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Executive Summary

Georgia's Constraints Analysis (CA) paper was prepared according to Millennium Challenge Corporation (MCC) guidelines as a first phase in the framework of Georgia's future second compact with the MCC.

The Constraints Analysis is based on the Growth Diagnostics methodology developed by the Professors Rodrick, Hausmann and Velasco at the Kennedy School of Government, Harvard University. The analysis is performed by the MCC Georgia Core Team, which includes the representatives of state institutions, relevantly experienced non-governmental organizations and business groups.

The Constraints Analysis paper aims to identify constraints that hinder economic growth and poverty alleviation in the country. The idea of the CA is based on the assumption that the main driver of economic growth of a country is private sector development and entrepreneurship, and thus creating favorable conditions for the latter would contribute to the growth of the economy and complement poverty alleviation efforts.

The study examines various factors that can potentially drive growth. The analysis is broadly divided in two parts. Namely, in the first part CA provides general overview of the country, including economic performance, with particular stress on tourism and agriculture sectors, which are very important for country's development, especially for regional development. The analysis also includes the overview of external sector and social and healthcare sectors, which are not generally covered by the growth diagnostics methodology, but are relevant for Georgia because part of its population has not yet been able to benefit from growth and development and government designed special policies to address the needs of the most vulnerable parts of the population.

In the second part the CA further discusses particular factors and aspects according to the Growth Diagnostics Model. This part first analyses whether the low social returns hinder economic growth in the country. In this regard examination is focused on the natural capital (including geography, transit potential, etc.), human capital, quality of infrastructure and level of innovations in the country. Secondly, CA examines whether the low appropriability hinders economic growth, by analyzing macro and micro climate in Georgia, with all its components. Lastly, CA examines financial sector of Georgia, taking into consideration both foreign and local finance, access to finance, level of national savings, etc. Overall the analysis closely follows the growth diagnostics model and constructs the growth diagnostics tree. Local context and specific features of Georgia's economy at its current level of development are also taken into account where appropriate.

Each part of the CA consists of comprehensive analysis of the respective factor with the conclusion identifying whether this factor constitutes a constraint for growth and development of the country. As a further step a constraint optimization effort is undertaken with the aim of identifying binding constraints. The CA is based on comprehensive qualitative and quantitative analysis, using international as well as local sources and statistical data.

For a more thorough analysis, the country's performance is judged, where applicable, against a pool of so called benchmark countries selected according to a number of criteria. These countries are: Albania, Armenia, Macedonia, Moldova and Ukraine.

The study demonstrates that despite the progress achieved in recent years, there are areas of the economy, which require increased attention and efforts, as they constitute constraints to further growth and development. If not addressed in due time and in a consequent manner, these constraints will hinder growth and moreover, undermine achievements of recent years.

Finally, the findings of the analysis are grouped as binding, non-binding and non-constraints to growth. Quality of human capital and road infrastructure are identified to be binding constraints for growth in Georgia.

As the study reveals, low quality of human capital is mainly caused by insufficient level of higher education, which results in the rather high level of unemployment as a result of the mismatch between supply and demand on the labor market. Therefore, solution of the problem lays in the improvement of the high education quality in Georgia.

Regarding the roads infrastructure, as the analysis shows, much has been already done in this regard in Georgia during the last years. Significant investments were made in the development of road infrastructure, which have been duly reflected in international ratings. However, improvement mainly touched international road quality, while the quality of the secondary roads remains insufficient. It is also shown that development of secondary roads is extremely important for regional development and decrease of disparities between the center and regions of Georgia.

The findings of the constraints analysis were cross checked through the specifically designed population survey and focus groups, the results of which are attached as an annex to the CA.

In addition to the binding constraints, the CA identifies constraints for growth in the country, which include access to finance, innovation capacity and water supply infrastructure.

The main concern in the financial sector is relatively high interest rates, which are caused by the high country risk. Despite the fact the Georgian banking system is developing very fast, the interest rates still remain high.

As regards innovation capacity, the analysis revealed the low level of technology absorption in Georgia, which in turn hinders high technology production and export diversification. As the analysis further shows, the main reason for low level of innovation is the lack of qualified labor force, which is a binding constraint for growth in Georgia.

The CA also revealed that current level of water infrastructure remains a constraint in the country. The problem mainly concerns the irrigation system development in Georgia, which in turn hinders the development of agriculture in the country, while level of drinking water system development improved significantly due to increased investment in this area during the recent years.

Areas such as geography, micro and macro environment, energy and communications were identified as non-constraints.

To summarize, it is noteworthy that the CA has been a useful exercise at this stage of Georgia's development in order to reveal constraints for growth and address them in the most efficient way.

Introduction

Georgia today is a small economy in development, pursuing liberal market policies and aiming at creating favorable business environment for the development of private sector and attracting foreign investment. It was through active and drastic reform policies in all spheres of public life and statehood that the country managed to transform itself from an almost failed state to a dynamic market economy in development and democracy that is maturing - a development path that should lay a solid foundation for the long-term sustainable development.

Georgia has made substantial achievements in reform and development in the last several years, starting from 2004, which has been recognized both inside the country and by international assessments. However, a lot still remains to be done, in order to eliminate the constraints to economic growth and development, and create favorable conditions for poverty alleviation and private sector development.

In this regard, the government has designed and is pursuing policies and actions in line with the country's development vision and relevant goals, and views the MCC assistance as an important complementary factor to its own efforts.

The current document represents a thorough analysis of various sectors of Georgian economy produced in accordance with the MCC guidelines and with broad ownership of state and non-governmental institutions of Georgia.

As a first step, following the MCC guidance, an MCC country coordinator – Chief advisor to the Prime Minister Ms. Tamar Kovziridze – was nominated and a special Country MCC Team has been assembled in order to prepare a Constraints Analysis (CA) document. The Team consisted of the representatives of state institutions, relevantly experienced non-governmental organizations and business groups. Taking into account the characteristics of the document to be produced, the bulk of the Core Team constituted the staff of the Prime Minister's advisory groups. They were seconded for this project for the period necessary for conducting the Constraints Analysis, retaining their official positions at the PM office and were full-time dedicated to drafting the document.

As a second step the team embarked on preparing the Constraints Analysis pursuant to the Growth Diagnostics methodology elaborated by the Harvard University Kennedy School Professors Rodrick, Hausmann and Velasco (Rodrick, Hausmann, Velasco (2005)). Accordingly, a growth diagnostics tree was constructed using the model provided by the methodology and the relevant MCC guidance documents and the same time taking due account of the country specifics.

According to this structure a thorough analysis of various aspects of Georgian economy was undertaken and constraints for growth and development were identified. These constraints were divided into binding and non-binding ones. In parallel non-constraints were identified.

It is noteworthy, that the philosophy of the economic and reform policy of the Government of Georgia for the recent years turned out to be largely coinciding with the rationale behind the Growth Diagnostic methodology, which is to create macroeconomic and regulatory conditions, promoting private investment and entrepreneurship, and ensuring private sector growth. Broadly, the Government's vision is that the private sector growth should be the main driving force for the growth of the economy. In this regard, the constraints analysis exercise is viewed by the Government of Georgia as a useful tool for revealing and analyzing various constraints that hinder growth and development.

Throughout the analysis, wherever deemed appropriate, Georgia's performance is checked against a group of benchmark countries, identified according to the Growth Diagnostics methodology. These countries are Albania, Macedonia, Ukraine, Armenia and Moldova. These countries were selected according to a set of criteria, which establish a certain level of similarity and make them comparable in the global or regional context. These criteria are: shared and resembling past, comparable economic performance, among others determined by similar Soviet legacy, regional proximity and thus comparable development environment, and the same income group, namely Lower Middle Income as characterized by the World Bank.

According to the MCC guidelines, and in order to deliver a high-quality analysis, the drafting process was accompanied by consultations across a broad range of stakeholders. *Inter-alia*, the Core Team established direct contact with the authors of the Growth Diagnostics model, Mr. Velasco, Mr. Rodrick and Mr. Hausmann. Extremely useful and lively interaction was undertaken with the MCC staff, both locally in Georgia, and in Washington DC from the very initial phases of the document elaboration. MCCs country director and his staff provided valuable and steadfast guidance and assistance in all matters related to the analysis. Valuable discussions have taken place with the MCCs economic team, and specially allocated economists, in particular those who, apart from consultations through the video conferences and email contacts, visited Georgia in the very time of the CA first draft completion.

A number of working interactions have been organized with various interest groups, primarily with the NGO and business representatives. In addition a public opinion research and focus-groups have been conducted on the request of the CA team. The findings of these public outreach and consultative activities are integrated in the Constraints Analysis. The purpose of this outreach exercise was to provide additional valuable source of feedback and information from relevant stakeholders including the public, and in certain instances to cross-check results obtained through quantitative analysis and available local and international research. Apart from that the population survey served as a useful tool to evaluate the sentiments of Georgia's population regarding the urgent needs for growth and development and constraints that hinder the latter.

In order to make the public outreach efforts more effective, a web-access to the information regarding the CA preparation was ensured at first through a government's web-page www.georgia.gov.ge. At a later stage of compact development, setting up of a special web site is planned.

Public consultation process indeed turned out to be a very useful exercise: firstly, the findings of the Constraints Analysis were cross-checked with the various stakeholders and grassroots sentiments, and secondly, more thorough, qualitative discussions were initiated with these groups in order to identify their views on growth constraints to the economy of Georgia.

As regards the dialogue with entrepreneurs, it was identified to have utmost importance, as it was regarded more natural for business community to know best, what constraints there were for private investment in the Georgian economy. With this in mind, a number of meetings with business representatives were undertaken, one of them with the participation of the Prime Minister.¹

The paper is structured as follows: in the first part a general overview of Georgia's economy is presented, and country's development objectives are discussed. In addition several sectors of the economy are being reviewed, which are extremely important for the country's development, affect or have the potential to affect large portion of Georgian population, but due to the methodology of the Growth Diagnostics are somewhat out of scope of the analysis. These sectors are tourism, agriculture and healthcare.

In the second part the Constraints Analysis exercise is undertaken according to the Growth Diagnostics methodology and the Diagnostics Tree (Annex I) constructed for these purposes. And finally, conclusions of the analysis are presented.

All relevant materials, including the details of the consultative process and the findings of the public opinion research are attached as an annex. (Annex II)

¹ It should be mentioned that throughout the whole process of the Constraints Analysis it has been under close attention from the Prime Minister of Georgia. The secondment of his Chief Adviser Ms. Kovziridze to this position is another illustration of his special interest.

General Overview

In what follows, a general overview of the country's economy, a brief description of its recent past as well as main policies of the governments in power and their results are presented.

Georgia is a small country situated between Europe and Asia, on the southern slopes of the Caucasus mountainous grid, and to the eastern shore of the Black Sea. The population is circa 4.4 million (Source: Geostat), and the GDP per Capita is 2629 USD (2010E) (Source: Geostat).

Over the last several years, starting from 2004 the country has been enjoying relatively good economic performance, which was interrupted by the Russian military invasion in 2008 and the global economic crisis.

The last decade of the 20-th century was extremely difficult for the country which was almost stigmatized as a failed state. It was in the year 1991, when Georgia proclaimed its independence from the Soviet Union. With no major experience and competence in state governance, as well as in running of the economy, the new government of Georgia started to pursue sovereign economic policy.

The country immediately plunged into a deep political and economic recession. All this was aggravated by the civil war, resulting in the toppling of the government in 1992, and the two military conflicts over the breakaway regions of South Ossetia and Abkhazia in 1993-1994. As a result, the country was devastated, the economy was ruined and the constant sense of instability was entrenched in the region. The state institutions were on initial phases of their development and failed to duly provide for the functions they are ought to. The country jumped into a deep recession, with skyrocketing inflation levels, sharply declined living standards, large scale unemployment, overwhelming corruption and rapidly depleting infrastructure. In 1991 alone the economy contracted by 21% and the slump continued in the following years resulting in the reduction of the economy in 1993 to the level of just 30% of the 1990 figures. Cumulative inflation by the end of the 1994 exceeded 7800%.

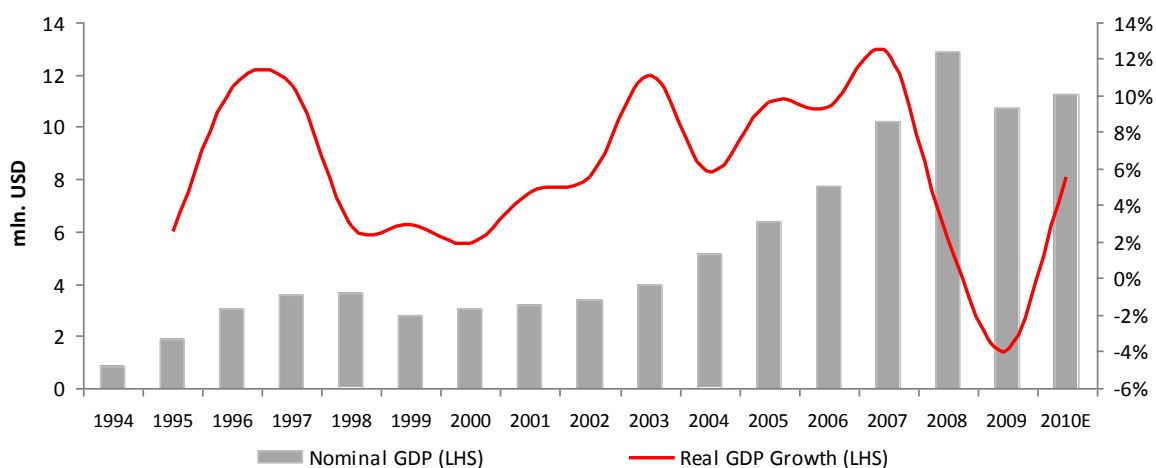
After 1994 the first steps towards the stabilization of the economy and the political climate were taken. The importance of the country to the West increased after starting the construction of the Baku-Tbilisi-Ceyhan oil pipeline in mid-1990s, which was to deliver the Caspian oil to Turkey and further to the West. But generally, the situation was still easily explosive. In addition, the state was plunged into the web of corruption².

During the 90s incumbent governments managed to attract foreign aid into the country, but due to the corrupt government system only a miniscule of the aid reached their destination because of the institutionalized corruption which used to strengthen from year to year.

In terms of economy the situation saw a brief recovery in the second half of the 1990s, when the GDP grew for a little more than 10% for the 2 consecutive years. (Chart 1). But this was mainly linked to the major investments related to the pipeline construction and overall, the situation remained difficult.

² According to the TI's Corruption Perception Index the country ranked 136 (out of 146) in 2004.

Chart 1. Nominal and Real GDP of Georgia 1994-2010E



Source: IMF

The entirely new impetus to the development and modernization of Georgia was given by the 2003 peaceful 'Rose Revolution'. The new Government coming to power in 2003 had to face almost non-existent statehood and shabby economy, with underdeveloped and uncompetitive sectors. Deep going and comprehensive reforms were need in all spheres of public life and economy in order to eradicate corruption, build democratic institutions and generate growth through private sector development.

Consequently, a vision was elaborated by the Government, depicting what the policies were to aim for in the medium and long term perspective. Several comparative advantages were identified by the new government and it was decided to promote them in order to make them main motors for growth, on the one hand, and on the other, to develop these areas as adding on to the competitiveness of Georgia on the world market.

The policy of the Government was to encourage private sector growth and removing barriers that hinder its development. The Government's vision has been that Georgia should become a transportation, transit, service, trade and energy hub for the region, with smart regulations, liberal economy, highly educated local workforce, that would make the country competitive in the increasingly integrated global market. To achieve this in a sustainable manner, intensive reform policies were launched and actively pursued.

The economic reforms *inter-alia* focused on:

- Removing of institutional and regulatory constrains to growth and development
- Eliminating corruption through drastic public service reform and smart regulation
- Crating business friendly economic environment through:
 - Reducing government's involvement in economic activities and effectively limiting its role to offering of most essential services that only government can provide
 - Reducing red-tape
 - Privatizing state owned property
- Utilizing the country's transit, transport and tourism potential to the maximum extent.

Georgia's economic reforms since 2004 have brought tangible results in terms of robust economic growth, ensuring macroeconomic stability and improving business environment in the country.

During the recent years, the policy of the Georgian Government was aimed at deregulation of the economy and creation of open and competitive environment for the private sector. State-owned enterprises have been and are being privatized. Up to date the majority of the state-owned companies have been sold to private investors. There are just several large companies in state ownership which are generally serving strategic security interests of the country – for instance the National Railway, the Enguri hydro power plant (partially located on the territory of the break-away region of Abkhazia, Georgia) and the gas pipeline system connecting Georgia with neighboring countries. Overall, the share of state ownership in the economy has been subsequently reduced and the privatization process is to be continued.

As a result of the reforms implemented, the state regulatory burden has been significantly diminished. A lot of unnecessary regulations, being a substantial source of corruption, were abolished starting from 2004. Georgia eradicated corruption in state institutions and civil service. According to the 2009 Corruption Barometer survey by Transparency International, (TI) Georgia is placed in the group of the least corrupt countries along with US and Western Europe, with only 2% of the population having to pay bribe in the survey period. The TI's Corruption Perception Index shifted up Georgia from the 136th place in 2004 to the 68th place in 2010³.

Georgia has dramatically simplified business and property registration procedures. Business registration takes only 1 day and equal treatment of local and foreign business is applied. As for the property registration, it takes only 3 days and no restriction on foreign ownership of urban real estate, business and land is applied.⁴

Tax system was reformed. Currently there are very few, flat and low taxes, where Personal Income Tax is 20%, Corporate Tax – 15% and VAT – 18%. There is no dividend, payroll, social insurance, capital gains, wealth, inheritance or stamp duty taxes in the country. Electronic tax declaration was introduced in 2009.

Number of licenses and permits necessary for doing business were cut by 85%. "One-stop-shop" and "silence is consent" principles were introduced. Now it is cheap, quick and easy to acquire a license.

Georgia has one of the most flexible and smart labor regulations encouraging development of a dynamic labor market.

The country has one of the lowest import duties worldwide. No quantitative restrictions to export, re-export or transit are applied. The country has reformed its customs system, improving both, the quality of services and infrastructure. Export and import procedures were simplified and customs check-points modernized.

These achievements are duly reflected in a number of international ratings. For instance, the World Bank/IFC Doing Business report for 2011 upgraded Georgia's performance from the 112th position in 2005 to the 12th position in 2010. By the same study Georgia was identified as the best reformer worldwide for the years 2005-2010.

In what follows, a brief description of Georgia's economy and its main sectors is presented.

³ http://www.transparency.org/policy_research/surveys_indices/cpi

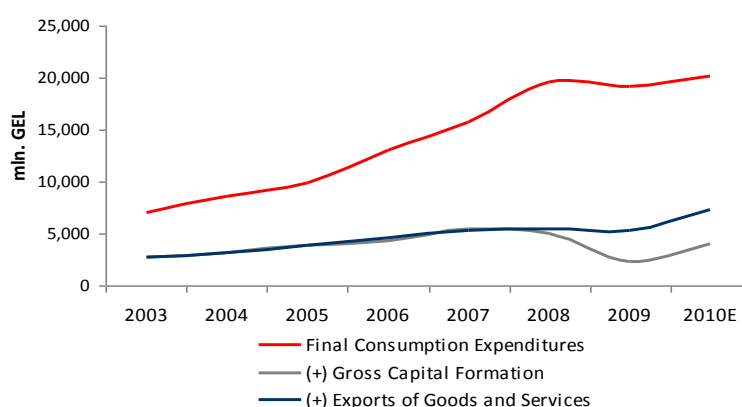
⁴ <http://www.doingbusiness.org/data/exploreeconomies/georgia>

Overview of Economic Performance

As mentioned earlier, the reforms implemented by the government yielded tangible results in terms of improved economic performance in Georgia. Prior to 2008, Georgian GDP was gradually increasing reaching record high levels. During the 5 years after the rose revolution (2003-2007) average annual economic growth rate was about 9%. However, in 2009, due to the double shocks of the world financial crisis and the Russian invasion of 2008 the economy shrank by 3.8%. 2010 estimated real GDP growth was 6.4%, which represents a significant upward trend from the beginning of the year forecast of 2% (see Chart 1 below). This relatively good performance was largely made possible by the diversified economic structure, implemented reforms, stable financial sector, as well as the generous foreign aid of circa USD 4.5 billion to Georgia, rendered by the international community in order to mitigate the devastations of the Russian invasion.

The Chart 2 below represents Georgia's GDP by the categories of consumption. According to the Chart, gross capital formation reduced in 2009, but recovered slightly in 2010. Final consumption expenditures have been increasing starting from 2003, with slight reduction in 2009.

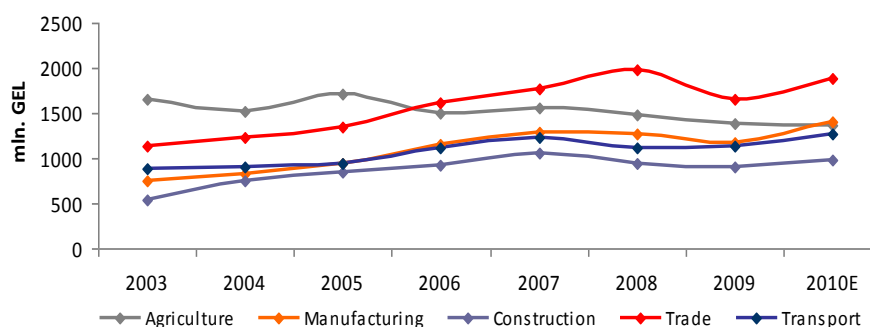
Chart 2. GDP of Georgia by Categories of Consumption 2003-2010



Source: Geostat

During the recent years (2003-2007), agriculture, manufacturing, construction, trade and transport constituted the main driving sectors of the economy and thus contributed to largest shares of GDP of Georgia (Chart 3).

