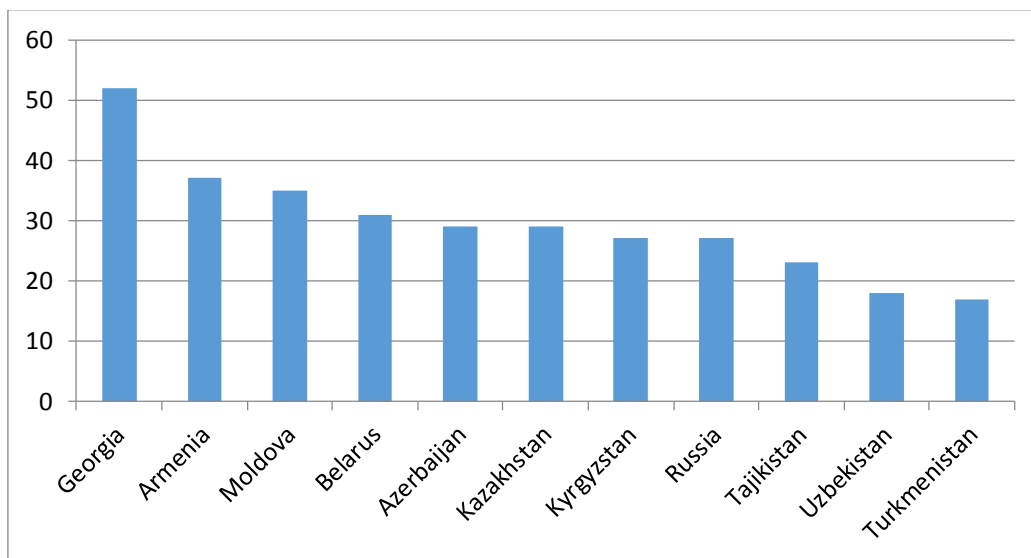


Figure 12. Corruption Perception Index, 2014 (1–100 (less corrupted)).

Source: Transparency International (2014)

According to the data of the World Bank Governance Indicators (2013b), the Kyrgyz Republic scored -1.14 in the control of law, on a scale from -2.5 to 2.5, and it showed slight improvements over the years: for instance, in 2009, it scored -1.32. The score on rules of law is also low, with a score of -1.12 in 2013. Furthermore, according to the data of the Global Competitiveness Forum, the Kyrgyz Republic has ranked corruption as the second most problematic factor for doing

business (17.4), behind political instability (20.2). This indicator does not demonstrate considerable improvement during the analysed period from 13.6 in 2010 to 17.4 in 2013, while in 2012 it increased to 21.5.

In addition, Table 10 indicates that corruption is considered to be one of the major obstacles for business in the Kyrgyz Republic, as 60.2% of all surveyed firms identified corruption as a major constraint for business, which is the highest percentage compared to the comparator group of countries. In comparison, in Georgia it was 2.9%, in Kazakhstan 19.6% and in Russia 33.1%. Additionally, 51.3% of the surveyed firms identified that they expect to give gifts to public officials “to get things done”, while the average of the CIS countries is 13.8%. According to the same survey, 59.6% of the firms identified that bribes are required to obtain operating licences from the government, which is higher than any other comparator country, while the average of the CIS countries is 15.7%.

Table 10. Corruption as a constraint on firm growth (percentage of firms)

Economy	Bribery incidence (% of firms experiencing at least one bribe payment request)	Bribery depth (% of public transactions where a gift or informal payment was requested)	% of firms expected to give gifts in meetings with tax officials	% of firms expected to give gifts to secure government contract	% of firms expected to give gifts to get an operating licence	% of firms expected to give gifts to public officials “to get things done”	% of firms identifying corruption as a major constraint
Armenia (2013)	7.1	6.1	4.6	2.7	10.6	4.6	13.5
Azerbaijan (2013)	15.3	13.2	11.8	49.9	38.8	6.8	4.7
Belarus (2013)	8.9	4.4	3.4	17	1.4	13.2	10.2
Georgia (2013)	2.2	1.3	0.2	1.1	0	1.9	2.9
Kazakhstan (2013)	26.7	22	22.3	19.1	15.8	20.4	19.6
Kyrgyz Republic (2013)	59.8	53.6	54.8	55.1	59.6	51.3	60.2
Moldova (2013)	30.9	22.2	13.5	10.8	22.1	16.4	37.8
Russian Federation (2012)	14.2	9.7	7.3	30.9	12.6	20.5	33.1
Tajikistan (2013)	36.3	29.6	31.9	33.6	28.7	37.2	23.7
Uzbekistan (2013)	7	4.5	2.4	8	11.3	3.5	6.1

Source: The World Bank (2013a)

Transparency International (2014) reported that the judiciary system and law institutions are highly corrupt and not independent, and assessed the judiciary system as the weakest and most corrupted state institution of the country. According to the Economic Freedom Network, the Kyrgyz Republic has the second lowest judicial independence in comparison with other

comparator countries in the region. In light of the analysis above, corruption is seen as a binding constraint to growth in the Kyrgyz Republic.