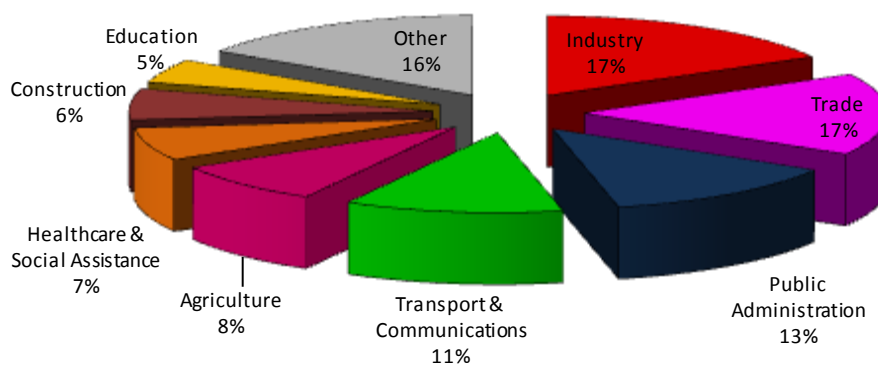
Chart 3. Georgia's Sectors of GDP, in 2003-2010 (in 2003 prices)



Source: Geostat

It should be noted that agriculture traditionally constituted the biggest share of GDP over the years. However, recently the sector reduced from 19.3% of GDP in 2003 to 8.1% in 2009. The 2003-2009 average growth rate of the sector was -2.6%. Trade sector showed the reversed picture constituting the biggest share of the 2009 GDP, with average growth rate of 7.1 % in 2003-2009. Share of construction sector in GDP was increasing in 2003-2005, following the construction boom and large scale investment projects in Georgia. However, starting from 2006, share of construction in GDP is observed to be reducing. (Chart 4)

Chart 4. Georgia's Sectors of GDP (%) 2010

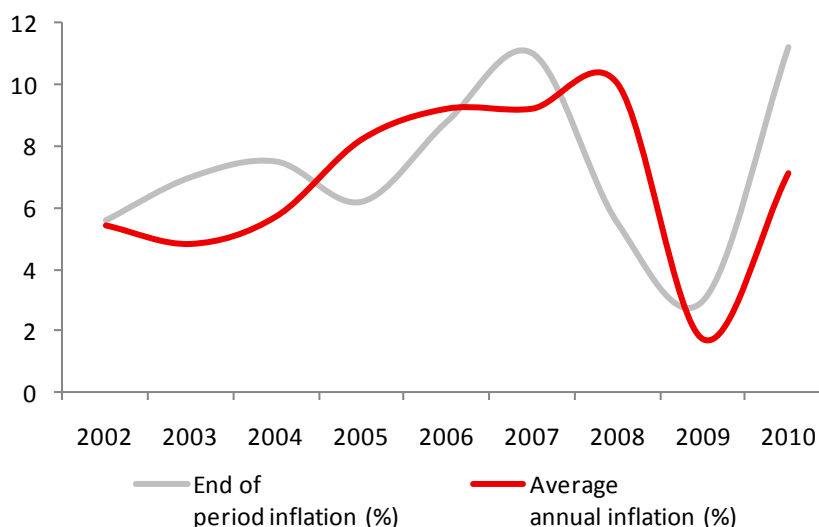


Source: Geostat

Apart from those mentioned above, the fastest growing sectors of economy were financial intermediation, communications and real estate sector (real estate, renting and business activities), with average annual growth rates of 20.6%, 13.4% and 12.9% respectively. However the shares of these sectors in GDP still remain low.

As for the inflation rate, during the recent years (before 2008) it was increasing, reaching 11% (end of period inflation) in 2007. In 2009, inflation rate reduced to 3 % and increased again in 2010 reaching 11.2 % (Chart 5.), mainly due to the rapid economic recovery after the global recession and increase of prices on the world food market (see detailed explanations and benchmark country comparison in the respective chapter below).

Chart 5. Inflation Rate in Georgia 2002-2010



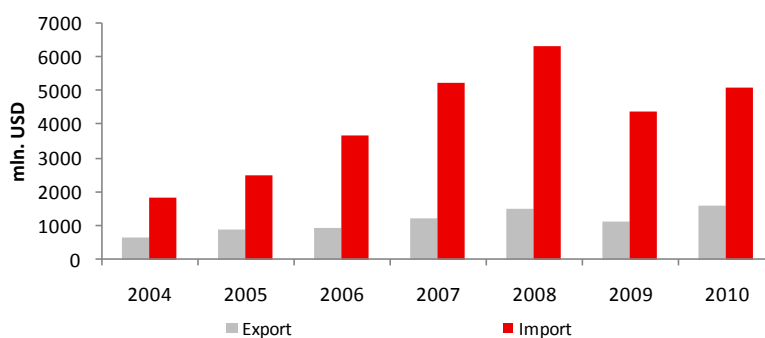
Source: Geostat

The External Sector

Georgia is an open economy, which is actively integrating in the global market. During the recent years, trade liberalization has been one of the key objectives on Georgia's economic policy agenda. Georgia has undertaken a large number of reform initiatives targeted at streamlining, liberalization and simplification of trade regulations and their implementation. Starting from 2004 Georgia has almost entirely eliminated tariff barriers and drastically reduced non-tariff barriers to trade. The import tariffs have been abolished on almost 90% of goods, and there are only three low rates (0%, 5% and 12%) in place instead of the previous 16. Domestic trade related legislation was brought in conformity with WTO standards. These reforms contributed to the creation of competitive market conditions and business-enabling environment, diversified international trade and economic ties.

Georgia's foreign trade turnover saw a steady increase over the recent years, but the tendency was interrupted in 2009 as a result of the aftermath of the Russian invasion and the global economic downturn. In 2010, signs of slow recovery are observed coupled with increased diversification of export by products as well as by export markets (Chart 6).

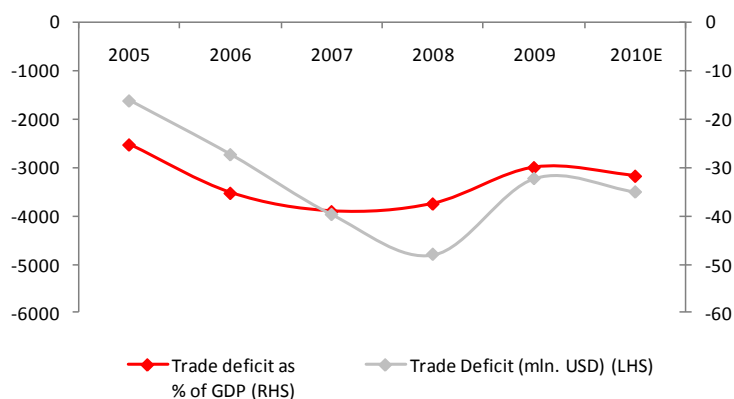
Chart 6. Georgian Trade Turnover 2004-2010



Source: Geostat

As it can be concluded from the Chart 7 below, Georgia's trade deficit has been increasing during the last few years, with the reduction tendency in 2009 and increase again in 2010. This increase of trade deficit was mainly caused by the fast increase of import, which itself was mainly investment driven in this period. As for the share of trade deficit in GDP, this indicator decreased in 2009 mainly as a result of the reduction of trade deficit, but slightly increased again in 2010.

Chart 7. Georgia's Trade Deficit % of GDP 2005-2010



Source: Geostat

In what follows below, three sectors of Georgian economy, tourism, agriculture and social and healthcare sector are reviewed. These sectors are not included in the Growth Diagnostics analysis because the latter mainly focuses on structural and institutional aspects of growth and development rather than a sector analysis. The Core Team closely followed the Growth Diagnostics methodology, based on which it conducted the analysis presented in the respective part. Nevertheless, it was decided to include the above mentioned sectors in the general overview of Georgia's economy because they are regarded important for the country's development and are influenced by existing constraints of institutional or structural nature as identified later. These sectors have high potential for development and if properly addressed will contribute to the improvement of the situation of Georgia's population, especially most vulnerable and poor parts of it.

Tourism

Georgia's climate and geography create attractive opportunities for tourism. The sector is regarded to have high potential for growth and to be attractive for investment. Due to diverse geographic conditions a large variety of climatic zones is represented in Georgia (excluding Savanna and tropical forests and including wet-subtropical and permafrost zones). The diversified climatic condition provide good basis for the development of a wide variety of tourism activities ranging from, but not limited to seaside, ski, religious and wine tourism. During the Soviet period the country was regarded as the main tourist destination for the whole USSR. But following the period of economic depression, the sector suffered sharp decline, conditioned, among others, by depletion of relevant infrastructure and disqualification of the human capital. In recent years the situation started to recover, which is evidenced by the growing number of tourist arrivals. This, in the view of the Government, should serve as an impetus for the sector development, attracting larger volumes of FDI.

Here, as well as in other sectors, the Government vision is that the private initiative should be the main growth-generator, although the state could have a limited facilitating role. The latter mainly include:

- Creation of favorable conditions for private sector development such as smart regulation and elimination of entry barriers.
- Creation of regional infrastructure in the country to increase accessibility of Georgia's tourist attractions. (The public opinion survey, conducted at the request of the Core Team, identified infrastructure rehabilitation (including regional infrastructure) as the main priority for the country's development, as well as road construction/rehabilitation was named as the top need for the tourism development and FDI attraction.)
- Liberalization of visa regimes with various countries and diversification of transport connections in order to make travel to Georgia easier and cheaper.

The actions of the Government in the recent years have brought tangible results in this regard: In 2010 more than 2,032 million international visitors came to Georgia. This is a 36% increase of the number of visitors from the previous year. According to the Georgian National Tourism Agency surveys, 28% of all international arrivals to Georgia were for business purposes. This amounts approximately to 420,000 business travelers arriving in Georgia in 2009 (more than 35,000 visitors per month) and more than 570,000 (about 47,000 business travelers per month) in 2010. Around 32% of international travelers were holiday/vacation makers. Apart from increasing the numbers of travelers, the tendency of increasing and diversifying the countries of origin has also been observed (visitors from 154 countries in 2010).

The evidence demonstrates that in 2005-2008 hotel industry revenues grew at an annualized rate of 49,7%, growing by 235,5% in a three year period. Due to the effects of the global financial crisis and the Russian invasion, the hotel industry grew by mere 0,5% in 2009 and similarly in 2010. From 2007 fixed assets grew by 45,6%. The amount of revenues generated by the global hotel brands is about 60-65% while the remaining 35-40% is distributed among the local Georgian hotels.

Stemming from the high level of development of tourism in the past and with currently rebounding international tourist interest towards Georgia, the Government regards this sector to have high potential for development, which would result in the increase of the growth rates of Georgian economy. It is regarded that tourism development will help develop business activities, among others small business, in particular in Georgia's regions with main tourist attractions such as mountainous areas, the seaside, wine regions and more. To contribute achieving this result the Government sees its role as a facilitator to this process primarily through investing in relevant infrastructure such as regional roads, creating favorable legislation for private sector activities (as in any other sector), and encouraging development of diversified transportation links to and from Georgia.

Agriculture Sector Overview

Agriculture has not seen any impressive growth record in recent years, and has not benefited from Georgia's otherwise impressive GDP growth. Nevertheless, this sector is extremely important for the country as it employs more than a half of the population (52.6%). Large portion is occupied with subsistence farming, and only relatively low segment of the population is involved in agriculture as a business. Overall, the sector is highly inefficient, its output currently being only 11.5% of GDP in 2009. Moreover, in absolute values the share of Agriculture has been decreasing in the last 5 years. (Table 1.) Sizable part of the population engaged in the sector, mainly in form of small and subsistence farming, is socially vulnerable and relatively poor. Therefore, agriculture in Georgia is a sensitive sector not only from economic, but mainly from social point of view. The sector has potential for development and there is a room for increasing its efficiency through encouraging private investment.

Table 1. Share of 'Agriculture, Hunting, Forestry and Fishing' in Real GDP (2004-2009)

	2004	2005	2006	2007	2008	2009
Share in Real GDP	16.80%	17.20%	13.90%	12.70%	11.90%	11.50%
Share in real GDP (Indexed to year 2003)	92.14%	103.22%	91.14%	94.11%	89.95%	83.84%

Source: Geostat

Back in Soviet times Georgia was regarded to be highly competitive in agriculture, and vegetable and fruit crops, including high value ones, were cultivated in the country and exported to other Soviet republics. The share agriculture in the GDP in Soviet Georgia was higher than its current level (Table 2). (What is more, unlike current methodology of GDP sector distribution, the Soviet time figures do not include forestry and fishing, which means that agriculture sector proper has even lower share nowadays.) Georgia has been famous for its long-standing traditions of winemaking, stemming from a multitude (about 400) of unique grape varieties that are grown only in Georgia. It is noteworthy that 27% of Georgia's agricultural land is arable out of which, as of 2010 circa 32% is utilized.

Table 2. Share of 'Agriculture' in Real GDP (1977-1984)

	1977	1978	1979	1980	1981	1982	1983	1984
Share in Real GDP	19.9%	19.8%	20.5%	19.0%	19.6%	17.7%	18.2%	19.2%

Source: Geostat

All this, coupled with the favorable business and regulatory climate in the country, and other factors like no restriction on foreign ownership of land, potential for tax-free production of export-oriented production, 0% VAT on primary production of agricultural products, 0% export duty, 100% VAT refund option, 0% of import duty on agricultural and other equipment, 100% depreciation allowance on investment, liberal labor regulations, create conditions for agri-business development in Georgia and can serve as an argument in favor of high development potential of Georgian agricultural sector. The global tendency of rising food prices makes it even more important to increase Georgia's reliance on its own agriculture production.

But the fact is that this sector in Georgia is heavily underdeveloped and it failed to benefit from the high growth rates of Georgian economy of the recent years. In 2004-2010 growth rate of the Georgian agricultural sector was rather low compared to other sectors of the economy, being negative in certain years. The Table 2 illustrates that agriculture was the only sector to show contraction if compared to the year 2003. (Table 3)

Table 3. GDP Real Growth by Sector (2003 level)

	2004	2005	2006	2007	2008	2009	2010*
Agriculture, hunting and forestry; fishing	92.1	103.2	91.1	94.1	89.9	83.8	82.4
Mining and quarrying	80.1	73.8	87.7	105.1	122.7	134.2	140.6
Manufacturing	111.6	127.3	155.6	173.6	171.0	156.5	188.3
Electricity, gas and water supply	96.0	100.9	114.5	122.2	126.7	134.6	137.4
Processing of products by households	98.4	110.6	113.8	145.8	139.2	136.7	131.6
Construction	135.9	155.0	168.3	192.9	171.5	166.1	178.7
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	108.2	118.3	141.7	155.3	173.6	145.3	165.9
Hotels and restaurants	103.5	120.7	133.3	148.5	155.7	148.9	168.1
Transport	103.7	107.7	125.9	140.8	127.4	128.1	144.9
Communication	116.9	150.5	170.7	185.6	215.0	207.8	221.4
Financial intermediation	112.8	172.5	236.1	272.2	283.8	288.1	330.5
Real estate, renting and business activities	128.1	141.7	166.3	204.7	209.6	201.1	218.3
Imputed rent of own occupied dwellings	100.6	101.5	101.7	107.2	110.6	113.7	116.7
Public administration	109.7	102.8	100.4	116.3	127.9	129.4	130.4

Education	101.8	115.9	129.8	142.1	160.8	168.4	172.3
Health and social work	104.2	112.1	129.4	142.8	152.6	165.8	171.0
Other community, social and personal service activities	106.5	126.0	135.0	167.4	170.0	147.9	163.3
Private households employing domestic staff and undifferentiated production activities of households for own use	120.5	97.8	106.2	114.1	120.7	124.0	135.8
Financial Intermediation Services Indirectly Measured (FISIM)	92.1	145.1	123.4	175.8	222.1	219.8	240.9
GDP at basic prices	105.6	116.6	127.8	142.6	146.3	140.4	150.5
Taxes on products	108.3	109.5	117.2	137.4	138.1	135.7	137.5
Subsidies on products	99.2	99.7	88.8	94.5	102.3	106.5	111.0
GDP at market prices	105.9	116.0	126.9	142.6	145.9	140.4	149.3
GDP deflator	108.4	117.0	126.9	139.2	152.7	149.6	162.6

Source: Geostat

Here, just like in other sectors of the economy, the Government vision is that the private investment should be the driving force for the sector development. However, it turns out that the hindrances listed below have proven to be important factors constraining private initiative and investment inflows.

Firstly, there is a large portion of population involved in subsistence farming, without having any special education or skills to run agriculture as a business. Only minor part of rural population is involved in agriculture as a business (no precise statistical data is available).

Another factor, hindering development of Georgian agriculture is high degree of land fragmentation in the country, where the arable land is almost completely (99.4%) split into plots of less than 1 hectare (circa 4 million plots). Such a fragmented ownership structure is a legacy of the reform undertaken in 1992, which privatized collective farms. As a result, large collective farms were dismantled and livestock was distributed to small and peasant households. 99.6% of livestock is held by families and the ownership structure is fragmented. The share of livestock held by agricultural enterprises is only 0.4 percent.

It is noteworthy, that no tendency of moving towards land co-ownership practices is observed (which would be regarded as the private sector trying to overcome this problem), mainly, due to the recent unfavorable experience of common and shared ownership during the communist times.

In fact, the majority of population involved in subsistence farming has failed either to increase their productivity in agriculture, or to shift in other sectors, due to the lack of relevant qualification and skills, and subsequently arising difficulties to attract funding.

Another constraint to agricultural sector development is the seasonality of both, production and consumption. Lack of storage facilities make it difficult to provide uninterrupted supply of fruits and vegetables to both local and international markets. In addition, this very reason, also poses certain food-security risk on the country, as in certain periods of the year Georgia becomes to a larger extent import-dependent on a wide range of agricultural products although there is local capacity to produce them in sufficient quantities. This occurrence can be aggravated by the increase of global food prices⁵ observed lately the world-over. In Georgia's case the food price rising poses a serious risk for the population, especially to its most vulnerable part. The latest food price increase in Georgia, caused by the global increase of the food prices inter-alia triggered inflation rate increase. It is noteworthy that most common consumption pattern in Georgia includes those very products, prices on which have risen globally such as meat, oil, sugar, and cereal.⁶

Another issue, briefly mentioned above, is the lack of necessary qualification of the people involved in agriculture, which hinders them from both, developing their production into business, as well as enhancing their production practices and capacities. This has also been indicated at the meeting by the Core Team with business representatives, who complained of the shortage of relevantly qualified human capital, which would be able to learn and apply the latest scientific and technological achievements.

At a substantial level, the quality of secondary road infrastructure also affects the agri-production, in terms of increasing the transportation costs both of products and human resources between production sources and the final markets. The regional infrastructure is also critical in order to facilitate integration of small farmers and those involved in subsistence farming. According to the village infrastructure survey, conducted by the Geostat (National Statistics Office of Georgia) under the support of the MCC first compact, transportation facilities and road development was named by the highest portion of respondents, namely 33,1%, as a first priority to be developed in the countryside (with 53.8% of respondents naming it as 1st, 2nd or 3rd priority).

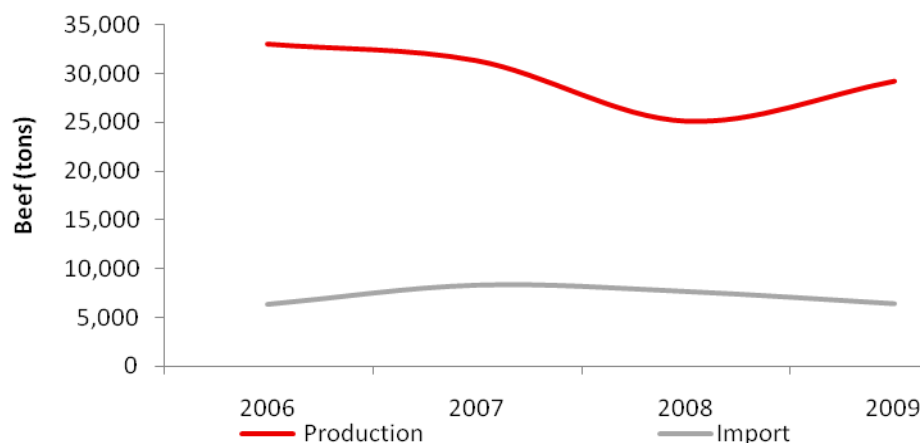
Besides road infrastructure, insufficiently developed irrigation facilities have to be mentioned as a reason for hindering agriculture development. Although a certain level of resources, both domestic and foreign, have been invested in this area, substantial effort still needs to be undertaken. In the short term perspective government continues to invest in water and irrigation infrastructure, whereas in medium and longer term privatization and public private partnership schemes are envisaged.

The Government has identified existing challenges related to agriculture development and has undertaken efforts to mitigate the problem, above all through promoting private investment in agriculture. Certain success in this regard has been achieved. For instance, lately, a tendency of increasing local production and thus substituting import has been observed. The Charts below (Charts 8, 9, 10) illustrate the import and export situation on the markets of some most commonly consumed agriculture products.

⁵ 'Food prices around the world surged to a new historic peak in January (2011), for the seventh consecutive month, the United Nations Food and Agriculture Organization (FAO) reported today, adding that the prices are not likely to decline in the months ahead.', February 3, 2011, Global food prices rise to new highs, not expected to fall in coming months – UN, UN News Centre, <http://www.un.org/apps/news/story.asp?Cr=fao&Cr1=food&NewsID=37455>

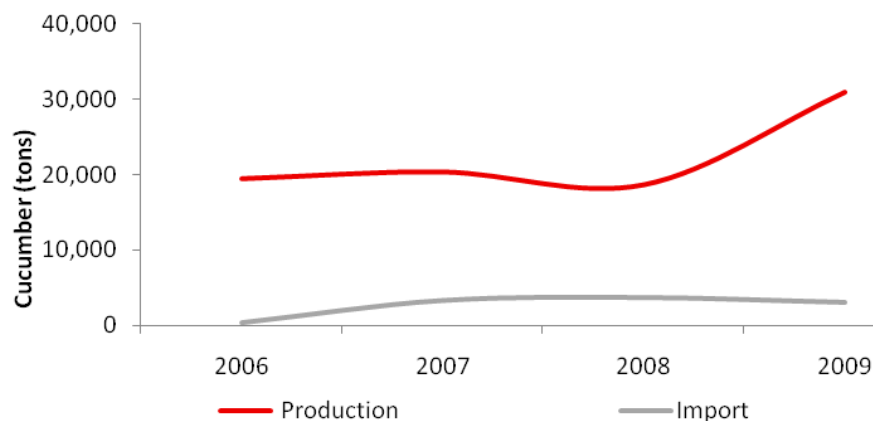
⁶ Food and Agriculture Organization Food Price Index - <http://www.fao.org/worldfoodsituation/wfs-home/foodpricesindex/en/>

Chart 8. Beef Production and Import Volumes in Georgia 2006-2009



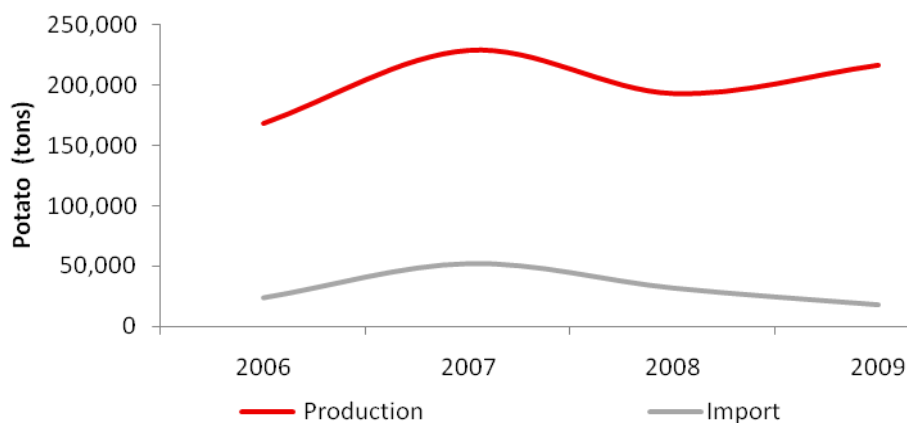
Source: Geostat

Chart 9. Cucumber Production and Import Volumes in Georgia 2006-2009



Source: Geostat

Chart 10. Potato Production and Import Volumes in Georgia 2006-2009



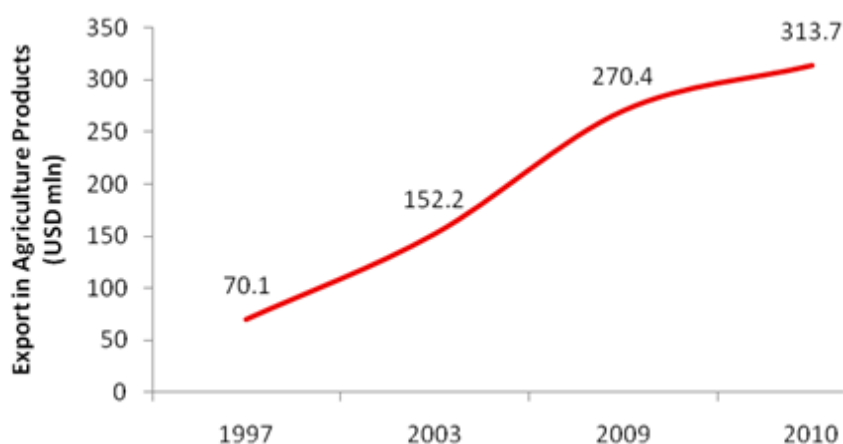
Source: Geostat

Lately, several sizable private investments have been made in the agricultural sector demonstrating increasing interest of businesses. A number of food business companies were created, which produce according to international standards and target both local and foreign markets.

It should also be noted that the sector is undergoing a reform related to the introduction of food safety official control mechanisms. From July 2010 food safety official control covers food business operators oriented towards export to the European Union. Starting from 2011, inspections and traceability control covers all other food business operators, including high risk, feed and other companies. Introduction of such a system is aimed at increasing the level of food safety in the country as well as competitiveness of Georgian food business operators on global markets through introduction of international standards. Recently, a comprehensive strategy on food safety has been approved by the Government of Georgia, which, *inter-alia*, sets strategic priorities for the development of the agricultural sector of Georgia.

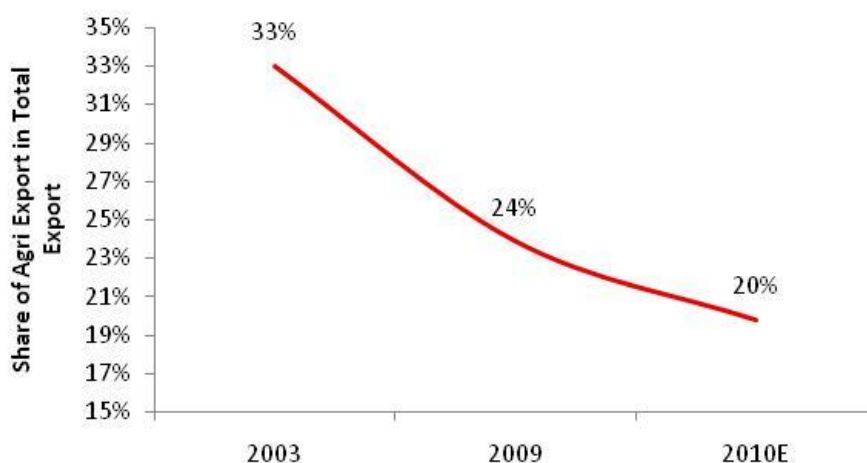
Another positive sign is that irrespective of the sector share in GDP declining the export of agricultural products is gradually increasing and diversifying (Chart 11). Georgia's agricultural export more than doubled between 2003 and 2010, notwithstanding the complete agriculture trade embargo imposed by Georgia's top trade partner – Russia in 2005, which is still in place. Previously Russia was the main foreign market for Georgia's agri production. In 2010 among 10 major export agricultural products of Georgia were: nuts (20% in total agri export), alcoholic beverages other than wine (17% in total agri export), wine (13% in total agri export) mineral and still waters (10% in total agri export), live cattle (5% in total agri export). Among main agricultural export products of Georgia were also citruses, non-alcoholic beverages, sheep and wheat. Among new export products are: fish, greens, cabbage and spices. Nevertheless, agri export, as a share of total export has been decreasing in recent years. (Chart 12)

Chart 11. Export in Agriculture Products of Georgia 1997-2010



Source: Geostat

Chart 12. Share of Agricultural Export in Total Export of Georgia 2003-2010E



Source: Geostat

It is through promoting increased private investment in agriculture, processing enterprises and storage facilities that the Government is aiming to overcome difficulties in the sector. In its efforts to reform the sector and make it attractive for investment, the Government is cautious of the threat arising from rapid modernization of the sector, which might pose risk to the interests of socially vulnerable population. Those who are earning their lives through small and primitive farming may face the threat of being left unemployed, should more advanced production technologies enter the Georgian agricultural sector, without small subsistence farmers having enough resources and capacity to adapt to the changing environment.

Overview of the Social and Healthcare Sector

Georgia's improved economic performance and growth had a certain positive impact on social development in the country, but certain parts of population failed to fully and adequately benefit from growth and development. As a result, overall social situation in the country remains a challenge for further development.

The main social challenge for Georgia's development is poverty alleviation. Government's long term economic strategy is based on the assumption that broad based economic growth will contribute to poverty reduction. At the same time, it is obvious that in the short to medium term, most vulnerable and poor parts of population have not benefited from impressive growth record of Georgia. Taking this into account, Government of Georgia designed special social programs aimed at improving the situation of the poor.

In order to address the existing problems regarding the poverty level in Georgia, in 2005 the Government introduced a means-testing system to increase the effectiveness of social assistance programs for the poor. With this purpose more than 500 000 applicant households have undergone the assessment process. The so-called "rating score" – a comprehensive measure of needs of the assessed households – has been assigned to each of them. Based on the rating score, households were qualified for a number of publicly funded benefits, including cash allowances to lift them above the subsistence minimum level and health insurance.

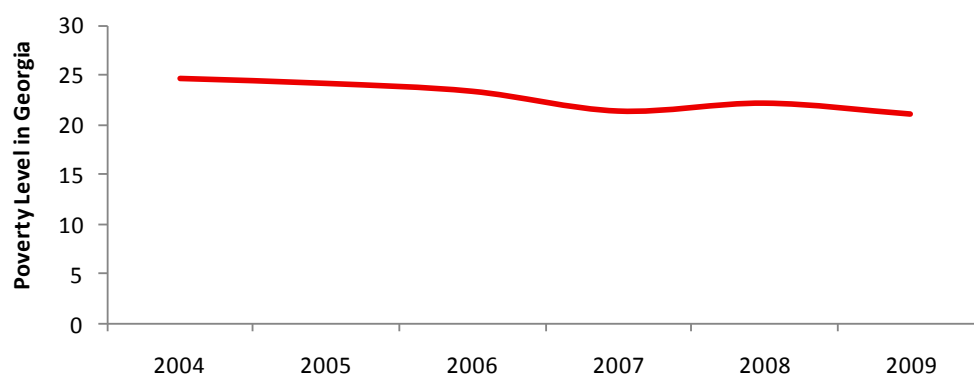
According to the information of the Ministry of Labor, Health and Social Affairs of Georgia, as of December 2010, the number of poor households receiving cash allowance equaled to 144 877 (408 367 individuals or circa 9% of households). The total budgetary allocation for the subsistence subsidy increased more than 3 times in 2007-2010.

In addition to cash allowances, state funded healthcare insurance packages were developed for those below the poverty line, which significantly increased access to health care services. According to the data of the Ministry of Labor, Health and Social Affairs of Georgia, as of December 2010, a publicly funded health insurance was granted to 289 275 households (885 325 individuals). The total budgetary allocation for health insurance of the poor increased 3 times in 2007-2010 and reached 159 445.6 mln GEL in 2010. In 2010, 1.5 mln people (34% of the country's population) were covered by the state-funded or voluntary insurance plans, which is approximately 3 times more than the same indicator in 2007.

The above measures, coupled with the impact of economic growth, helped reduce poverty in the country. Overall poverty rate in Georgia decreased from 24.6% in 2004 to 21.0% in 2009 (Chart 13).

Chart 13. Poverty Level in Georgia in % (with respect to 60 % of the mean consumption)

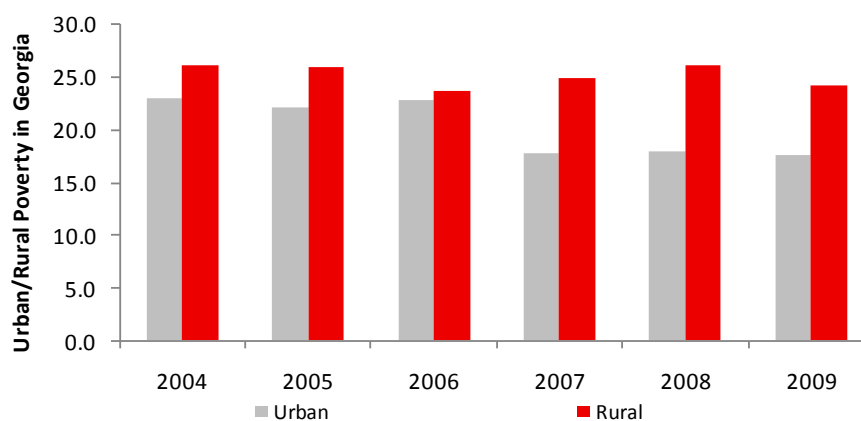
2004-2009



Source: Geostat

Although poverty level is slowly but gradually decreasing, one of the most important issues of concern remains existing disparities between urban and rural areas. This fact can be clearly observed by analyzing the level of poverty in urban and rural areas. The Chart 14 below shows that rural poverty in Georgia is higher than urban poverty.

Chart 14. Urban/Rural Poverty in Georgia 2004-2009



Source: Geostat

As it can be concluded from the presented data, reduction of overall poverty in the country is mainly caused by reduction of urban poverty, which reduced from 23.0% in 2004 to 17.6% in 2009, while the rural poverty reduced only by 1.9 % points from 26.2% in 2004 to 24.3% in 2009.

Besides, most recent (March, 2011) World Bank Report “Poverty Dynamics since the Rose Revolution”, which was presented as a draft to the Government of Georgia outlines that in 2003-2007 years period the gap between urban and rural poverty increased and now 64% of Georgia’s poor live in rural areas. Higher level of rural poverty can be explained by several reasons, such as low level of infrastructure development in the regions, lack of skilled-workers and subsequently lack of opportunities of formal employment.

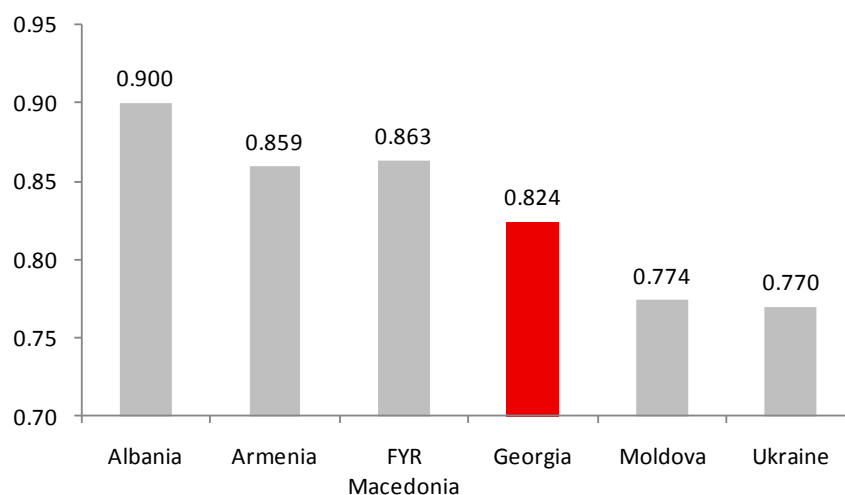
The phenomena of poverty and unemployment are closely interlinked in Georgia. Creating employment opportunities through private sector development will help alleviate poverty in the regions of Georgia. Apart from addressing institutional and regulatory matters and creating favorable environment for private sector development, the state needs to encourage development of regional infrastructure in order to facilitate economic and social integration of regional population with the rest of the country and create improved education opportunities for the poor to increase their competitiveness on the labor market.

As for the situation in Georgia’s healthcare sector, it clearly requires improvement. The system suffered from soviet legacy over the years, which resulted in poor administration and technical inefficiencies. The hospital facilities in Georgia were neither efficient nor able to provide quality treatment.

The Core Team particularly looked at the health indicator of the Human Development Index (HDI) in The Human Development Report 2010. According to the report, Human Development Index (HDI) is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. The HDI is the geometric mean of normalized indices measuring achievements in each dimension. The life expectancy index itself is the dimension index of life expectancy at birth indicator, calculated based on the minimum and maximum values. There is positive correlation between life expectancy index and HDI (Human Development Report 2010).

As the Chart 15 below demonstrates, Georgia’s performance in this indicator is third worst among the benchmark countries.

Chart 15. HDI, Health indicator for Georgia and the Benchmark Countries (2010)

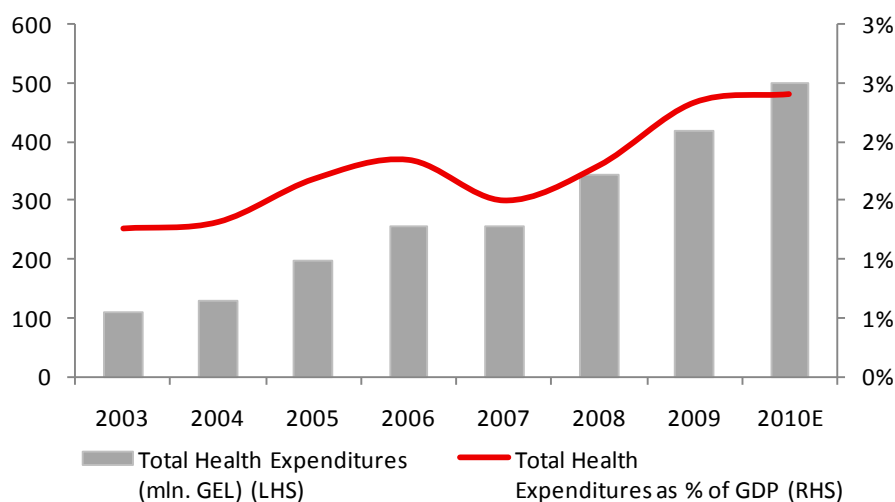


Source: UN Human Development Report

In 2003, the Government of Georgia started primary healthcare reform to improve quality and affordability of healthcare services. The main aim of health reforms in Georgia is the improvement of health quality in the country, increased access of the population to health care services through the effective health insurance system and rehabilitation and construction of hospitals.

Healthcare related reforms led to significant increase in the amount of public expenditures on health. In 2010, the latter equaled approximately 280 mln USD, which is 3 times more compared to 2003. Subsequently, share of public expenditures in GDP increased from 1.3% in 2003 to approximately 2.4% in 2010 (see Chart 16).

Chart 16. Georgia’s Health Expenditures 2003-2010E



Source: Ministry of Labor, Health and Social Affairs of Georgia

Nowadays, one of the main directions of the healthcare reform in Georgia is the construction and rehabilitation of hospital sector infrastructure. This is to maintain adequate capacity for universal hospital service accessibility in all regions of the country. Significant efforts are being undertaken in this regard jointly by the Government, private sector and donor organizations.

Besides the construction and rehabilitation of hospitals in Georgia, the issue of crucial importance is increasing access to health care system for the population. In this regard, the most important step is the development of health insurance system. Much has been done in this regard in the country. As mentioned above, in 2010, 1.5 mln people (34% of the country’s population) were covered by the state-funded or voluntary insurance plans, which is approximately 3 times more than the same indicator in 2007. State-funded healthcare schemes cover poor parts of Georgia’s population, in order to guarantee their access to basic healthcare services. Government strategy in the hospital sector is to attract private investment and thus upgrade infrastructure and increase efficiency of healthcare services.

Summary

The brief overview of the recent years' economic situation presented above shows how fragile and short-lived the achievements and successes might be against external shocks, and how important it is to constantly work on refinement of the policies pursued. It is in this spirit that reform and development plans remain high on the Government's agenda en route to realizing the medium-and long term development objectives.

To encapsulate the vision of the Government vis-à-vis Georgia's development path, it is that the main driver of growth and development should be private sector and Foreign Direct Investment (FDI) inflows. In this regard, Georgia tries to fully utilize its potential and strengthen the competitive advantage, through positioning itself as a transit and transportation hub for the region and a favorable location for local and foreign private sector development. As a complementary factor to these needs, along with the favorable business environment, low taxation regime and minimum bureaucracy, ensuring the availability of well-educated and highly-skilled work-force is also a priority for the Government.

Throughout the reform process of the recent years, the Government has been trying to identify and mitigate possible constraints and deficiencies that are or might arise, and there is a full recognition of the fact that a lot yet remains to be done.

There is a substantial part of the population of Georgia which cannot up to now fully benefit from the progress of the recent years. This is a multi-dimensional and fundamental problem and all the actions and policies of the Government are directly or indirectly targeted at contributing to its solution. In order to tackle this problem the Government follows the logic which is mainly two-fold. Firstly, a number of steps are taken to even further improve entrepreneurial climate in the country, in order to make it possible for the most vulnerable part of the population to get involved in the economic and business activities, or otherwise improve their welfare, and secondly special, means-based social assistance programs have been elaborated, which would assist those who are the most vulnerable.

It should be mentioned, that the Government of Georgia highly values the substantial results delivered by the projects under the MCC first compact, and the hope is that the opportunities arisen from the possible second compact would add on these efforts, and would be in line with the goals and plans of the Government, which, as mentioned earlier, fully coincide with the rationale behind the MCC financing which is to foster and to contribute to the private sector growth. The Government does not intend to propose projects in all areas identified as constraints by the CA, as tackling problems in some of the areas are expected to be within the existing plans and pool of resources at the Government's disposal. The Government of Georgia sees the MCC financing to be channeled towards medium-term strategic projects, funding for which have not yet been completely secured by the Government.

It is in this very spirit the CA team has embarked on the growth-diagnostics exercise, which is entitled to complement the Government's vision on the main constraints to the growth and hindrances to development of the country.

Growth Diagnostics

The Growth Diagnostics exercise was undertaken following the MCC guidelines and according to the methodology elaborated at the Harvard University's Kennedy School of Government, by Professors, Rodrick, Hausmann, and Velasco.

The idea behind the approach is to analyze economic dynamics, and define whether, or to what extent its current status hinders private investment and entrepreneurship, which in its turn, is regarded as almost synonymous to economic growth. The rationale is to single out those sectors which are constraining potential for growth of the economy, in order to focus the Governments relevant efforts on the priority areas.

It is noteworthy that the vision of the Government of Georgia has been the same and it has been prioritizing creation of pro-business environment from the first months, following the 2003 Rose Revolution. The government has been constantly monitoring the situation and undertaking similar (but not this very type of) analysis in order to evaluate and improve the entrepreneurial climate in the country. Thus, the government has already identified constraints to growth on its own and has been addressing them in due course. In this regard this exercise at this point of time presents another opportunity for the government to re-check the current status of the economy and its development prospects.

As a first step, the growth diagnostics tree (see the attachment) for Georgia was constructed, through taking into account the basic model provided in the MCC guidance documents and respective literature.

As a result of the analysis, the following list of constraints has been identified which are divided here into 'binding constraint', 'non-binding constraint' and 'non-constraint' categories according to the Constraints Analysis methodology.

Categories of Constraints	Factors
Non-Constraints	<ul style="list-style-type: none"> <li data-bbox="416 1010 1315 1211">• Geography is more an opportunity than a constraint for growth in the country, as Georgia's geographic location offers immense opportunities for the country's transit potential, tourism development and rich hydro resources, which provide for energy generation capacity. <li data-bbox="416 1218 1315 1509">• Macro Risks do not constitute a constraint for growth in Georgia, taking into consideration Georgia's better performance compared to the benchmark countries across a number of factors. What is more, the Government's existing track-record of conducting prudent macroeconomic policies, resilience of the economy in the face of the external shocks and the demonstrated ability to manage all the related risks, serve as an additional proof that macroeconomic environment in Georgia does not hinder the country's development. <li data-bbox="416 1516 1315 1785">• Micro Risks Georgia's entrepreneurial climate is widely regarded as rather favorable for business, which is evidenced by high volumes of FDI inflows in the country. In addition, various global ratings and assessments name Georgia among the best places in the world to do business. This is especially evident when compared with the benchmark countries. Thus Georgia's microeconomic environment is not a constraint for growth. <li data-bbox="416 1792 1315 1986">• Energy sector. The reforms conducted in the recent years and the achievements attained, such as infrastructure development, diversification of import sources and export destinations, increasing generation capacity and stable energy supply lead to the assumption that energy sector of Georgia is not a constraint for development.