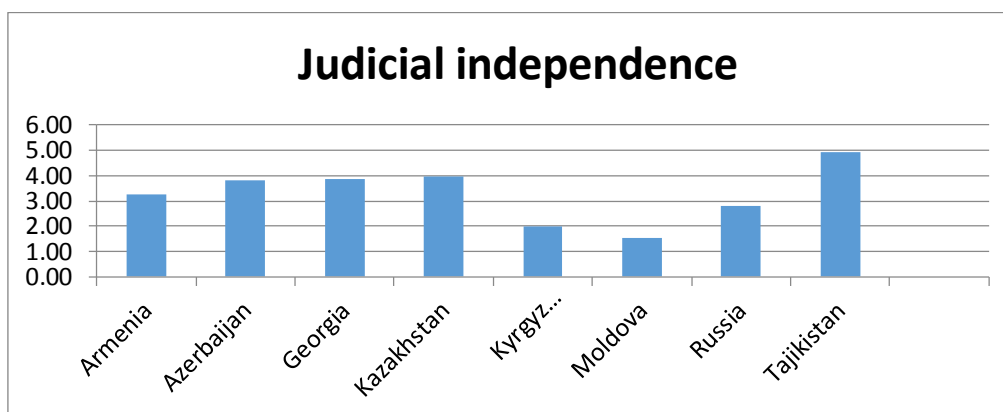


Figure 13 Juridical independence.

Source: Transparency International (2014)

Poor protected property rights have an impact on firms' and entrepreneurs' willingness to invest. The Kyrgyz Republic has weak institutions and widespread corruption in the judiciary system. As a result, courts are inefficient and costly. According to the latest data of the Global Competitiveness Report, the Kyrgyz Republic's property right protection score in 2013 was 3.2, ranking 125th out of 144 economies, and intellectual property protection for the same period of time was 2.6, ranking 130th out of 144 countries. Both indicators are the lowest compared to comparator countries, with the exception of Moldova (Table 11). Corresponding to the data of the World Bank, the Kyrgyz Republic rated as one of the lowest on CPIA property rights and rule-based governance rating over the 10 years from 2004 until 2013, achieving 2.5 out of 6, while in comparison Armenia and Georgia scored 3.5 for the same period. The same results give the latest data of the Heritage Foundation, and the Kyrgyz Republic has 20 out of 100 scores, and still has the lowest score.

Table 11. Property rights

Global competitiveness report	Intellectual property protection		Property rights		Property rights (The Heritage Foundation) 2014 (1–100 (best))
	score	rank	score	rank	
Armenia	3.5	84	4.2	67	20
Azerbaijan	3.5	80	3.8	91	20
Georgia	3	106	3.9	85	40
Kazakhstan	3.7	74	4.1	70	25
The Kyrgyz Republic	2.6	130	3.2	125	20
Moldova	2.8	118	3.2	126	40
Russia	3	107	3.3	120	20
Tajikistan	3.7	67	3.9	87	20

Source: Global Economic Forum (2014), The Heritage Foundation (2014)

Micro risks could be caused by high taxes and ineffective tax policy, which may lead to decreasing business and investment activities. Entrepreneurs consider taxes an additional cost for business, thus high tax rates could restrict investment. High tax rates may lead to low private investment of economic returns by negative impact in investment attractiveness of a country. Tax rates are not likely to be a binding constraint to growth for the Kyrgyz Republic. As Table 12 shows, tax rates in the Kyrgyz Republic are comparatively low. Tariff rates (%) are considerably lower than the average of the CIS countries. Income tax rates are the lowest in the region, the same as in Kazakhstan and Turkmenistan, while the highest rate is 26% in Armenia. Corporate tax rate is the third lowest compared to other comparator countries.