	<ul style="list-style-type: none"> • Telecommunications is not a constraint for growth in Georgia, considering <i>inter-alia</i> the rapid growth rates of the sector, increasing competition and availability of the latest technologies in the country.
Constraints	<ul style="list-style-type: none"> • Water Supply Infrastructure is a constraint for growth in Georgia, but not a binding one. The development of irrigation systems in the country remains a problem, while the access to clean water for the population improved significantly.
	<ul style="list-style-type: none"> • Innovations constitute a constraint for growth, taking into account the low level of innovation absorption by companies, low expenses in R&D by private sector, leading to a low level of export sophistication. The limited innovation capacity and the lack of the technology spillover potential are also tied to the low level of skills of the labor force, which, in its turn, also constitutes a constraint for growth (as described below).
	<ul style="list-style-type: none"> • Access to Finance remains a constraint in the country, because of high interest rates (majorly due to high country risk associated with the Russian threat), although Georgia's banking sector is one of the most sophisticated in the region and across the benchmark countries.
Binding Constraints	<ul style="list-style-type: none"> • Human Capital in Georgia is a binding constraint due to the difficulties of getting high-quality education in Georgia and the low qualification of the labor force, largely resulting thereof. This, in turn, accounts for the relatively high unemployment rate (labour market mismatch). The findings of the analysis are complemented by the assessments of the business sector, the government and relevant international organizations, as well as by the results of a number of local and international surveys.
	<ul style="list-style-type: none"> • Roads infrastructure continues to be a binding constraint for growth in Georgia, given the low quality of secondary roads and particularly poor condition of the road infrastructure in the regional (mountainous) areas, because of tourism and transit being among the main development objectives of the country. The underdeveloped roads infrastructure is closely intertwined with a number of problems for the local population, such as social and economic integration of the regional population into the economic processes, access to education, healthcare and other services. Improved roads infrastructure would also result to increased earning opportunities for the local population.

Following the methodology of the Growth Diagnostics, Georgia's performance was judged against a pool of benchmark countries, selected based on a number of criteria. These criteria are: shared and resembling past, comparable economic performance, among others determined by similar Soviet legacy, regional proximity and thus comparable development environment, and the same income group, namely lower middle income as characterized by the World Bank. The team selected the following countries for the purpose of this analysis: Albania, Macedonia, Ukraine, Armenia and Moldova.

All of these countries are situated relatively close to each other and broadly, face resembling immediate international economic environment. All of the countries but Ukraine are economies of relatively similar size and none of them are rich with any significant amounts of natural resources. All but Albania and Macedonia are lower middle income countries⁷. These very countries share common past under the Soviet rule and they have inherited Soviet-type inefficient planning economy legacy.

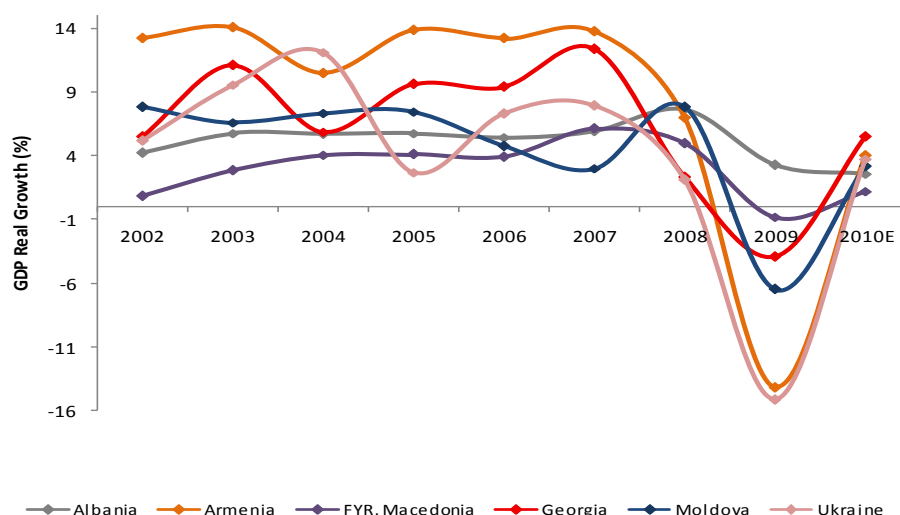
Throughout the recent history all countries in the selected pool faced largely the same challenges related to economic development. However, there is one factor that makes Georgia a special case and thus different from the benchmark countries. It is namely its relations with the northern neighbor – the Russian Federation. It is out of scope of the Growth Diagnostics methodology to address security related risks, and therefore the Core Team has not addressed them in detail in the present analysis, and/or included security in the list of constraints. It would entail analysis of political and security aspects and therefore overburden this document of strictly economic nature. Moreover, these issues cannot be addressed through economic mechanisms and are therefore out of scope of the present document.

However, it has to be mentioned that occupation of 20% of Georgia's territory by Russia as a result of the 2008 August war does pose a security risk to private sector development and thus economic growth of Georgia. This factor creates a substantial sense of instability around Georgia, has a negative impact on investor and consumer confidence and increases the level of risk associated with the country, reflected in the risk premium to all the investment in the country. Thus, it hinders among others FDI, which is regarded to be one of the main locomotives for growth and development of the economy.

To situate the selected countries with respect of their level of economic development, the graph 17 below shows the GDP growth rates of Georgia and the benchmark countries in the last several years, in period between 2002 and 2010. More comprehensive analysis of the countries' Gross Domestic Product rate evolution and other relevant economic indicators is presented in relevant chapters below.

⁷ According to the World Bank (<http://data.worldbank.org/about/country-classifications/country-and-lending-groups>)

Chart 17. GDP Real Growth of Georgia and the Benchmark Countries 2002-2010E



Source: IMF

1. Is it Low Returns to Economic Activity?

1.1. Is it Low Social Returns?

1.1.1. Is it Natural Capital/Geography?

In what follows, Georgia's geography is analyzed with the aim to check whether it constitutes a constraint to the country's growth and development. The findings, as they show below, indicate that the country's location, geography, natural resources and transportation links are more of an advantage⁸, bearing tremendous potential for the country's development. However, insufficiently developed infrastructure, in particular with a view of the regional transportation and transit role of Georgia, were revealed to be serious constraints for development.

General Overview of Geography

Georgia is a small country, situated on the southern slope of the Caucasus mountain grid, to the east of the Black Sea. It borders with Russia to the north, Azerbaijan to the East and south-east, Armenia to the south, and Turkey to the south-west. The length of coastal zone is 310 km; the length of land border is about 2148 km.

Land area of Georgia is 6949, 4 thousand hectares (ha) and the area of territorial water is 679,0 thousand ha. As a result, the whole area of the country is determined to be 7628,4 thousand ha.

Georgia is rich with water resources. There are 26060 rivers in the country and their total length is about 59 thousand kilometers. There are a lot of thermal and mineral water springs and many natural and mechanic water reservoirs. Important supplies of ground water are in limestone horizons on the territory of Caucasus.

Forest areas occupy 3005.3 thousand ha while pure forestry accounts for 2772.4 ha which is 40% of the country's territory. 97% (2915.8 ha) of Georgian forestry is situated on mountain slopes, and the remaining 3% is low-lying and flood plain forest mostly in western of Georgia. The country does not have any significant deposits of mineral resources or hydrocarbons.

⁸This analysis obviously does not look at Georgia's geographic location from the point of view of neighbouring to Russia, which, as already mentioned earlier, is the most severely binding constraint to Georgia's peaceful and secure sustainable development.

Generally, Georgia's geography offers a substantial potential for tourism and transit development. Abundance of water resources contributes to renewable energy generation potential and creates room for improving irrigation situation. The geography and climate a certain risk of climate-associated diseases, but they are effectively mitigated. According to the survey 'Capital and Conflict' conducted in February-June 2010, surveying foreign-owned firms in Georgia, the country's geographic location was named as one of the most positive factors attracting foreign investment (Capital and Conflict: Georgia (2011)).

Transit Potential and Terrain Endowment

Georgia's geographic location offers tremendous transit potential to the country. Important transportation routes for goods and hydrocarbons from Asia to Europe pass through Georgia. Increasing volumes of hydrocarbons are delivered to the countries of the region, through the oil and gas pipelines, or railroads crossing Georgia. It is expected that in the upcoming decades the country's position as a regional transit hub will become increasingly important. Transformation of Georgia into a reliable and sustainable transit and transport corridor and regional hub is one of the top priorities of the Government. To achieve this goal, the Government has invested heavily in creation and rehabilitation of necessary physical infrastructure.

Hereby, it has to be mentioned specifically that the terrain endowment of Georgia contains certain risks and constraints if no proper infrastructure is created. The diverse climate and terrain, and abundance of high mountains make certain parts of the country difficult to access in winter times, posing a serious challenge to regional development. Large portion of Georgia's territory is mountainous areas (circa 38000 square km or more than 50% of the territory is on the level above 1000 meters). This is connected to a number of existential problems for the local population. In particular, the deficiencies of the ground infrastructure in mountainous regions are a source of serious problems for the population, including in terms of access to basic services such as healthcare and education. The problems are especially acute in certain periods of the year, with the climatic conditions becoming more severe. This problem has long been identified by the Government of Georgia, and special treatment regimes have been designed for these geographic areas. Even bespoke legislation has been elaborated vis-à-vis the population in these areas. In this regard, the government puts special emphasis on the mountainous parts of the country, heavily investing in infrastructure development.

Climate Associated Diseases

With regard to climate associated diseases, Georgia's position is relatively good in the region, without any serious risks associated with malaria or tuberculosis.

The majority of population lives on territories, where risk of malaria transmission is very high, and there had been certain incidence of the disease on early 2000. But due to the active efforts by healthcare authorities of Georgia, the malaria incidence has been reduced from 474 in 2002 to 1 case in 2009, with all local transmission being Plasmodium Vivax.

As regards the tuberculosis, the disease is relatively uncommon in the country - around 6000 incidence per annum. The situation is under full control of the country's health authorities, and there is no risk of any serious spread of the disease. There is also no climate associated occurrence of the tuberculosis in Georgia.

Transportation Routes and Links to Markets

Georgia's geographic position makes it a natural hub for trade and transit routes. The country is located on the east coast of the Black Sea, and borders Russia to the north, Azerbaijan to the East and south-east, Armenia to the south, and Turkey to the south-west. The Black Sea ports of Georgia, with the relevant transport infrastructure in place make the country one of the most convenient means for transporting goods between Europe and Central Asia. For hydrocarbon transit, the web of pipelines is constructed and operating in Georgia.

The Government of Georgia places special emphasis on the build-up of relevant road and railroad infrastructure to offer high quality full service opportunities to the exporters and importers of the region. Throughout the last several years major infrastructure improvement projects have been undertaken: the railroad central line rehabilitation is underway and is to be completed by 2013, the construction of the international standard highway across the country from the sea-shore to the Azerbaijani border is underway, a number of roads connecting the country with Armenia and Turkey have been being constructed, existing port terminals have been rehabilitated by their private owners and one new port has been built.

With its pro-entrepreneurial business environment, Georgia positions itself as a favorable foothold location for international businesses targeting Central Asian or European markets. Many international companies have already utilized this opportunity and many more are looking at it. Especially for this kind of export-oriented businesses Georgian government has introduced legislation on special economic zones, which allows producers to import raw materials for production, produce tax free and exports final products from Georgia. Currently there are two such zones in Georgia – one near the second largest city of Kutaisi, and the second in Poti, adjacent to the Black Sea port facilities.

The infrastructure rebuilding activities are complemented by the liberal trade policies pursued by Georgia (as described above). The country has eliminated almost all trade barriers and enjoys liberal trade regimes with all of its neighbors and main trade partners. Preparations are underway for an FTA with the European Union.

All this has been positively reflected on Georgia's trade turnover and on diversification of export by products as well as by export markets.

To summarize, with the current liberal trade and regulatory policies pursued by the country, and its geographic location, the ongoing build-up of infrastructure is of crucial importance for increasing the country's trade potential and is directly linked with the economic growth potential of Georgia. Although a number of important accomplishments have been made lately, a lot still remains to be done, in particular to overcome existing constraints and also fully utilize Georgia's transport and transit potential. A long-term goal is to create infrastructure capable to satisfy the needs of the wider region. In order to achieve this ambitious goal, large amounts of investment are still required to be channeled in Georgia's infrastructure (these aspects are discussed in detail in the infrastructure part below).

Natural Capital Conclusion

To summarize, Georgia's geographic location offers immense opportunities for the country's development but contains certain challenges as well, which need to be addressed.

On the one hand, Georgia's geography offers far more opportunities than presented just by its location. On top of the country's transit potential stemming from it being situated on the crossroads of Europe and Central Asia, Georgia has diverse nature offering tremendous prospects for tourism development and rich hydro resources which provide for energy generation capacity. Coupled with the liberal trade regimes with all its neighbors and trading partners, it can be concluded, that Georgia's geography is more of an opportunity, than a constraint.

On the other hand, to fully utilize its potential related to favorable geographic location, Georgia needs to consistently address its infrastructure need, both in terms of development in the country's regions and in view of further increasing its transit and transport related attractiveness. This requires continued public investment in physical infrastructure, which in turn will serve as an incentive for private sector development and growth and help create enabling environment. Infrastructure related issues are addressed in detail in relevant parts of the analysis below.

1.1.2. Is it Human Capital?

Human capital is one of the criteria determining investment attractiveness of a market. In recent years Georgia has intensively addressed various business environment related factors influencing the level of private investment, both local and foreign. Whereas in areas such as taxes, licensing, fight against corruption or customs it has been relatively successful, improvement of the quality of human capital is still lagging behind. The part which follows analyzes human capital in Georgia, and finds that it represents a binding constraint for growth and development. Detailed analysis of the Georgian labor market, employment dynamics, education system, relevant cross-country comparisons and quantitative research results reveals that the locally available workforce is of a low relevant qualification and does not meet demands of the job market. Insufficient quality of human capital hinders development, among others through creating shadow costs for private sector as employer, the state and potential employed persons such as students.

The Core Team searched for the root of the problem and discovered that low quality of higher education is the main reason behind the insufficient qualification and skills of the available human capital in Georgia.

1.1.2.1. Lack of Skilled Labor

1.1.2.1.1. Situation on the Labor Market and Mismatch of Supply and Demand

Although Georgian economy experienced overall impressive growth record since 2004 (see above) driven mainly by private sector, this growth was largely jobless, failing to improve unemployment situation in the country.

The unemployment rate in Georgia had been decreasing only to a limited extent in the pre-crisis years starting from 2005. Following the double shock on the economy by the global recession and the Russian invasion of 2008 the unemployment rate increased up to 16.9% in 2009 (see Table 4).

Table 4. Employment Statistics of Georgia 2003-2009

	2003	2004	2005	2006	2007	2008	2009
Active population (labour force), total	2050.8	2041.0	2023.9	2021.8	1965.3	1917.8	1991.8
Employed	1814.9	1783.3	1744.6	1747.3	1704.3	1601.9	1656.1

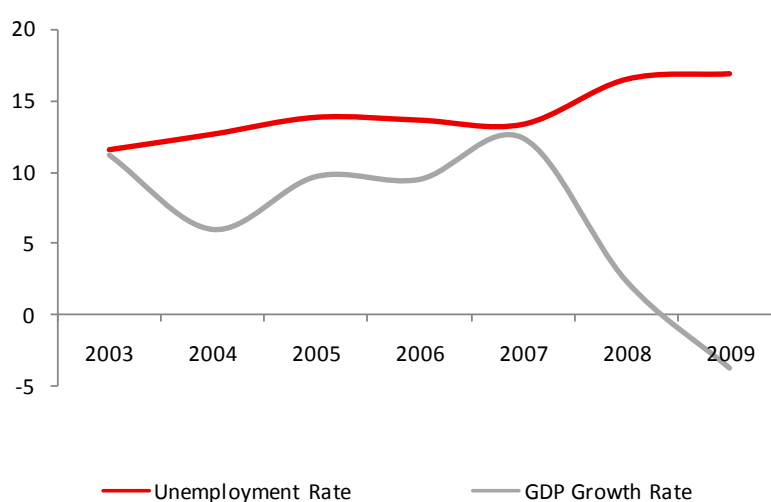
Hired	618.5	600.9	600.5	603.9	625.4	572.4	596.0
Self-employed	1195.2	1180.8	1143.3	1141.6	1078.8	1028.5	1059.0
Not-identified worker	1.3	1.6	0.8	1.8	0.1	1.1	1.2
Unemployed	235.9	257.6	279.3	274.5	261.0	315.8	335.6
Population outside labor force	1048.4	1105.9	1136.1	1228.0	1138.6	1145.2	1139.3
Unemployment rate (percentage)	11.5	12.6	13.8	13.6	13.3	16.5	16.9
Economic activity rate (percentage)	66.2	64.9	64.0	62.2	63.3	62.6	63.6
Employment rate (percentage)	58.6	56.7	55.2	53.8	54.9	52.3	52.9

Source: Geostat

The reasons for this jobless nature of growth are multiple, some of them being of punctual, others of structural nature.

One of the most important but rather punctual, i.e, one off, reasons for jobless growth was the deep and comprehensive civil service reform launched in 2004. It was aimed at optimization and downsizing of the inefficient, soviet-style civil service and increasing its competitiveness with regard to other sectors through increased salaries. This *inter-alia* resulted in substantial reduction of the civil service and abolishing of nominal employment practices⁹. By 2006 the number of civil servants was halved from circa 120000 to 60000. The fact that this did not translate into the dramatic boost of unemployment meant that the negative effect was surpassed by the new jobs created in the private sector. However, overall employment figures were not substantially improved, and unemployment even increased in 2004 and 2005 (see the Table above). The Chart 18 below more vividly presents a relation of GDP growth and unemployment rates.

Chart 18. GDP Growth vs. Unemployment 2003-2009



Source: Geostat

⁹ Under the nominal employment for this research we understand a practice commonly used in Soviet and post-Soviet times, when people have been listed to be employed in a state-owned enterprise or organization, with extremely low or no salary, without actually being employed.

Among the reasons for unemployment in the country, there is a very specific one that accounted for the high unemployment rate of Georgia and turned out relatively difficult to address. It is the large number of internally displaced persons. They have been ousted from their places of residence in Abkhazia and Tskhinvali Region and their everyday life has been disrupted as a result of war and ethnic cleansing in respective breakaway regions in the first half of the 1990s. Due to the reasons that the majority of them either do not have a higher education qualification, or those they possess are of a low standard, as well as for the reason that the employment of the majority of them had been linked to the land they owned – the large number of the displaced persons have encountered substantial problems in applying their skills on the current job market. Currently, this segment of the population is among the poorest in the country.

Another reason for jobless growth in Georgia is that the main growing sectors of the economy, which attracted highest level of investment turned out to be the least labor-intensive ones, such as finance, communications etc. This in turn had an impact on one of the main characteristics of the labor market evolution of Georgia in the recent years, namely the fact that the GDP growth rates of 2004-2008 failed to be fully reflected in the decrease of the unemployment rate.

Apart from this one off and/or specific reasons for the difficulty to reduce unemployment in the country, the most important reason of structural nature has to be mentioned and analyzed in greater detail. The latter is expressed in increased demand for qualified human resources by the private sector on the one hand, and inability of the existing labor force to provide supply of labor that would satisfy quality requirements of the employers.

The recent survey ‘Public Attitudes in Georgia’ conducted by the National Democratic Institute (NDI), published in March 2011, illustrated that unemployment is still number one concern for the population (59%), and 73% of population regard themselves unemployed. One of the most evident explanations for the latter figure is that large part of the population in Georgia is employed not according to their profession (qualification according to education), which makes them say that they are unemployed. This is a vivid illustration of the mismatch of supply and demand that exists on the labor market.

This mismatch becomes more evident with Georgia integrating into international markets and more international foreign firms with high human quality requirements entering the country. Generally, the tendency on the Georgian job market, which is identified by the private sector, the Government and is also confirmed by international expert assessments, is that the locally obtainable workforce or more specifically the workforce with local education is of a rather low qualification.

First of all the Core Team looked at the education level distribution statistics in Georgia (Table 5). According to the data of Georgian Statistics Service, circa 99% of population is literate. The statistics below show, that rather low portion of population – less than 27%, have higher education qualification.

Table 5. Population by Education Level¹⁰ 2009

Education Level		Share of Population
0	Illiterate	0.80%
1	Primary School (grades I-IV)	2.81%
2	Incomplete Secondary School (grades V-IX)	11.24%
3	Secondary School (grades IX-XI (XII ¹¹))	39.92%
4	Primary Professional (Vocational) Education	3.23%
5	Secondary (Full) Professional (Vocational) Education	15.16%
6	Higher Education	26.85%

Source: Geostat

Following the MCC recommendation, the Team also looked at employment statistics with regard to education (Table 6). The data shows that less than 58% of those having higher education degree are employed.

Table 6. Population Employment Status by Education 2009

Education Level		Unemployed	Employed
0	Illiterate	82.22%	17.78%
1	Primary School (grades I-IV)	62.18%	37.82%
2	Incomplete Secondary School (grades V-IX)	66.07%	33.93%
3	Secondary School (grades IX-XI (XII))	46.76%	53.24%
4	Primary Professional (Vocational) Education	30.01%	69.99%
5	Secondary (Full) Professional (Vocational) Education	41.67%	58.33%
6	Higher Education	42.18%	57.82%

Source: Geostat

¹⁰ Current grouping of population by education is somewhat outdated, as nowadays (since 2010) there is a different structure in the education system. The reason for presenting this grouping is that this is how the data is organized by the statistics office, as the data represents pre 2010 reality. Previously existing education system of Georgia did not clearly differentiate secondary and tertiary education. School years starting from grade 9, as well as vocational (professional) education received after the 9-th grade were regarded as secondary, although those graduating from vocational (professional) education institutions were not permitted to apply for higher education. (Please find below more detailed analysis of Vocational Education System).

¹¹ XII grade in the school was introduced in 2008

The Team also looked in the distribution of education levels within the employed and unemployed which illustrated that less than 30% of those employed have a higher education qualification and almost quarter of unemployed have graduated from a higher education institution.

Table 7. Population Education level by Employment Status

	0	1	2	3	4	5	6
Unemployed	1.39%	3.71%	15.76%	39.63%	2.05%	13.41%	24.04%
Employed	0.27%	2.01%	7.21%	40.19%	4.27%	16.71%	29.35%

Source: Geostat

In order to comprehensively grasp the situation on the Georgian labor market, following the MCC guidelines, the Core Team performed the Mincer regression. The latter establishes correlation between the market wage on the one hand and years of schooling and potential experience on the other.

The findings of the Mincer wage regression for the Georgian case illustrate that the independent variables, namely years of schooling, potential experience and square of potential experience used in the model explain only less than 5.7% at most of the changes of the market wage. Based on the findings it can be concluded that in Georgia the market wage level is determined mostly by factors other than years of schooling and potential experience. (Annex III.)

Having received this outcome, the Core Team made an assumption that it is the quality of education of an employee which matters with regard to the employment opportunities and wages, and not education as such. It was decided to draw on additional sources of information in order to cross-check the explanation.

To substantiate the above assumption and receive empirical feedback directly from relevant stakeholders, the MCC Core Team used two methods – focus groups with private sector and general population survey with a special emphasis on education. The first was aimed at receiving feedback by private sector as the main employer. The second was aimed at identifying the general feeling and priorities of the population, with a particular emphasis on the opinion of students and their parents.

The link between employment prospects and quality of human capital was clearly revealed by the population survey conducted for the purpose of this analysis at the Core Team's request in March 2011. It showed that more than 56% of the respondents see high quality education as the main factor defining employment prospects. Among parents of students the share of the same answer is even higher reaching 63%. The results also showed that the population includes the low quality of qualification (education) among the main hindering factors to the development of Georgian Economy.

The results of a focus group conducted on the Core Team's request revealed that the business clearly identified low qualification of the available workforce as one of the main problems on the Georgian job market. This sentiment was confirmed at the consultative meeting with the business sector representatives where the businessmen pointed out their dissatisfaction with the education level and skills of the available workforce. The focus group and the meeting showed the clear preference of the employers to hire Western graduates, especially on entry or mid positions, rather than those having qualifications from Georgian universities.¹² These sentiments are also backed by available statistics on the employment level of foreign graduates. Thus, according to the data by major entities running scholarship programmes in Georgia such as British Council (Chevening), IREX (Muskie), Open Society Georgia Foundation (various education programmes) average unemployment level among their graduates is 2.5%, 4% and 1% respectively. High employment rate is shown among the graduates of Georgian HEI running programmes together with a foreign HEI, and issuing a foreign diploma upon completion. For instance, the average unemployment rate among the alumni of the Caucasus University MBA programme administered together with the Grenoble Graduate School of Business (France) is 6%.¹³ This statistics is rather different from the 16,9% general unemployment level in the country, as well as from the unemployment level in the age group of 22-27 of the people with higher education, which is 15,4% (Geostat).

Thus, the results of the survey and focus group discussions coincided with the initial assumptions of the Core Team confirming that the quality of education of an employee is one of the most important determinants for hiring, as well as for determining remuneration rates. Georgian employers tend to primarily consider the quality of education represented among others in the 'brand' of the HEI. As mentioned earlier the population views the low quality of education as the main factor defining employment prospects.

This tendency is also backed by the unemployment statistics in Georgia, which shows that the unemployment rate is higher among the recent graduates. According to the 2009 figures the unemployment rate is 38.1% for the 22-25-age group, and 35.8% for the 22-27 year age group, with the overall unemployment level being at 16.9% in the same year (Geostat). This clearly shows that the university degree only is not regarded as a valuable or sufficient asset by the employers even for entry positions. These factors add on to other problems on the Georgian job market and contribute to rather high unemployment figures.

The latest internationally available business opinion research is the 2008 Georgia Enterprise Survey, conducted by the World Bank, which shows that inadequately educated workforce is 8-th out of 10 constraints that are faced by businesses in Georgia. Although World Bank research is generally regarded as relatively reliable and high quality by the Core Team, this particular opinion research, which is based on business perceptions, is regarded to be insufficiently reflecting the business environment and existing constraints in the country for the period of the last several years.

A number of factors, identified in the WB survey as key constraints by the business community, raise serious questions. To bring just four examples, political instability, electricity, tax rates and corruption were named as more serious constraints than education, respectively on the second, third, fourth and seventh place. To begin with political instability, it has to be emphasized that the fieldwork of the survey was conducted in April-December 2008. Thus, the answers are highly influenced by instability and immediate pre- and post- 2008 war environment, which makes the results influenced by the 2008 context and explains the outcome.

¹² The Core Team attempted to obtain data on what was the share of graduates with foreign and local diploma, but this information was not available.

¹³ Although, it should be mentioned that in absolute terms these percentages depict just several hundred of people.

Furthermore, electricity is identified in the WB survey as the third most serious constraint, whereby today this factor is a non-constraint, as it is also revealed by this Constraints Analysis. Unlike the pre-2003 period, electricity shortages and black-outs are not a problem in Georgia any more. Today, Georgia is net exporter of electricity to all four of its neighbors and attracts substantial amounts of private FDI in hydro energy generation, where Georgia has utilized only 18% of its potential and has very promising production and export potential.

As far as the fourth constraint identified by the WB survey, tax rates are concerned, it has to be mentioned that Georgia has a flat tax system, with only 6 taxes, all of them being relatively low in the worldwide comparison. It is noteworthy that according to the Forbes Tax Misery and Reform Index Georgia has been stably rated in the past couple of years (in 2008 and 2009) as the fourth least tax burdened country in the world, after Qatar, UAE and Hong Kong.

As regards the corruption problem, it should be noticed that the 2010 Global Corruption Barometer by the Transparency International rates Georgia 1st in the world in terms of the (public perception of the) decrease of the level of corruption, with 78% of the surveyed claiming the corruption level has decreased. Georgia is placed in the least corrupt group of countries with merely 3% admitting having paid a bribe within the last 12 months. The same average score for the EU and North America is 5%.

Without going into greater detail regarding the results of the WB survey, similar evidences can be brought on factors like crime, theft and disorder, where Georgia has been rated relatively well by various international organizations and surveys.

All the above-mentioned indicates that the 2008 World Bank Enterprise Survey, can not be considered as a reliable source adequately depicting constraints faced by the business community.

Based on these findings and own analysis the Core Team decided not to rely on the findings of this very survey in the parts where public attitudes are concerned.

Following the MCC guidance, the Team examined Georgia's labor force participation rate. Georgia' figure is 63.7%, which is lower than the average across the Lower Middle Income countries, but is slightly higher than in the benchmark countries, with only Armenia having a higher rate than Georgia – 65.6%. This relatively good performance by Georgia can be explained by a high number of self-employed – almost 64% in 2009, which are factored in the data (Table 8).

Table 8. Labor Force Participation Rate in Georgia and the Benchmark Countries 2001-2008

	2001	2002	2003	2004	2005	2006	2007	2008
Armenia	64.30	64.70	64.90	65.00	65.20	65.30	65.40	65.60
Georgia	66.00	63.90	65.20	63.90	63.70	63.60	63.60	63.70
Moldova	58.20	57.00	54.20	51.50	48.90	48.90	49.00	49.10
Ukraine	57.10	57.20	57.00	57.10	57.80	57.80	57.80	58.00
Macedonia, FYR	53.70	53.30	53.60	51.50	52.90	54.00	54.50	54.30
Albania	61.10	60.90	60.60	60.40	60.20	59.90	59.70	59.40
Lower Middle Income	66.68	66.35	66.08	65.77	65.57	65.41	65.21	65.11
World	65.23	65.09	64.95	64.83	64.82	64.83	64.76	64.77

Source: World Bank World Development Indicators

To summarize, the situation on the Georgian labor market is largely determined by structural reasons, namely the mismatch between supply and demand as regards the quality of human capital. Requirements by private sector in this respect are not met by the qualification and skills the current labor force can offer. The analysis so far indicates that low level of high education system in Georgia is the main determinant for the structural mismatch and consequently for the relatively high unemployment rate in Georgia. Even against the background of impressive economic growth, it has been impossible to substantially reduce unemployment. Lack of qualified human capital was reflected in the fact that least labor intensive sectors have attracted more FDI to Georgia.

In order to comprehensively explore the education system of Georgia, below an overview of Georgia's education system is presented.¹⁴

1.1.2.1.2. Education System Overview¹⁵

General Education

In general education sector a number of reforms has been implemented during the last several years. These reforms were aimed at the improvement of the quality of secondary education, introduction of modern educational systems, facilitation of learning processes, etc.

The general education system of Georgia consists of three levels: primary (grades 1 through 6), basic (grades 7 through 9) and secondary (grades 10 through 12). According to the legislation, basic education is compulsory in Georgia.

Currently, there are 2200 schools in Georgia, including public and private ones. As of 2010-2011 school year, there are 542,367 pupils in public schools and 53,027 in private ones.

Reforms undertaken in the general education sector include the following:

In 2005 the new Law on General Education was adopted. One of the most important features of the law is decentralization of the school system. Schools have become independent entities with more independent funding and governance practices. Institutionalization of localized supervisory structures, such as school boards, which oversee and assist the governance of public schools contribute to this goal. The school boards are composed of six teachers, six parents, and one senior pupil. The Law recognizes a general education school as a legal entity of public law. This status entitles schools to generate their own budget and exercise independence in administrative matters. Schools are also entitled to develop their own individual school curriculum, which should be in line with the national curriculum.

In 2005 Government introduced 'money follows student' principle, which was an important innovation. Before this reform, the Government allocated funding for schools without accounting for different enrollment levels, whereas the new system of funding allocates finances to schools depending on the number of pupils. Hereby, pupils are free to choose the school. This increases competition among schools and has a potential positive impact on the quality of

¹⁴ In the view of the Core Team, it is the tertiary level of education which mainly affects the quality of the workforce and not primary, secondary or professional, although the Core Team fully realizes that certain problems might exist at these levels of education. This view coincides with the business sector sentiments revealed at the focus groups and at meetings with businessmen. In addition, the findings of the survey conducted at the request of the Core Team came up with almost identical percentage of respondents regarding Education quality (without specification) and Higher education quality being the reason for unemployment, which reveals that it is exactly the higher education, and not any other level of education that is the problem.

¹⁵ As explained earlier for the purposes of this analysis under tertiary education we mainly understand university education, although, in this chapter, vocational (professional) education is also discussed.

education. Schools with higher number of pupils attract more funding.

In 2010 a new national curriculum for secondary schools across the country was elaborated and introduced. This new outcome-based curriculum is aimed at improvement of quality of school graduates' knowledge and their better preparation for the Unified National Examination.

In order to improve quality and increase the availability of textbooks, the Ministry of Education and Science of Georgia developed new approaches and principles of the textbook approval procedures in 2010. Competition procedures were improved; criteria of the textbook evaluation, technical parameters and methodology of the textbook assessment were defined. From 2010-2011 academic years, the Government provides all vulnerable schoolchildren with the free textbooks. Schoolchildren of non-Georgian schools are also provided with bilingual textbooks of civil education, history of Georgia, world history and geography as well as textbooks for Georgian as a second language.

From the 2010-2011 school year school graduation examinations were introduced. According to the new rule, all school graduates willing to continue study in a higher educational institution have to pass graduation exams in eight subjects. The purpose of this requirement is to increase the level of knowledge of general education graduates and introduce unified requirements of all of them.

In order to improve the quality of teaching and learning in public schools of Georgia, the government has decided to regulate the profession by introducing the teacher certification. The first teacher certification exams were held in 2010 and the process is voluntary until 2014. In order to become certified, teachers need to pass a certification examination in their respective subjects and professional skills. The teachers retain the status of a certified teacher for 8 years. Certified teachers receive monetary incentives to their salaries. The program aims to annually increase efforts with a view to popularization and promotion of the process of certification. In 2011, on the initiative of the President of Georgia, certified teachers were able to pass, on a voluntary basis, an additional test in computer and English language skills. In case of successfully passing this test, teachers' salaries will be increased.

Another innovation in the secondary education system is introduction of school branding system starting from September 2010. School branding is compulsory for public schools and voluntary for the private. Branding means assessment of schools under a ten-star system using predefined criteria. The primary reason of school branding is creation of a competitive environment for schools and their stimulation with a view to improvement of the learning process.

From the end of 2010, an information system is in place to secure detailed information about schoolchildren (attendance, grades, achievements, etc), history (mobility of schoolchildren, e.g. their movement from one school to another), e-register and time-table, information about teachers and schools. Lists of students are automatically transferred to the National Examination Centre, excluding the need of re-registration of students for the Unified National Exams.

In addition to changing the regulatory and legal environment of the general education, Government invested substantial resources in school infrastructure - 137 mln. USD in 2006-2011. Parallel to investment in physical infrastructure and renovation of schools throughout Georgia, from the 2010-2011 school year, the Government started distribution of netbooks to 3000 first-graders, which contain educational programs in foreign language, Georgian language, mathematics, logic, educational and cognitive games. This initiative serves the aim to increase computer literacy in the country. From September 2011, all first class graders will receive netbooks that serve as additional source of information in the learning process. To make computer easily understandable and more attractive for children, it is conventionally called a "Buki". Simultaneously, a web-page www.buki.ge was created, which can be used not only by the first-graders, but also by all students. The web-page contains various interactive games and e-library school textbooks

Besides computer literacy, Government pays special attention to English language skills. To enhance and promote English language teaching process in Georgia, English language is being taught from the first grade. Moreover, starting from 2011-2012 academic year, English language will be taught through Macmillan English book which is a unique blend of first language methodology and support for non-native learners. At the same time, to improve English language knowledge of pupils as well as teachers, a new program, Teach and Learn for Georgia, was launched in 2010. Under the program native English speakers are invited to teach English for one year in Georgia's schools in the regions and live in local families. The Government plans to continue this program in the years to come. In 2010-2011 academic year, the number of TLG volunteers was more than one thousand. For academic year of 2011-2012, the goal is to reach 1500 volunteers.

Ministry of Education and Science of Georgia has prioritized learning/teaching of applied and natural sciences - mathematics, physics, chemistry and biology - at public schools. Increased demand on the labour market makes necessary to create adequate conditions for the applied and natural sciences at schools in compliance with the global tendencies. For this purpose, schools are being equipped with modern educational and scientific laboratories (physical, chemical and biological); natural sciences are to be taught from the first grade up to eleventh. Additional hours for experimental/laboratory works are added in the natural science school program. "Leonardo Da Vinci" scientific contest is organized to enhance knowledge of the secondary school students, support developing a creative thinking.

Despite the reforms undertaken in the general education sector, substantial effort is required to improve quality of education through streamlined requirements for teachers as well as students. Deficiencies of the system are *inter-alia* shown by a well-acknowledged international ranking, Trends in International Mathematics and Science Study (TIMSS). The latest TIMSS ranking of 2007 shows that Georgian math and science education quality (scoring 438 for grade 4 and 410 for grade 8) at school is lowest in the benchmark country group mentioned above (Armenia, Ukraine, Moldova, Albania and FYR of Macedonia). It is also below the world average.

Hereby it should be mentioned that the latest TIMSS ranking is published in 2007 and is based on the data of years before. As major reforms in the general education system were implemented in the period after 2007, namely 2010 and 2011, the Core Team assumes that improvements resulting from these reforms will be reflected in the next TIMSS report due in 2012.

Professional Education

As for the vocational education, (or professional education) this sector also underwent major transformation in the past several years. The aim is to transform the soviet-style professional education system into a market driven one, where emphasis is put on the needs of the growing economy and quality of education.

Starting from 2005, several new conceptual documents were prepared by the Government, leading to enacting a new Law on Professional Education in spring 2007.

In 2009 the Government developed and approved a special strategy of professional education, which contains all necessary steps to be undertaken in the years to come.

Government embarked on the institutional reform of the VET system. The latest wave of reforms was undertaken in September 2010, which resulted in optimization of the professional education centres, the quantity of which is currently 20. The new professional education system consists of 5 levels, which is in full compliance with the relevant system existing in Europe. The professional education centres have been reformed into professional colleges, which provide education at first three levels.

There were two types (broad levels) of vocational education: vocational education and training (craftsmanship, or occupational education) provided by VET Centers and higher professional education provided by Higher Educational institutions. Nowadays, there is one whole system of Vocational Education that covers/includes 5 levels of vocational education. The first 3 levels are provided by Vocational Colleges, community colleges, higher educational institutions and general educational schools; the last two levels (IV and V) are provided by community colleges and higher educational institutions. All education institutions with appropriate licenses are also authorized to carry out VET programmes).

Students can apply for vocational education (3 levels at least) after completion of basic level of general education (IX grades). As for professional higher education, applicant should have completed full secondary education (XII grades). Upon completion of a VET programme, a certificate of a specialist is issued.

Currently there are 20 state and 75 private vocational education institutions, in addition to 17 state and 5 private higher education institutions offering vocational education programmes. Around 8000 students are educated in the state institutions and around 5000 - in private ones. According to the data by the Ministry of Education and Science of Georgia, the last 2 years saw the doubling of private education institutions, which shows increasing demand, and is an evidence of the private sector trying to overcome the constraint.

Apart from the state efforts to reform the sector, a number of international donor organisations have been contributing to the process. EU, UNDP, USAID, GIZ, IOM and NRC in cooperation with the Ministry of Education and Science provide special assistance programs for VET development in the country.

Ministry of Education and Science of Georgia implements the EU project “support for the vocational education and training sector of Georgia. The overall objective of the project is to support development of the sector of vocational education in Georgia and to enhance the credibility and attractiveness of the VET system. This objective matches with priorities set in national VET strategy (2009-2012). The project aims at continuous progress towards integration of the Georgian VET system into common European education space, which implies creation of an effective system capable of providing domestic and international market with competitive workforce. Three priority objectives underline these goals: 1. Increased access to VET and support to professional development throughout life; 2. Quality and market relevance of VET; 3. Participatory governance, management and financing system in VET. Project implementation period is 2009-2012. The total cost of the programme is 19,000,000 Euro, with the following components: 1) Budget Support: 17,000,000 Euro and 2) Technical Assistance: 2,000,000 Euro.

GIZ provides private sector development program in Georgia. The main goal of the project is to improve general conditions for the development of a labor market-oriented VET system in Georgia, increased public private partnership (PPP) schemes in this area, and identify and balance mismatches on the labor market. GIZ implements the project in cooperation with the Ministry of Education and Science of Georgia. Project implementation period is 2009-2011 and project budget is 2 ml Euro.

UNDP also provides assistance to VET development in cooperation with the Ministry of Education and Science of Georgia. UNDP has been supporting the development of the vocational education and training system in Georgia since 2006. This area is included in UNDP's plans for the period of 2011-2015 as well. The strategic vision of UNDP programs is ensuring employment of vulnerable population through development of their professional skills and turning the VET centers into hubs of local economic development. UNDP activities were financed from various donors, including the Swiss Development and Cooperation Agency (SDC), the European Union (EU), and UNDP's own funds. Currently, UNDP is present at 9 regionally based VET centers in different regions of Georgia. It has plans to expand geographically and functionally the VET development targeting more vulnerable population and

people with disabilities in the future. The above mentioned VET centers offer courses in such areas as construction, agriculture, tourism, processing and industry.

USAID develops Vocational Education Project in Georgia for the period of 2008-2011. The project is focused on improving vocational education and training in construction and tourism by building direct partnerships between vocational schools and employers to improve the country's ability to meet workforce needs. The program provides short-term, intensive training to meet job opportunities created by post-conflict reconstruction projects as well as secondary support industries through rapid, intensive courses that directly meet the needs of employers. Currently, the program cooperates with 6 vocational educational centers country-wide. Project includes activities such as rehabilitation of infrastructure, preparation of modern study materials, training programs for teachers. 5544 people were trained in the framework of the project, 67% of which were subsequently employed.

Norwegian Refugee Council (NRC) also participates in the VET development process in Georgia through its project Youth Education Pack. With the assistance of NRC internally displayed persons were trained in 9 vocational educational centers throughout the country in different fields. Only in 2010, 754 beneficiaries participated in the program. The project implementation period is 2008-2011 and the project budget is 480 000 USD.

In addition to the abovementioned, International Organization of Migration (IOM) with its project, Consultation and Employment, created the consultation and employment centers in 7 VETs across the country. Project implementation period is 2010 – 2012 and the project budget is 144 000 USD.

Vocational education system of Georgia provides a good example of cooperation between state institutions, private sector and donors. Currently the sector is increasingly driven by private sector demand, number of private professional education institutions growing gradually.

To summarize, professional education sector has seen on the one hand substantial regulatory reform and Government involvement and on the other hand intensive effort both by private sector and donor organizations. The Core Team believes, provided that this trend continues, and professional education remains one of the priorities of the Government, which is the case, the situation in the area will improve in the medium term perspective.

Higher Education

Substantial changes have taken place in the Georgian higher education system. In the generally corrupt legacy of the society and statehood, Georgia's high education system was one of its main shady pillars. It was impossible either to be enrolled to the university studies or to pass an exam without a bribe or nepotistic ties. Salaries of the academic personnel were low. According to the Ministry of Education of Georgia, an average professor received less than USD 200 monthly salary in the pre-2003 period. This served as an additional trigger for corruption, as well as a major reason for the brain-drain from academia. The absence of a merit-high education system and difficulty to attract qualified teachers has affected the quality of graduates.

The situation started to change in 2004, when a number of important reforms were undertaken by the Government:

In December 2004 a new Law on Higher Education was adopted. The law aims at ensuring compliance of higher education system with western systems, creating new mechanisms of quality control and achieving higher standards in education. According to the new law, higher education in the country is based on the principles of democracy, transparency and equal opportunities as well as autonomy of Higher Education Institutions (HEIs).

One of the most important reform deliverable was the introduction of the Unified National

Admission Exams for Bachelor's degree in 2005. Since 2009 same unified exams were introduced for Master's degree. Among others, it is envisaged that in the future Master's degree applicants will be entitled to take a GRE examination. The new merit-based system university entrance examinations replaced the old corrupt practices and gave equal chances to university applicants from various economic, social, ethnic background and gender.

The novel financing model for education institutions – “money follows student” – is among the most important achievements of the education reform. The new model implies the state covering tuition fees for students with best results at Unified National Admission Exams. In addition, order to ensure effective realization of education rights for the most vulnerable part of the population 10% of state education grants are annually allocated to students from vulnerable groups such as those from poor social background (recipients of targeted social assistance), from high mountainous regions, eco-migrants, students from conflict regions, orphans and disabled students. According to the data provided by the Ministry of Education and Science of Georgia, over the last 5 years the amount of state grants for education increased almost 15-fold, from 955,000 USD in 2005 to 14,102,000 USD in 2010.

It should also be mentioned, that Government has allocated substantial resources for the Higher Education sector reform. According to the data of the Ministry of Education and Science, throughout 2004-2010, more than 98 mln. USD was spent on higher education sector through different programs, on top of what was allocated to Universities through the ‘money follows student’ voucher format.