Table 12. Tax rates in the Kyrgyz Republic and CIS countries, 2014

2014	Profit tax (%)	Labour tax and other contributions (%)	Other taxes (%)	Total taxes (%)	Tariff rate (%)	Income tax rate (%)	Corporate tax rate (%)
Armenia	19.5	0	0.8	20.4	2.3	26	20
Azerbaijan	12.9	24.8	2.1	39.8	4.5	25	20
Belarus	11.9	39	1	52	2	12	18
Georgia	14.3	0	2.1	16.4	0.7	20	15
Kazakhstan	15.9	11.2	1.5	28.6	3	10	20
Kyrgyz Republic	6.4	19.5	3.1	29	2.4	10	10
Moldova	9.3	30.2	0.2	39.7	2.6	18	12
Russian Federation	8.4	35.4	5.1	48.9	5	13	20
Tajikistan	17.7	28.5	34.8	80.9	5.2	13	15
Uzbekistan	12.1	28.2	1.9	42.2	5.1	22	9

Source: The World Bank 2015b

In comparison with all the chosen comparator group of countries, the Kyrgyz Republic demonstrated the lowest profit tax rates in 2014; with respect to the labour tax rate it has the second lowest rate (19.5%), followed by Kazakhstan (11.2%). The overall tax rate, as indicated above, is the fourth lowest out of 10 CIS economies; the rate is considerably lower than the average tax rate (39.8%) of the comparator group of countries. Furthermore, 28.9% of firms identified high tax rates as a major constraint to growth, as compared to firms of other countries, for instance Armenia (36.9%), Russia (59.1%) and Tajikistan (31%). Summing up, high taxes in the Kyrgyz Republic are not likely to be a restricting factor to growth.

5. Conclusion

The purpose of this paper is to identify the most binding constraints to economic growth in the Kyrgyz Republic. The growth diagnostic framework proposed by Hausmann et al (2005) is applied to identify the most binding constraints. It is supposed that a low level of private investment is a key factor in depressing economic growth. The framework is addressed to

identify country-specific problems and thus it is contrary to the “laundry list” approach (any reform is good, the more areas reformed, the better for a country). Growth Diagnostics literature is a relatively recent one and a comparatively new tool to identify constraints to growth in a particular country. The Growth Diagnostics approach aims to identify binding constraints to growth across countries and helps policymakers to design appropriate policies to remove the constraints. Despite the criticism of this approach, it has advantages, and the paper underlines the most relevant ones. First, Growth Diagnostics is flexible. It does not promote universal policy recommendations in a standard list; instead, in the case of each country, it focuses on critical obstacles and weak parts that require more attention from policymakers. Unlike the Washington Consensus set of reforms, which mostly addressed government failures, this approach gives a variety of possible binding constraints depending on country-specific priorities. Second, the approach allows policymakers to prioritize reforms, adapting to the limited resources of a country; this is a key point for developing economies. It also gives a country more freedom in implementing specific policies taking into consideration local political, economic and social features.

It should be mentioned that the flexibility of this approach can also be a disadvantage as the results of Growth Diagnostics application may vary depending on the analysts’ point of view. Hence, analysts must have in-depth knowledge of analysing a country’s economy.

A wide range of qualitative and quantitative data was analysed to identify constraints. The study indicates that the most binding constraints to economic growth in the Kyrgyz Republic are (a) widespread corruption, (b) weak property rights, (c) an inefficient energy sector, and (d) the low quality of the education system.

The majority of the Kyrgyz Republic’s firms identified that widespread corruption and political instability are strong obstacles to growth. The number of firms identifying corruption as an obstacle to business is increasing year by year. The same results are confirmed by ADB studies, which identified corruption as the highest in the region and a strong obstacle to growth.

Weak property rights are also binding for the Kyrgyz Republic; this is mainly due to weak institutions and a highly corrupt judiciary system.

Corresponding to the data of international organizations such as the Global Competitiveness Forum, the World Bank and the Heritage Foundation, the Kyrgyz Republic demonstrated the lowest scores compared to the comparator countries. These results are supported by the research of ADB regarding the Kyrgyz Republic.

With regard to the energy sector, despite the fact that the Kyrgyz Republic is a country with rich water resources and with the second richest hydro resources in Central Asia after Tajikistan, it faces a number of difficulties related to low productivity, outdated equipment from

the Soviet Union era, a shortage of qualified workers and low efficiency. These difficulties resulted in increasing electricity outages, which has a strong negative impact on business. World Bank data shows that an unreliable electricity supply is a strong obstacle for them. At the same time, the Global Competitiveness Forum assessed the quality of the electricity supply as the lowest compared to comparator countries. Although the government is undertaking some measures to improve energy production and supply, they are not sufficient at this stage.

The lack of qualified labour force and low quality of education are also binding constraints to growth for the Kyrgyz Republic. According to the data of the Global Competitiveness Forum, the Kyrgyz Republic ranked the lowest in comparison with the comparator countries in all indicators assessing the quality and quantity of the educational system. Furthermore, 33.5% of firms identified that an “inadequately educated workforce” is one of the binding constraints. ADB assessed access to credit as a binding constraint to growth for the Kyrgyz Republic in 2009, but up to now the financial sector has been improving and it could significantly reduce lending rates, as the number of financial institutions has been increased. The problems exist with respect to low domestic saving, but these difficulties are mostly caused by political instability and low deposit rates. Summing up, currently access to finance is not a binding constraint to growth.

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