As part of the reforms in 2005 the state started promoting quality assurance measures in order to increase the quality of education provided in the country. According to the legislation, along with the autonomy of the HEIs, the state remains responsible for education quality through clearly defined, transparent and objective procedure of accreditation. A diploma/academic degree awarded only by an accredited higher education institution is recognized by the State.

In 2009 Government initiated and Parliament approved legal amendments, according to which national minorities are encouraged to receive higher education in Georgian. Government of Georgia offers preferable conditions for the national minorities. According to the new system the latter have to pass only one exam (general abilities test) in their native language. After being admitted to the University, they study only Georgian language for 1 year and then continue studies at the selected department. Before the reform, national minorities mostly studied in Russian schools and had to pass entrance exams in Russian. Due to the introduction of simplified system for national minorities, the latter have the opportunity to take the entrance exam in their own language and study Georgian at the university in order to continue studies in Georgian. Consequently, the number of national minorities admitted to Universities in Georgia started to increase. For example, starting from 2008, number of national minorities (Armenians and Azeri) admitted to the higher educational institutions increased by 258.5%.

In order to increase the autonomy of state owned higher education institutions, in 2011 Government submitted legal amendments to the Parliament, according to which higher education institutions can be established as legal entities of private law. This will allow them to have a higher degree of financial autonomy and diversify sources of their revenue generation in order not to be exclusively dependent on state financing.

Despite the reforms described above, there is a clear understanding that a lot yet remains to be done, as the current level of the education provided in the country does not meet the requirements of the rapidly modernizing job market and growing demand for qualified labor force in the fast developing sectors of the economy that strive to become globally competitive. Relevant initial analysis indicated growing demand for qualified labor force in technical fields rather than humanities. The trend of GDP growth by sector in the period of 2000-2010 demonstrates that higher average growth rates have been recorded in sectors such as construction (15.5%), mining (14.4%), communications (12.2%) and manufacturing (9.2). The

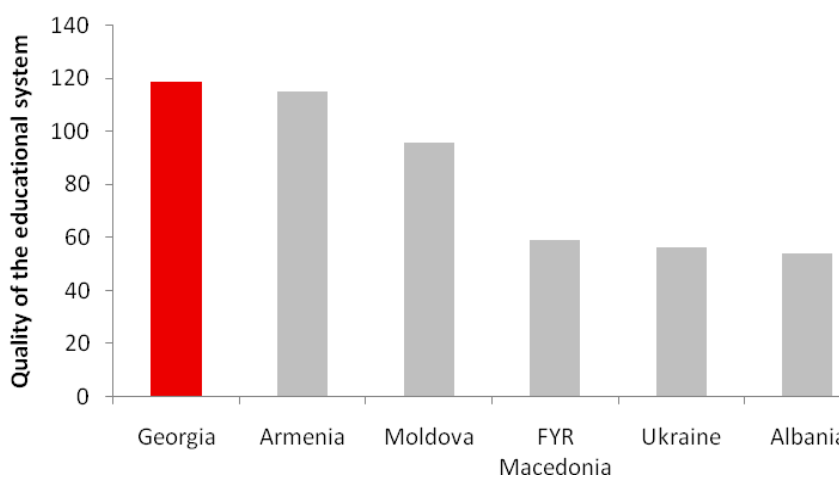
abovementioned sectors of economy were also the ones attracting highest levels of FDI in recent years. For example, based on the data of Geostat, in 2007-2010 transport and communications, and industry constituted the biggest shares in total countrywide FDI, with respectively 35.1% and 16.4% in 2010.

Although no statistical data on sector-based growth projections is available for Georgia, sectoral growth statistics and FDI dynamics demonstrate which sectors have high growth potential and thus require increased numbers of high quality human capital in the years to come. Therefore, in order to sustain high level growth and keep the abovementioned and other related sectors competitive, not only attractive regulation and thus enabling business environment is essential but qualified labor force should play an important role in creating Georgia's comparative advantage and meet existing demand on the labor market.

As mentioned earlier, consultative meetings with the business sector (March 1, 2011 and March 24, 2011) revealed their clear dissatisfaction with the locally-educated labor force quality. The same has been confirmed at the focus groups with the business representatives. In particular, it was revealed that education at the tertiary level rather than secondary is perceived as most problematic by the businesses. The need for improvement of the education quality in Georgia is also acknowledged by international expert assessments. For instance, the Survey 'Capital and Conflict: Georgia' points out the supply of skilled labor in Georgia among the top negative factors hindering foreign investment ('Capital and Conflict: Georgia,' 2011, University of California, San Diego).

Moreover, according to the World Economic Forum's Global Competitiveness Report (GCR) the quality of the educational system in Georgia is the lowest among the benchmark countries (The Global Competitiveness Report 2010-2011 (2010) World Economic Forum, Table 5.03), as well as the quality of math and science education (GCR 2010-2011 2010, Table 5.04).

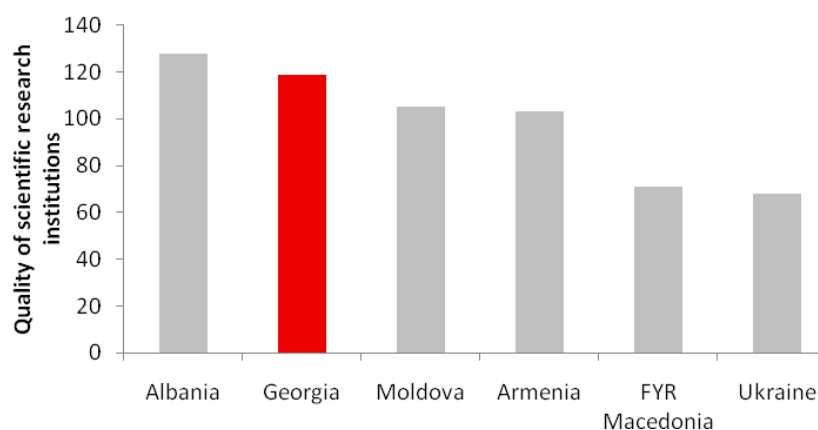
Chart 19. Quality of Educational System in Georgia and the Benchmark Countries (Ranking – higher the rank, worse the quality)



Source: GCR 2010-2011, Table 5.03

The same is the situation with the quality of the scientific research institutions, where Georgia, according to the same survey, is positioned on the 119th place out of 139 countries, with only Albania among the benchmark countries performing worse (Chart 20).

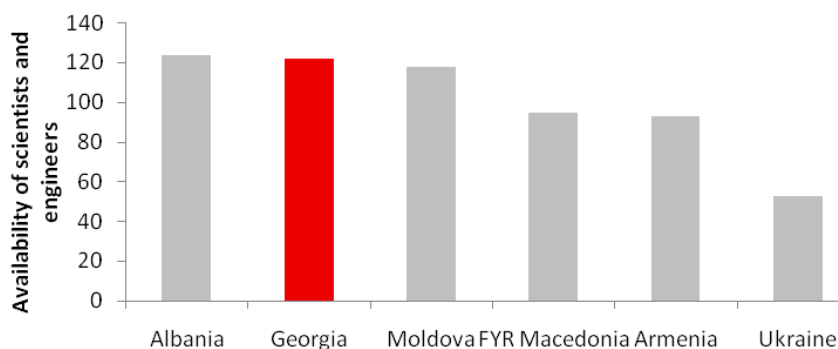
Chart 20. Quality of Scientific Research Institutions in Georgia and the Benchmark Countries (higher the rank, worse the quality)



Source: GCR 2010-2011, Table 12.02

Another deficiency of the Georgian education system is illustrated by a ranking according to the same Global Competitiveness Report, which places Georgia on the 112th place out of 139 in the assessment of the innovation capacity. It measures the level to which the local companies rely on their own research rather than licensing foreign companies or imitating, in the process of production. This is yet another indication of the scarcity of highly qualified human resources. In addition to the low quality of the scientific research institutions mentioned above, the country ranks 122th in terms the availability of scientists and engineers (GCR 2010-2011, Table 12.06). All the benchmark countries but Albania perform substantially better. (Chart 21)

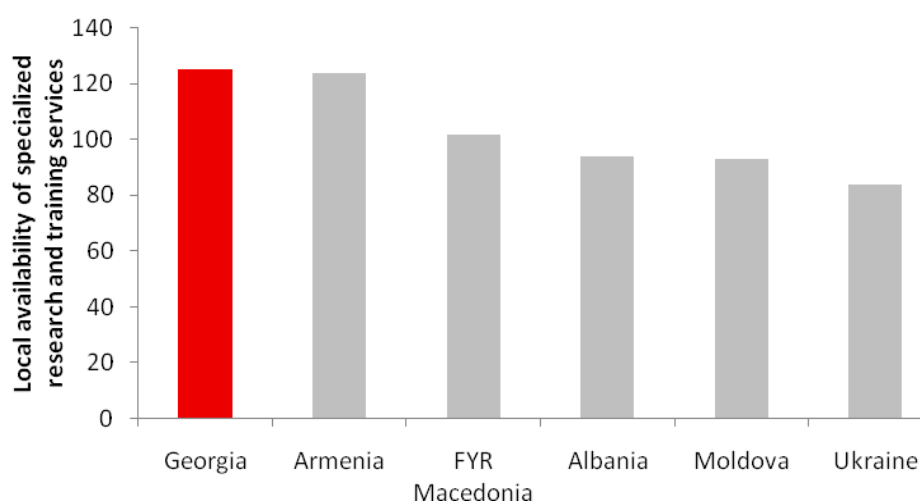
Chart 21. Availability of Scientists and Engineers in Georgia and the Benchmark Countries (higher the rank, lower the availability)



Source: GCR 2010-2011 2010, Table 12.06

As illustrated by the Global Competitiveness Report, the level of university-industry collaboration in Georgia is one of the worst not only across the benchmark countries but across all of the countries surveyed. Georgia is on the 134th place out of 139. (GCR 2010-2011, Table 12.04). The survey also highlights that Georgia has the worst situation among the benchmark countries in terms of availability of specialized high quality research and training services (Chart 22)

Chart 22. Local availability of Specialized Research and Training Services in Georgia and the Benchmark Countries (higher the rank, lower the availability)



Source GCR 2010-2011 2010, Table 5.07

Besides the abovementioned, clear preference of employers to hire graduates of foreign HEI, rather than of Georgian ones, was demonstrated at the meetings with business representatives as well as at the focus groups conducted at the request of the Core Team. These sentiments are also backed by available statistics on the employment level of foreign graduates, as already described above.

It is important to have a look at public sentiments vis-à-vis the higher education system and what is perceived to be major areas in need of improvement.

Deficiencies of the Georgian education system were vividly illustrated by the public opinion research conducted in March 2011 for the purposes of the Constraints Analysis. The survey identified the following top three problems in Georgia's education system: 1. Low quality of obtainable education, which in turn diminishes decent employment prospects, 2. Deficient teaching methodology and 3. Low qualification of teachers.

As for the top 3 problems characterizing the higher education system specifically, the respondents named: 1. Low prospects of employment for the graduates of Georgian universities and uncompetitiveness of diplomas issued by Georgian HEIs, 2. Non-existence of modern technology laboratories and 3. Obsolete teaching style and methodology, and absence of modern teaching programmes. Over 56% of the population surveyed named high quality education as the main factor defining employment prospects.

The high importance the public attaches to improvement of the education system of Georgia is also illustrated by the results of a survey, conducted by the National Democratic Institute (NDI) and published in Spring 2011, which indicated that the Georgian people deem educational reform to be the most important (desirable) reform to be conducted in the country (NDI, Public Attitudes in Georgia, 2011). This result indicates that people expect tangible improvements in the sector, as a result of reforms conducted, and it is improvement of the educational system in the country what the public cares about as a top priority.

The low quality of education is identified as a problem by the private sector, as well as by the youngsters themselves. This is demonstrated by substantial shadow costs both agents have to bear in order to overcome the constraint. For instance businesses, as demonstrated at the Core

Team consultative process meetings with the business representatives, use to invest heavily in training their employees¹⁶.

The same is identified by the Global Competitiveness Report ranking, which shows that Georgian firms invest substantial resources in their staff training, with the ranking score being second highest among the benchmark countries selected for the purposes of the CA (GCR 2010-2011).

As for the students, they are also dissatisfied with the quality of higher education in the country (as mentioned earlier, this was also confirmed by the population survey). One indication of this dissatisfaction is the fact that they tend to take up substantial shadow costs connected to travelling and living abroad in order to be educated in foreign universities. According to the estimations of the Ministry of Education and Science of Georgia, students of foreign Master's Degree education require funding in the range of EUR 30000 to GBP 30000 per year per head. Although no statistical data is available on exact quantities of those travelling abroad, according to the estimations of the Ministry, the figure is increasing annually. Since 2005 the Government only has allocated circa USD 9.5 mln. through merit-based scholarships in leading foreign universities for more than 350 students. This indicates that the Government also takes its share of the shadow costs associated to overcoming the deficiencies of the country's educational system.

Having identified the problems in the education system of Georgia, the Core Team also examined in which way the private sector has been approaching the situation in terms of entering the education business. It was found, and inter-alia revealed at meetings with business sector representatives, that generally, the business sector of Georgia, although realizing low quality of human capital that hinders development, is not yet advanced to the level of making sufficient investment in education sector. The reason named by private sector representatives is that the local business saw a real boost in economic development just some 5 to 7 years ago, and is not yet experienced in making long-term investments in spheres like education.

However, it should be mentioned that some level of investment in the education system has been made. According to the data by the Ministry of Education and Science of Georgia, there are 299 private schools operating in the country (12.3% of the total school number), where 8,9% of students are being educated.

As for the higher education specifically, there are 42 private higher education institutions in Georgia (out of 63), where 19% of the students are educated. The general trend in Georgia has been that larger part of students is educated in state universities. However, in 2010 a new trend could be observed, whereby number of students admitted to the private universities increased by 63.9% compared to 2009, while the number of students admitted to the state universities decreased by 12.5% in the same period.

Most private institutions offering higher education degrees are teaching establishments by their nature rather than education and research centers. The faculty of the majority of the existing higher education institutions consists of practitioners visiting the institutions for merely delivering lectures, without conducting any scientific research or being engaged in university activities on a permanent basis. This does have an obvious impact on the quality of higher education provided.

The private sector has so far not shown sufficient interest to view higher education as a business. The only way to enhance the system is to ensure public (or grant) investment promoting qualitative change in the system and seek partnership schemes with private sector in this framework. It is in this spirit that the current project is proposed, which is viewed as beneficial

¹⁶ As indicated at one of the meetings with the businessmen, the expenditures on educating the employees are sometimes so substantial, that having made that investment in the employee, the businesses become reluctant to increase remuneration of the trainees in the future.

for growth and development needs of Georgia and of the region, as well as a major step forward in improvement of human capital and innovation capacity.

Besides the international worldwide comparisons on education mentioned above, where Georgia scores relatively poorly, international qualitative research on Georgia's higher education system also concludes that improvement is needed.

The study performed by the Texas International Education Consortium (TIEC) which was conducted in March-April 2011, producing results in early May 2011, reports that 'Georgia's public colleges and universities have difficulties in producing graduates who are able to meet the needs and expectations of private and public sector employers.' It also highlights that 'while there has been tremendous progress recently in reforming Georgian higher education institutions, much remains to be done to bring Georgian universities into a competitive range with their Western counterparts. Creating a model U.S.-style university in Georgia might help relieve the situation by providing quality education and student services to Georgian students and by serving as a model for existing Georgian higher education institutions' through, introducing '...higher standards for academic success', developing '... a collaborative approach with the nation's corporate and governmental entities', and utilizing '... the latest instructional techniques and technologies', and through its graduates the University could foster 'change and growth in Georgia and throughout the region' (TIEC, 2011).

Human Capital Summary

As mentioned above, Georgia's economic policy is derived from the vision, according to which the driving force of the country's growth and development should be private sector. Foreign Direct Investment (FDI) plays a crucial role in this respect, as Georgia's local private sector resources are not sufficient to generate appropriate levels of investment and thus employment. In this regard, along with the favorable business environment, low taxation regime and minimum bureaucracy, the quality of human capital is of utmost importance to attract local and more importantly foreign private investment.

At this stage of development the human capital turns out to be a binding constraint for the development of Georgian economy, on which there is a consensus assessment across business sector, the government, relevant international organizations, and more broadly population. All relevant stakeholders clearly identify problems related with education quality in the country that is the core reason for insufficient human capital quality. Unemployment is a binding constraint to growth, and this constraint is caused to a large extent by insufficient education and lack of competitive qualification and skills of available human capital. The market clearly shows the signs of scarcity of high quality educated people. The general low quality of locally obtainable education is a factor conditioning a rather high rate of unemployment. The existing education system in Georgia fails to contribute to the creation of qualified human capital, reduction of demand and supply mismatch on the labor market and thus to the reduction of unemployment.

Another factor is that due to the low qualification of the human resources the businesses have to invest in on-job training of their employees, but they see a substantial room for improvement of education quality of the educational institutions. The non-applicability of the Mincer regression, which failed to show the correlation of education and professional experience durations on wages, and the following additional consultations conducted, added on to the argument that the quality of education is one of the most important determinants of the employment status in the country.

These arguments lead to the conclusion on the vivid scarcity of the human capital in Georgia, largely caused by the lack of the availability of the high quality education opportunities, which, in its turn, presents a binding constraint to growth and development.

1.1.3. Is it Infrastructure?

In this part of the report, the core team takes a deeper look at Georgian infrastructure, analyzing the quality of overall infrastructure, with all its components and making cross country comparison with the pool of the benchmark countries. The research found that the current level of development of Georgian infrastructure is a binding constraint for growth in the country, as it is explained below.

General Overview

High quality of infrastructure is one of the key factors for a country's successful development. Underdevelopment of infrastructure, particularly roads infrastructure, negatively affects the overall development of the country. In countries with particular geographic constraints such as complex terrain, as is the case in Georgia, low quality of infrastructure hinders development of certain regions, by limiting the integration of regional population in economic and trade activities as well as social life. Insufficient development of infrastructure in the regions negatively affects development of agriculture in Georgian regions, as the largest part of rural population is involved in agriculture including subsistence farming. This in turn hinders regional population's access to markets. Low level of infrastructure development has a negative impact on the tourism development and attraction of investments in Georgia. Besides, poor infrastructure has its social dimension, thus hindering regional population's access to the health and education facilities. The overall result, as it was already emphasized in the General Overview part, is the widening of the disparities between the urban and rural areas in the country.

Taking into account all the above mentioned, during the recent years, Government of Georgia has been paying utmost attention to the development of overall infrastructure in the country. A lot has already been done in Georgia in this regard, inter-alia in the framework of the first MCC Georgia Compact, the major part of which was devoted to infrastructure development. However, as it is demonstrated in the following sections, additional efforts are still required in this direction, especially with regard to the roads infrastructure. If the investment in this area is not continued in the same scale as in the previous years, the overall roads infrastructure will constitute a binding constraint for growth in the country.

During the recent years, policy priorities in infrastructure sector include diversification of transportation routes, liberalization of existing regulations to enable easy access to markets, creation of high quality physical infrastructure throughout the country, including Georgia's regions, introduction of private ownership and management and, as a result of all the above-mentioned, making Georgia a competitive transit route between Europe and Asia.

Starting from 2004 GoG has been intensively investing in infrastructure development projects. Construction of East-West highway, massive rehabilitation of roads, construction and rehabilitation of bridges, rehabilitation of water supply, irrigation and sewerage systems, large-scale energy projects are examples of massive infrastructure rehabilitation and renovation process in Georgia.

More than 800 km of roads, 100 bridges, and drinking water, sewerage and irrigation systems were rehabilitated during the last several years. It should be noted, that only in 2010, 21% of the state budget, approximately 723 mln. USD, had been allocated for regional development, a great share of which is for infrastructure development. In addition to state funding, significant international financial resources have been allocated for infrastructure development.

These significant investments brought tangible results in terms of improvement of infrastructure quality in Georgia and therefore, caused intensification and growth of cargo as well as passenger transportation in the country. Namely, total cargo transportation in 2010 reached 48.4 mln tons, which constitutes 7% growth compared to 2009.

It should be mentioned, that roads and railway are the two main modes for cargo transportation in Georgia. Transportation by road has larger share in total cargo transportation in the country, which amounts to 28.5 mln tons in 2010, that is 59% of total cargo transportation.

Cargo transportation by railway has the second largest share in total cargo transportation in Georgia. In 2010, cargo transportation by railway, which is operated by the LTD “Georgian Railway” increased by an important means of ground transportation for Georgia which has diverse terrain and high mountainous region. However, this transport mode is largely used for liquid cargo transportation (e.g. oil and oil products) to Georgia’s black sea ports, while the rest of cargo is mainly transported by roads. As of 2010, liquid cargo accounts for 57.8% of total cargo carried by railway.

Currently, a number of projects are underway for the development of Georgian railway, the most important of which is the Baku-Tbilisi-Kars railway project, which is considered to become a successful example of regional cooperation. The Baku-Tbilisi-Kars railway will be a new corridor that will connect Azerbaijan, Georgian and Turkish railways. It will connect Georgia to Turkey and open the entrance to Europe and the Mediterranean with cheaper and shorter corridor that will increase the function of Georgian railway as an alternative transportation and transit link between Europe and Asia.

The implementation of the project started in 2007 and it foresees the rehabilitation and reconstruction of the existing 178 km-long railway (Marabda-Akhalkalaki) and construction of a new railway (Akhalkalaki – Karsi) with total length of 98 km, from which 30 km of the railroad is on the Georgian territory close Turkish border, and 68 km is on the territory of Turkey.

After the project is completed, Baku-Tbilisi-Kars railway will become an important railway corridor connecting Europe, Caucasus and Asia. The new railway link will facilitate the delivery of freight from the countries involved in the project to international markets in Europe via the Bosphorus channel. The project includes the passenger transfer, which will significantly facilitate the development of tourism in Georgia.

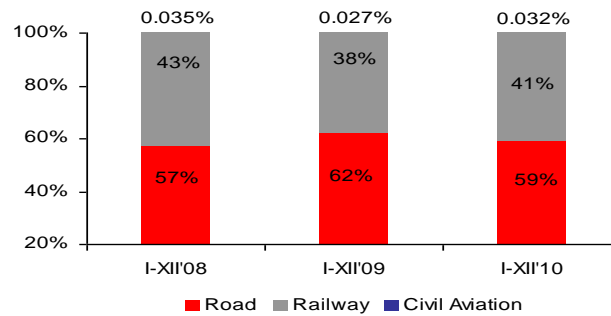
As for the Georgian sea-ports, currently, there are 4 privately operated sea-ports and terminals in the country – Batumi sea-port, Poti sea-port, Kulevi sea-terminal and Supsa sea-terminal. In 2010, total handled cargo in Georgian sea-ports and terminals increased by 12% compared to the previous year and reached 22.7 mln. tons. It should be mentioned, that Georgian sea ports are competitive across the transit corridor if compared to other countries of the corridor. Namely, according to the Doing Business Survey 2011 (indicator of Trading Across Borders), cost of handling of standard container (20-foot container with dry cargo) is the lowest in Georgia compared to other countries of the transit corridor both in case of export and import. This cost includes all fees levied on handling of a container in USD such as costs for documents, administrative fees for customs clearance and technical control, customs broker fees, terminal handling charges and inland transport) (see Table 9).

Table 9. Cost of Handling a Container in Ports

Country	Cost to Export (USD per container)	Cost to Import (USD per container)
Georgia	1329	1316
Azerbaijan	2980	3480
Kazakhstan	3005	3055
Ukraine	1560	1580

Indicators in air transportation are also improving over the years. Currently, there are 2 privately operated international airports in Georgia – Tbilisi and Batumi international airports. In 2010, civil air transportation reached 0.918 mln passengers, which is 18.9% more than in 2009, while cargo transportation increased by 26% (y-o-y). However, share of cargo transportation by air is very limited and as it was already mentioned, main share of cargo transportation is done by road and railway (see Chart 23).

Chart 23: Cargo Transportation by Mode in Georgia 2008-2010



Source: Ministry of Economy and Sustainable Development of Georgia

As it was already emphasized above, infrastructure development is especially important for a mountainous country with diverse terrain – like Georgia. It is more so for the regions with geographical constraints (high-mountainous regions) and populated by minority groups, where the development of infrastructure, particularly roads infrastructure along with contributing to regional development and economic growth, has a strong social dimension and is directly tied to improved living conditions of the population such as access to healthcare and education.

In this regard, extremely valuable input was made by the first MCC compact, which included the rehabilitation project of Samtskhe-Javakheti road. 223 km of roads was rehabilitated through allocating more than 220 mln USD from MCC funds. As a result, transportation time was sharply reduced. At the same time, one of the regions of Georgia, populated with minority groups is now better connected to the capital city of Tbilisi, the Republic of Armenia and the Republic of Turkey, by the means of a high quality and shorter road.

Development of regional road network, as well as, of course of the main road network, is extremely important, if Georgia wants to meet its development objectives and fully utilize its transit and tourist potential, contributing to economic growth and stability in the country and the wider region. Georgia's ambitious goal to position itself as a main transportation hub of the region, requires substantial improvement of the infrastructure quality, in order for it to match the needs and requirements of transporting goods from and to Turkey, Azerbaijan, Armenia, (possibly Russia) and further through Georgia via its roads, railway or sea-ports.

In this regard, it is also worth to mention that Georgian population still considers the current level of infrastructure as an impediment for economic development in the country. The population survey conducted in March, 2011 on the request of the MCC Core Team revealed interesting results related to infrastructure development. To the question “what is the constraint for economic development in Georgia”, 26.2% of all respondents and 34.2% of respondents from the regions with geographical constraints, including mountainous regions, (in both cases the highest share) indicated that it is low level of infrastructure development, including regional infrastructure. Furthermore, 59.1% of all respondents and 67.5% of respondents from the regions with geographical constraints (i.e. mountainous regions) assigned the crucial importance

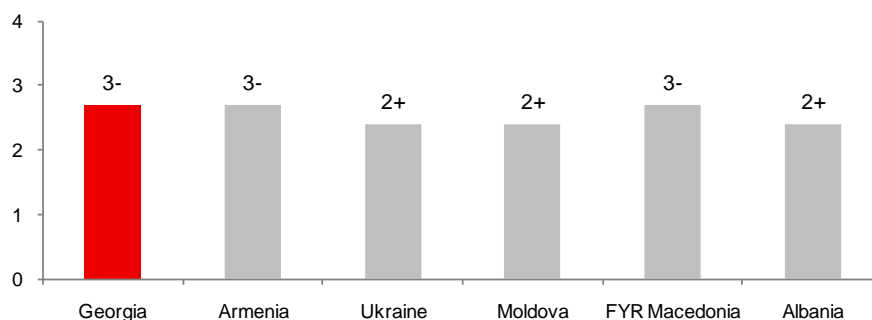
for country's economic development to the low level of infrastructure development including regional infrastructure. This survey shows, how much importance Georgia's population attaches to further development of infrastructure, including regional infrastructure in the country and considers it as the main policy and development priority.

In addition to the population survey, special focus groups were conducted with businesses. These focus groups revealed that representatives of the Georgian business sector also consider infrastructure development as a main policy priority and a key issue for the country's sustainable economic development.

Besides the local surveys and indicators, it is useful to make cross country comparisons. In order to assess overall quality of infrastructure in Georgia, several international reports and comparisons were looked at. First of all, most recent EBRD Transition Report was taken to assess overall transition progress made by the country in terms of implemented reforms in the sector. It should be mentioned that for the purpose of the report, the infrastructure sector includes telecoms, water and wastewater, urban transport, roads and railways. The report covers 29 countries in transition in Central and South-Eastern Europe, Caucasus and Central Asia. The scores in the report range from 1 to 4+ and are based on an assessment of the size of the challenges in two components: market structure (including privatization, sector liberalization, private sector participation) and market-supporting institutions and policies (including tariff reform and regulatory framework). It is noteworthy that the report does not assess the quality of physical infrastructure in the countries covered, but is rather focused on regulatory and institutional reforms undertaken in the infrastructure sector.

Based on the results of this scoring exercise, remaining transition gaps for market structure and institutions are classified as either "negligible" (4+), "small" (3+ - 4), "medium" (2+ - 3+) or "large" (1 - 2+). More precisely score, "1" represents little or no change from a rigid centrally planned economy, while score "4+" represents the standards of industrial market economy.

Chart 24. Overall Infrastructure Reform in Georgia and the Benchmark Countries

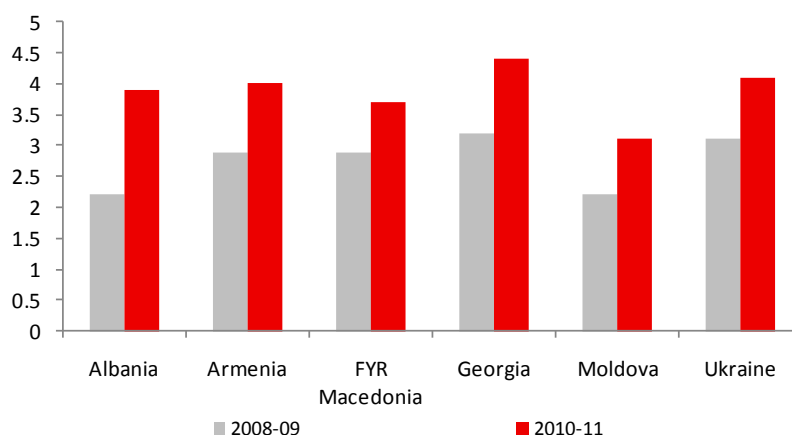


Source: EBRD Transition Report 2010

Georgia's performance in the overall infrastructure reform is average compared to benchmark countries. This score is based on the successful regulatory and institutional reforms implemented in the country during the recent years. The score "3-" means that transition gap still remains and it can be characterized as "medium" in Georgia.

Another useful cross country comparison is given by the World Economic Forum's Global Competitiveness Report (GCR). This report assesses the quality of overall infrastructure (e.g. communications, transport, energy) in 139 countries and ranks them from 1 to 7, where score "1" means that overall infrastructure is extremely underdeveloped and score "7" means that overall infrastructure is extensive and efficient by international standards.

Chart 25. Quality of Overall Infrastructure* in Georgia and the Benchmark Countries 2008-2011

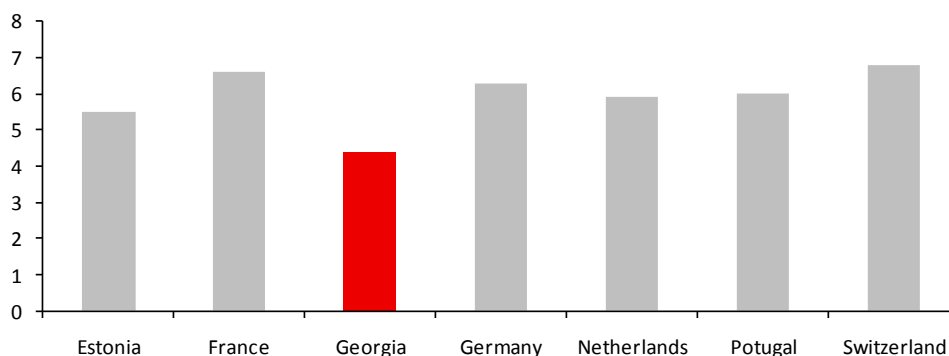


* weighted average

Source: Global Competitiveness Report 2010-2011, Table

According to the presented data, Georgia's score (4.4 in 2010) is higher than those of benchmark countries and improved compared to the 2008 data. It should be mentioned that GCR methodology does not include technical evaluations to measure the quality of overall infrastructure and this score is the weighted average of Georgia's performance in different components of infrastructure. As it is explained below, several components, such as roads quality, are evaluated according to personal perceptions of respondents that are mainly SME's in the case of Georgia. Their perception is not based on technical evaluation of different parts of country's infrastructure to determine its quality. Moreover, as the majority of respondents in Georgia's case are SME and not specifically active in transport and tourism sector. So, this positive perception having impact on Georgia's high score is indeed explained by the fact that Georgia pays utmost attention to the development of infrastructure and invests heavily in this area, in order to meet its policy objectives, increase country's attractiveness for FDI, reduce urban and rural disparities and fully utilize its significant transit as well as tourism development potential. However, it should be noted that compared to developed countries, Georgia's overall infrastructure quality is still insufficient.

Chart 26. Quality of Overall Infrastructure in Georgia and the Benchmark Countries (2009-2010 weighted average)



Source: Global Competitiveness Report 2010-2011

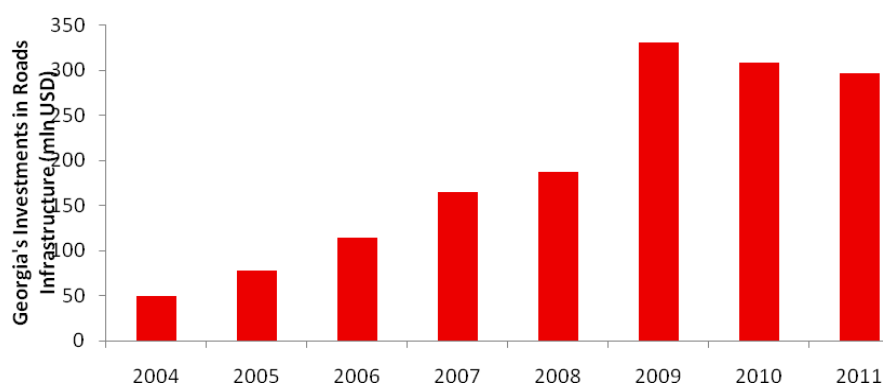
In addition to the assessment of the overall infrastructure, it is useful to look at the quality of roads infrastructure, as it is the main mode for cargo transportation in Georgia. Besides, as already emphasized above, development of roads infrastructure plays a key role in the regional as well as overall country's economic development and stability. The sections below describe the current level of development of roads infrastructure in Georgia and present cross-country comparisons in this regard.

1.1.3.1. Roads Infrastructure

1.1.3.1.1. Roads Quality

Overall length of roads in Georgia is 20 435 km, from which international roads equal to 1 563 km, internal roads – 5 446 km and local roads – 13 426 km. Starting from 2004, more than 1.5 bln. USD has been invested in roads construction and rehabilitation, from which only in 2010 investment (which also included budgetary sources, World Bank, ADB and other donor's funds) amounted to 417 mln. USD – 2.8% more than in 2009. (chart 27)

Chart 27. Georgia's Investments in Roads Infrastructure 2004-2011



Source: Ministry of Infrastructure and Regional Development of Georgia

Around 10% of roads and more than 115 bridges were rehabilitated or newly built over the last 2 years. These investments brought tangible results in terms of improvement of roads' condition. According to the assessment of the Ministry of Infrastructure and Regional Development of Georgia of Georgia (see Table 10 below), in 2010 82% of international roads, including 80 km of highway, are in good condition, compared to 34% in 2004. At the same time 29% of secondary roads (internal and local roads together) are also in a good condition compared to only 6% in 2004. This data shows that in 2004-2010, improvement of the condition of international roads was much more tangible than that of secondary roads. This is because at the first stage of infrastructure development, Government paid particular attention to major roads and highways among others with the purpose to increase Georgia's transit potential and facilitate access to main cities and centers of the country.

However, it has to be mentioned that the largest portion of roads in Georgia are secondary roads, constituting 93% of the overall road network. Therefore, bad or poor condition of 57% of secondary roads is a significant problem in terms of country's development that needs to be overcome.

Table 10. Roads Condition in Georgia 2004-2010

International Roads Condition				
Year / Quality	Good	Fair	Poor	Bad
2004	34%	23%	18%	25%
2009	80%	13%	4%	3%
2010	82%	13%	3%	2%

Secondary Roads Condition				
Year / Quality	Good	Fair	Poor	Bad
2004	6%	11%	13%	70%
2009	26%	12%	8%	54%
2010	29%	14%	9%	48%

Source: Ministry of Infrastructure and Regional Development of Georgia

When it comes to international roads, particularly important issue is the construction of East-West Highway, which is financed by budgetary sources, as well as World Bank, JICA and ADB credits. This highway connects east part of the country with the west part and Black Sea ports (Batumi & Poti) It also creates better quality connections between Georgia and its neighbors (Azerbaijan, Armenia and Turkey). The total length of the highway is approximately 420 km. Today, the highway is the backbone of Georgia's road infrastructure. Currently, construction of 80 km of the highway is completed. 15 km of highway construction, and rehabilitation of the tunnel connecting east and west parts of the country are ongoing.

The map below shows the completed and ongoing projects of roads construction and rehabilitation in Georgia

Picture 1. Georgia's Map of Roads



Source: Ministry of Infrastructure and Regional Development of Georgia of Georgia

The map above shows that a number of road projects, are ongoing or planned, but this mainly concerns international roads. Substantial investment is still required to upgrade the quality of secondary and alternative roads.

According to the estimations by the Ministry of Infrastructure and Regional Development of Georgia, in the mid-term period total investment need in road sector to construct international roads (309 km) and secondary roads equals to approximately 3 bln USD. From this investment 1.5 bln USD is needed for the reconstruction and rehabilitation of local and secondary roads and the rest of the investment is estimated for the construction of international roads.

Underdevelopment of secondary and alternative roads can create challenges not only for regional development but also for the country's security and stability. This has been vividly illustrated during the Russian invasion in 2008, when the communication between the West and the East of the country was effectively hindered by the Russian army, by blocking the East-West Highway – the main road across the country. This caused serious problems of supply not only for Georgia, but also for neighboring countries, and thus created a threat to regional stability. This example shows how important it is to develop alternative and secondary roads in the country for the development of Georgian regions, as well as the neighboring countries.

1.1.3.1.2. Roads Maintenance and Condition

In addition to the overall assessment of roads quality in Georgia, a number of international comparisons are presented in this regard to place Georgia in the wider context. One source for this purpose is Global Competitiveness Report as recommended by relevance MCC guidelines. It should be mentioned here, that certain rankings in this report are based on the executive opinion surveys, in which various Georgian firms participated, mainly SMEs (as classified by Georgian legislation). The questionnaire is built in such a way, that it does not differentiate between international and secondary roads. Moreover, the rankings reflect the perceptions of the individuals filling the questionnaire and do not represent a result of technical evaluation of roads' condition. As regards the data of the Ministry of Infrastructure and Regional Development of Georgia of Georgia (already presented above), it is based on the technical assessment of roads' condition. Therefore, this information represents a more precise picture of roads' condition in Georgia, compared to a survey depicting perceptions of respondents.

According to the Global Competitiveness Report, Georgia is above the average in terms of quality of roads compared to benchmark countries in 2009. Based on the ranking, Georgia's roads quality is scored by 3.9 and the country is on the 65th place (out of 139). With this score Georgia outperforms all benchmark countries (Table 11). Such an impressive performance by Georgia can be explained by substantially increased public investment in road infrastructure in recent years, which in turn clearly had an impact on the perception of business community surveyed by the GCR, without differentiating between various types of roads such as international and secondary.

Table 11. Roads Quality in Georgia and the Benchmark Countries

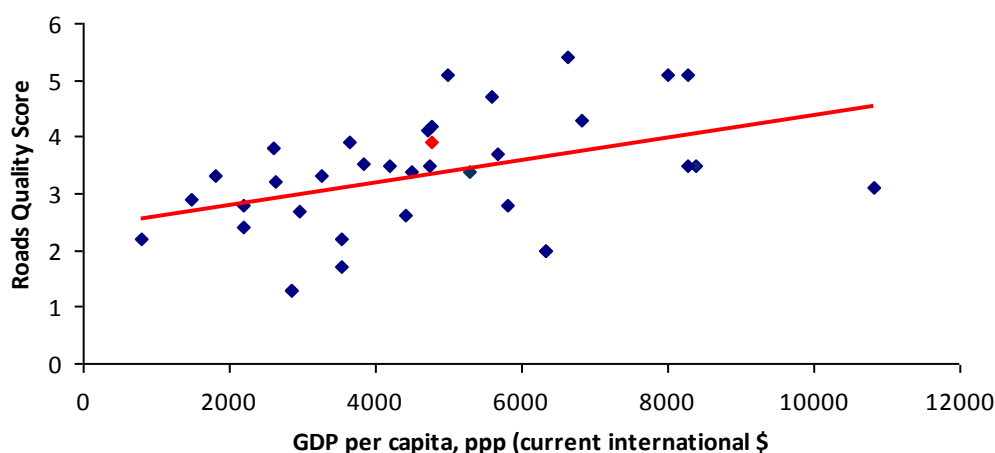
	Rank	Score	GDP per capita, PPP (2009)
Georgia	65	3.90	4774.11
FYR Macedonia	99	3.10	10822.75
Ukraine	136	2.00	6317.84
Armenia	87	3.40	5278.88
Moldova	139	1.30	2854.31
Albania	81	3.50	8372.98

Source: Global Competitiveness Report 2010-11

As mentioned above, in the contrast to the Global Competitiveness Report, data of the Ministry of Infrastructure and Regional Development of Georgia of Georgia make the differentiation between international and secondary roads condition (as presented above in the Table 11). These data shows that in 2010, condition of 57% of secondary roads is qualified as “bad” or “poor”. Overall the quality of secondary roads in Georgia is much worse than the quality of international roads.

The Core Team also made a regression to assess the relationship between roads quality score presented in the Global Competitiveness Report and country GDP per capita (PPP). For this purpose, the Core Team increased the sample and included more countries from the lower-middle income group (as classified by the World Bank) in addition to benchmark countries. As it can be observed from the Chart 16 below, Georgia is above the regression line, with the higher score in roads quality and rather low GDP per capita. Georgia's performance is close to average and from this pool of countries, Georgia is outperformed in terms of roads quality score by only few countries with rather similar GDP per capita (see Chart 28).

Chart 28. Roads Quality vs. GDP per capita, PPP



Source: Global Competitiveness Report 2010-11

The Core Team used several surveys to provide existing sentiments related to road quality in the country.

The Core Team looked at the population survey conducted in March, 2011. According to this survey, which covered 3 000 respondents, 26.2% of all respondents and 35.2% of respondents from the regions with geographic constraints, including mountainous regions, (the highest share in both cases) indicated poor quality of infrastructure including regional infrastructure as an impediment for economic development in Georgia. Besides, 56.3% of all respondents and 22.3% of those from the regions with geographic constraints, in both cases the highest share, indicated development of roads infrastructure as the most important factor for development of tourism and increase of investment inflows in Georgia.

Furthermore, 94.3% of all respondents and 92.2% of respondents from the regions with geographic constraints considered development of roads infrastructure as “very important” or “important”, respectively 66.3% of all respondents named as “very important” and 28% as “important” and 65.5% of those in mountainous regions named as “very important” and 26.7% as “important”.

According to the same survey, respondents outlined that development of roads infrastructure in Georgia will assist the development of regions (3.46 points out of 5), assist integration and development of distant regions (3.39 points) and facilitate goods transportation process (3.28 points). At the same time, respondents from the regions with geographic constraints also indicated that development of roads will assist development of regions (3.3 points out of 5), assist the integration of distant regions with the rest of the country (3.3 points) and facilitate goods transportation process (3.2 points).

The Core Team also used the Village Infrastructure Census of 2011, conducted jointly by MCG and Geostat. The census covered all villages of Georgia (except of the occupied territories). Respondents were asked to choose three of 18 priorities as most important and then rank those selected three priorities according to the level of importance for village development. According to the census, development of transport facilities and road infrastructure was ranked as the top out of the three most important priorities for village development by 33.1% of respondents. Besides, 17.4% of respondents named bad quality of roads as the second most important reason (out of 4) for inaccessibility to primary school facilities and 12.6% of respondents named the same indicator as the second most important reason (out of 6) for inaccessibility to primary ambulatory care facilities.

Poor quality of roads creates the high probability of road accidents and thus increases shadow costs. The Table 12 below shows the number of deaths caused by road accidents per 100 000 people. As the Table demonstrates, number of death incidents on secondary roads is much higher than the same figure for international roads. One of the explanations for such a big difference is indeed poor quality of secondary road infrastructure, especially against the background that regulation such as seat belt requirement or increased fines for violation of traffic rules, has been applied equally to traffic on international and secondary roads in recent years.

Table 12. Death Incidents in Georgia per 100 000 people 2004-2010

Year	Total Number	International Roads	Secondary Roads
2004	14.8	39.2%	60.8%
2005	13.4	38.4%	61.6%
2006	15.3	33.9%	66.1%
2007	16.8	38.9%	61.1%
2008	19.8	37.6%	62.4%
2009	16.9	40.2%	59.8%
2010	15.4	32.1%	67.9%

Source: Ministry of Internal Affairs of Georgia

As the analysis above revealed, Georgia makes significant efforts and investment in order to improve road infrastructure quality in the country. These efforts and investment in infrastructure development already brought some tangible results, in particular with respect to international road network.

As described above, a significant share of international roads are in good condition. However, based on the technical assessment by the Ministry of Infrastructure and Regional Development of Georgia, the level of secondary roads infrastructure development is still relatively poor. This was also clearly outlined by the population survey as well as Village Infrastructure Census. Underdevelopment of secondary roads hinders the overall development and integration of Georgian regions in trade and economic activities, limits population's access to markets, thus impeding the agriculture development in the rural areas, which as of now constitutes the main source of income for regional population. Poor quality of secondary roads also hinders development of tourism and attraction of FDI in this sector, thus preventing additional sources of income for regional population. Besides, poor quality of secondary roads further has its negative social impacts, such as limited access to health and education. All these impediments hinder development of Georgia's regions gradually widening the disparities between urban and rural areas.

As mentioned above, according to the estimations, in the mid-term period total investment need in road sector to construct international roads (309 km) and secondary roads equals up to 3 bln USD. This amount shows that further intensive efforts are required for this segment of physical infrastructure.

In order to summarize the roads infrastructure chapter, it can be concluded that if the construction and rehabilitation of roads in Georgia is not continued in a very intensive and vigorous manner, dedicating at least the same amount of resources as in previous years, in the medium and long term perspective this will cause significant problems for the country's development, thus creating a binding constraint for growth and development.

1.1.3.2. Energy

Energy independence and security is the crucial point for stable and sustainable development of any country. Therefore energy sector, if not developed to a sufficient degree, can be a serious constraint for the country. Georgia's case evidences that energy sector does not pose any threat for the country's development and is not a constraint for growth. Georgia's energy policy, sources of supply and export-import relations, prices, and quality of energy infrastructure are analyzed below.

Introduction

For an extensive period, Georgia suffered from energy deficiency, semi-permanent black-outs of electricity and high level corruption in the sector. However, as a result of implemented reforms in the sector, starting from 2004, within the period of only 3 years, Georgia turned from a country of energy-deficiency into a country with 24 hour electricity supply and started to even export electricity. Today Georgia is energy exporter to all its neighbors in the region, with significant potential to further increase export. The country has a potential to further export electricity to Turkey and Europe and thus, contribute to Europe's energy security. In 2010 the net export of Georgia reached the highest point for the past 20 years with 1.3 Tw/h which is 160% growth compared to the previous year. All this was achieved through the efficient fight against corruption in the sector, improved administration mechanisms and privatization of previously state owned energy companies.

Most importantly, a significant factor for the country's energy stability is its hydro resources. Georgia has one of the largest volumes of hydro resources per capita worldwide alongside with substantial untapped potential of renewable energy generation, out of which just 18% has been utilized so far. HPP green-field potential stands at 32TWh. Green energy comprises up to 90% of Georgia energy consumption. With the ongoing construction of additional infrastructure, Georgia is aiming at electricity, generated through hydro resources, becoming one of its main export items exporting electricity to more distant destinations.

1.1.3.2.1. Energy Independence and Stability

1.1.3.2.1.1. The level of stability of the energy sources

Georgia has made significant progress in ensuring stability of energy sources during the past couple of years, as it turned from a country with semi-permanent black-outs to a net electricity exporter. These changes were essential for the sustainable growth of the economy and increased levels of investment.

The Table 13 below shows how the energy stability indicators were evolving during the recent years. As it can be concluded from the Table, generation increased significantly, while the transmission losses were reduced.

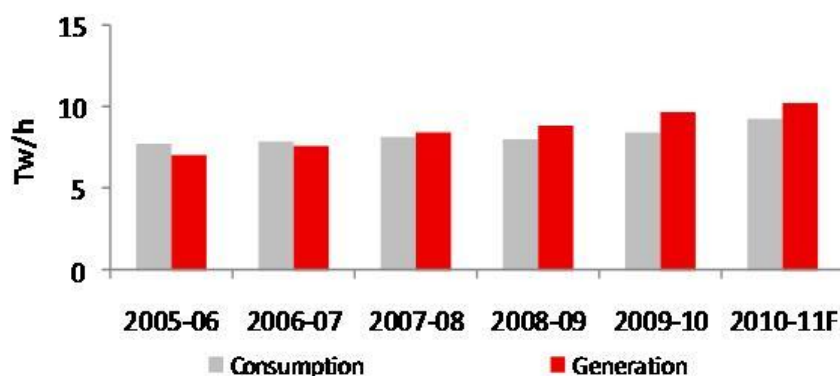
Table 13. Energy Stability Indicators for Georgia (2004-2010)

Tw/h	2004	2005	2006	2007	2008	2009	2010
Generation	6.9	7.0	7.6	8.4	8.6	8.9	10.1
Hydro	6.0	6.0	5.4	6.9	7.3	7.7	9.3
Thermal	0.9	1.0	2.2	1.5	1.3	1.2	0.8
Net Import	-1.2	-1.3	-0.7	0.3	0.3	0.5	1.3
Consumption	8.1	8.3	8.3	8.1	8.3	8.4	8.8
Distribution	5.7	5.9	5.9	5.9	6.0	6.1	6.4
Direct Customers	1.7	1.9	2.0	2.0	2.1	2.1	2.1
Transmission Losses	0.7	0.5	0.4	0.2	0.2	0.2	0.3
Consumption per capita (1000 kw/h)	1.8	1.8	1.84	1.9	1.9	1.95	1.97

Source: Ministry of Energy of Georgia

As it is demonstrated in the Chart 29 below, while up until 2007 Georgia consuming more than it generated and was import-dependent, the situation changed from 2007 and today Georgia generates more electricity and it consumes, and thus gradually increases its electricity export.

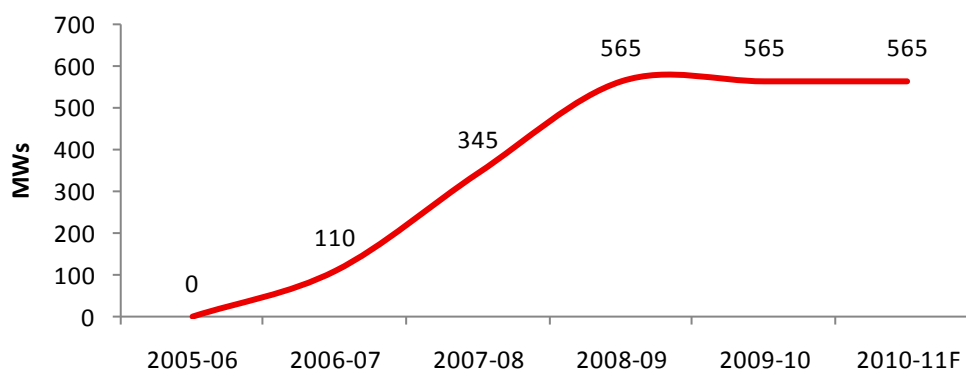
Chart 29. Electricity Balance of Georgia(2005-2011F)



Source: Ministry of Energy of Georgia

Moreover, the Chart 30 below shows that due to recent developments and electric power generation growth, Georgia has guaranteed certain reserve capacities, which become free capacities for exporting electric power.

Chart 30. System Reserve Capacity (Free capacity) of Georgia (2005-2011F)



Source: Ministry of Energy of Georgia

As for gas supply, it should be underlined that Georgia has secured a 10 year long-term contract for gas supply with Azerbaijan (Azeri Gas Company). Currently, there are three independent commercial sources of gas supply and three independent routs with spare capacity in the main pipeline system. Georgia does not receive any gas from Russia any more, as it turned out to be a very unreliable partner, interrupting several times gas supplies to Georgia. However, Georgia transits Russian gas to Armenia through existing pipelines system.

Long-term contracts mean price stability for Georgia, which is a significant factor contributing to the country's energy stability and thus stable economic growth and investment attractiveness.

In general, tariffs for energy in Georgia are market based in the deregulated areas. As for the regulated activities, it is calculated and approved by the independent regulatory body, Georgian National Energy and Water Supply Regulatory Commission, based on cost-based tariff methodology. Tariff increase mostly took place during the years 1999-2006 in parallel with significant and urgent investments in the energy infrastructure. But since then no significant tariff increase for the end users of the energy market took place and it is not expected in the coming years either.

The remarkable achievements in the energy sector mentioned above are the result of active deregulation policy undertaken by the Government during the last several years starting from 2004. In addition, state owned assets in the energy generation and distribution areas were privatized, mainly to foreign companies. Energy sector of Georgia is mainly privately owned and run now, which it turn increased efficient in the sector. Ownership structure of Georgia's energy assets looks as follows:

- **Generation** — 46 power plants are currently under private ownership of several companies, such as Inter-RAO (Russia), Energo-Pro (Czech Republic), EPC (China), and also German, Ukrainian and other foreign and Georgian companies.
- **Distribution** — is operated by 3 private companies: Inter-RAO, Energo-Pro and Akhema Group.
- **Transmission (HV grid)** — 2 companies operate in this area, one owned by the state and another by the state and Inter-RAO (50/50%).

1.1.3.2.2. Energy Infrastructure and Efficiency

1.1.3.2.2.1. Quality of the electric power supply infrastructure

Power supply infrastructure in Georgia covers transmission and distribution networks. Two basic parameters determine quality of power supplied to end users together with the duration for outages - frequency and voltage in the system, which is controlled online from the central dispatch center. HV transmission system operator since 2004 invested more than 200 mln. USD in the rehabilitation works including SCADA. As a result, losses are minimized and emergencies and system outages are reduced significantly.

As it was mentioned above, at the distribution level power supply for end-users is provided by 3 private companies. Since 1999 significant investments were made in medium and low voltage network rehabilitation and new constructions including individual re-metering (over 1 bln. USD). Today all customers throughout the country get 24 hour uninterrupted power supply of proper quality.

According to the data of Ministry of Energy in 2002 only about 30% of the customers were individually re-metered with the collection rate of 40%. By the end of 2010 almost 65 % of the customers are individually re-metered in the whole country and correspondingly collection rate is around 95 %. This is the collection rate from the billing. Re-metering is planned to be completed through 2013.

These achievements in the sector are subsequently reflected in international rankings. According to the Global Competitiveness Report 2010-11, Georgia has the highest score in electricity supply quality among the benchmark countries (See Table 14 below).

Table 14. Quality of Electricity Supply in Georgia and the Benchmark Countries

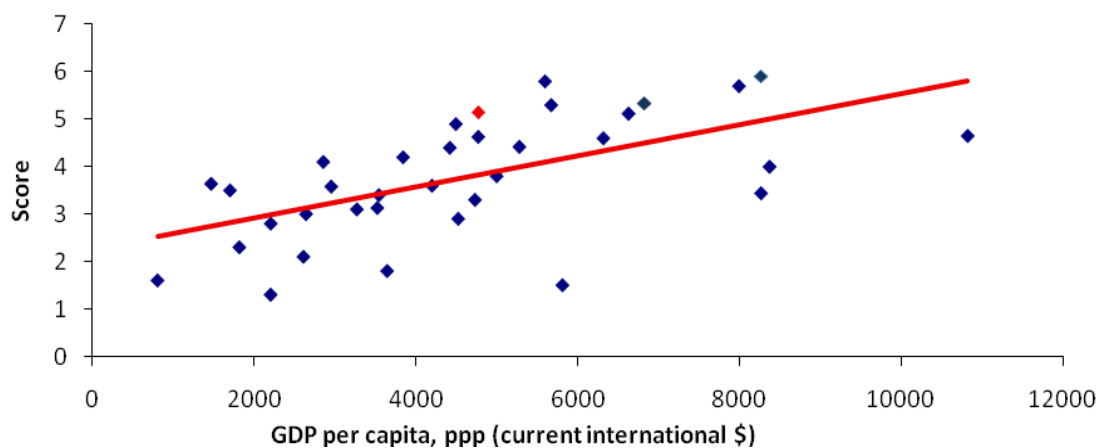
Quality of Electricity Supply			
Country	Rank	Score	GDP per capita, PPP (2009)
Georgia	58	5.15	4774.11
FYR Macedonia	72	4.62	10822.75
Ukraine	75	4.55	6317.84
Armenia	78	4.45	5278.88
Moldova	87	4.07	2854.31
Albania	90	4.00	8372.98

Source: Global Competitiveness Report 2010-11

Georgia's high performance is the result of recent investments in electricity infrastructure and Government's determination to provide high quality electricity to the population.

The regression line constructed on the basis of energy infrastructure quality and GDP per capita of benchmark countries and lower-middle income group (as classified by the World Bank) countries gives the indication for general adequacy of the energy infrastructure. (see Chart 31)

Chart 31. Quality of Electricity Supply vs. GDP per capita, PPP



Source: Global Competitiveness Report 2010-11

According to this Chart, Georgia's performance is high in energy infrastructure quality. Moreover, taking into consideration Georgia's GDP per capita (PPP) compared to other countries, Georgia is over-performing in terms of quality of its energy infrastructure.

During the recent years, GoG has invested heavily in the energy infrastructure, upgrading substantially the state owned infrastructure such as transmission lines and pipelines. Privately owned energy facilities were also upgraded by the private investors. In addition, significant amount of donors funds were invested in the rehabilitation of energy infrastructure. Extremely valuable input in this regard was made by the first MCC compact, which included the energy infrastructure rehabilitation project. The project aimed at rehabilitation of parts of North-South gas pipeline (22 parts in total). The project also undertook the pre-construction studies of the underground gas storage facility in Georgia with the aim to create strategic stocks of natural gas. The total budget of the project was 49.5 mln. USD.

In order to facilitate electricity export, in particular to Turkey, which has high demand, in 2009 Georgia started to construct a high voltage electricity transmission line to Turkey. The line is financed by a group of IFIs and plays a role of an important incentive for private companies interested in HPP construction and electricity export to Turkey. Since the start of high voltage line construction, private investment in Georgia's renewable (hydro) energy sector increased.

1.1.3.2.2. Energy Efficiency

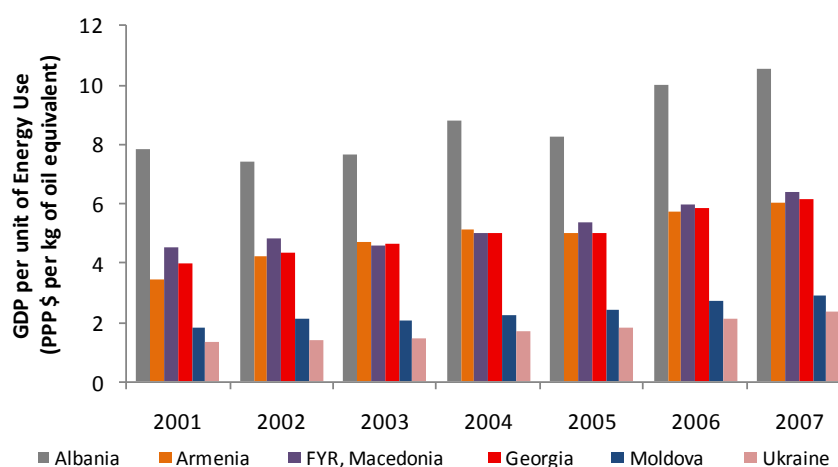
In order to evaluate the energy efficiency level of Georgia and compare it to benchmark countries, the latest available data of World Development Indicators was taken. According to the Table 15 and Chart 32 below, Georgia's performance in this indicator is above the average. Georgia is outperformed by Macedonia and Albania. As the Table 13 demonstrates, energy efficiency increased over the past years.

Table 15. GDP per Unit of Energy Use of Georgia and the Benchmark Countries 2001-2007

GDP per unit of energy use (constant 2005 PPP \$ per kg of oil equivalent)							
Country / Year	2001	2002	2003	2004	2005	2006	2007
Georgia	4.5	4.8	5	5.2	5	5.7	5.8
Armenia	3.9	4.7	5.1	5.3	5	5.6	5.7
Moldova	2.1	2.3	2.2	2.4	2.4	2.6	2.7
Ukraine	1.5	1.5	1.6	1.8	1.8	2.1	2.2

Source: World Bank, World Development Indicators

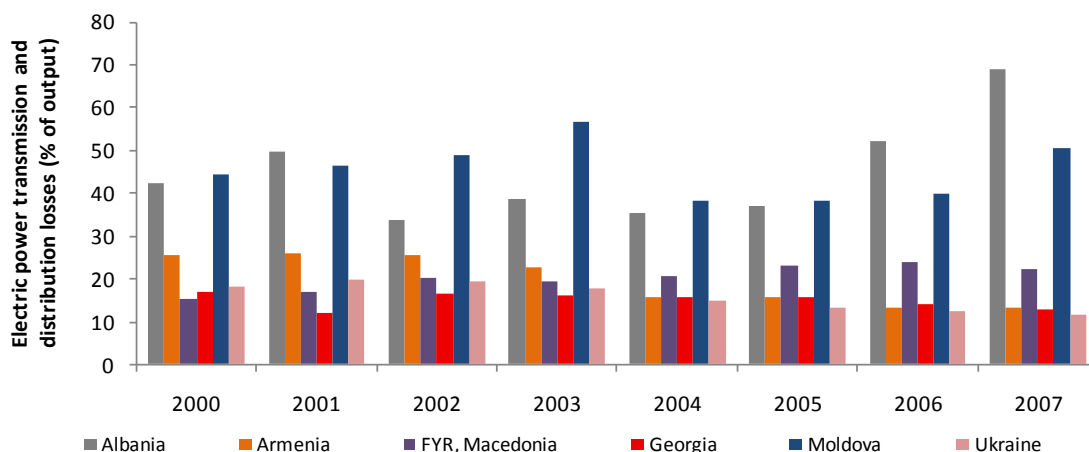
Chart 32. GDP per Unit of Energy Use (PPP \$ per kg of oil equivalent) of Georgia and the Benchmark Countries 2001-2007



Source: World Bank, World Development Indicators

Abovementioned significant rehabilitation works improved the quality of energy transmission system in Georgia. In order to evaluate this, the indicator of electric power losses was analyzed based on the World Bank data. According to these data, Georgia has quite low indicator of electric power losses during the transportation and, if compared with the benchmark country group. Nowadays, Georgia is among the most efficient countries in this respect with Ukraine having the lowest loss indicator (Chart 33).

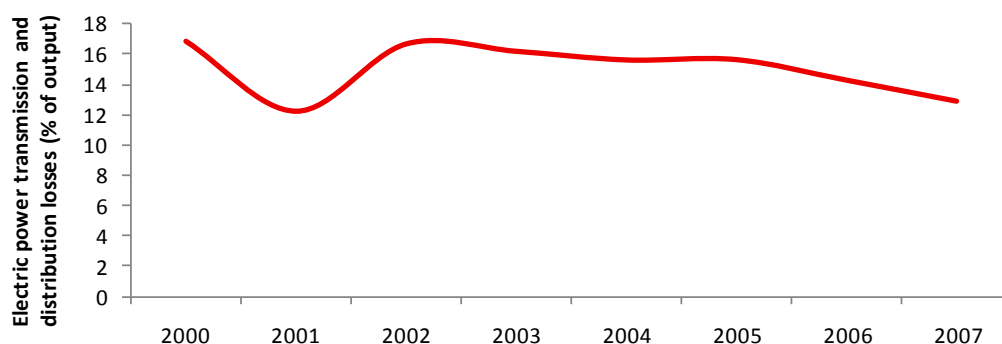
Chart 33. Electric Power Transmission and Distribution Losses (% of output) in Georgia and the Benchmark Countries 2000-2007



Source: World Bank, World Development Indicators

In addition to already mentioned indicators, the Chart 34 below shows that Georgia has decreasing electric power transmission and distribution losses during the recent years.

Chart 34. Electric Power Transmission and Distribution Losses in Georgia (% of output)(2000-2007)



Source: World Bank, World Development Indicators

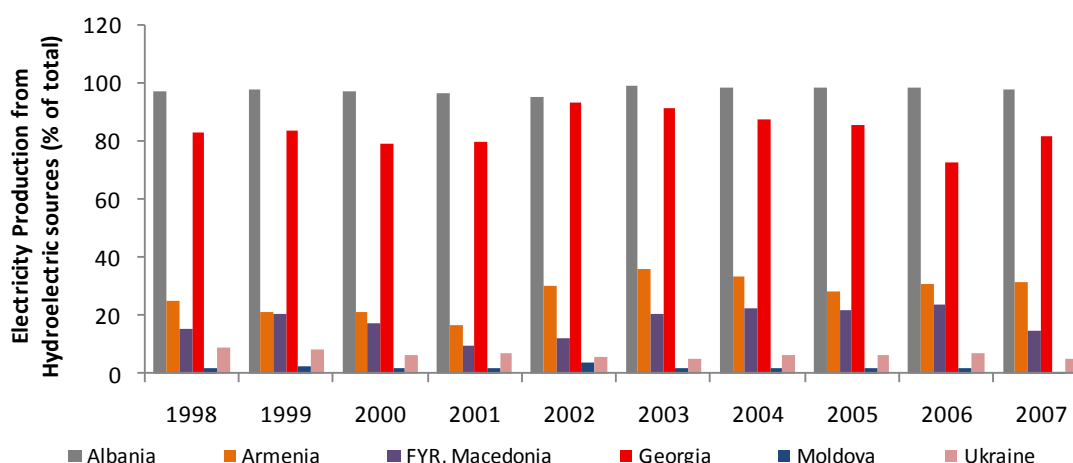
1.1.3.3.3. Energy Potential

1.1.3.3.3.1. Hydro Potential

Hydro resources take one of the first places among the natural riches of Georgia. There are 26 000 rivers on the territory of the country. Their total length is approximately 60 000 km. The entire fresh water supply of Georgia, which is made up of ice, lakes and water reservoirs, is 96.5 km³. Around 300 rivers are significant in terms of energy production. Their total annual potential capacity is equivalent to 15000 MW, while the average annual production equals to 50 mln KWh. This provides considerable potential for energy sector growth in the future.

The Chart 35 below shows the percentage of electricity production from hydroelectric sources of total production. Georgia is only outperformed by Albania in this regards, but compared to other benchmark countries it produces electricity from essentially high share of hydroelectric sources.

Chart 35. Electricity Production from Hydroelectric Sources (% of total) in Georgia and the Benchmark Countries 1998-2007



Source: World Bank, World Development Indicators

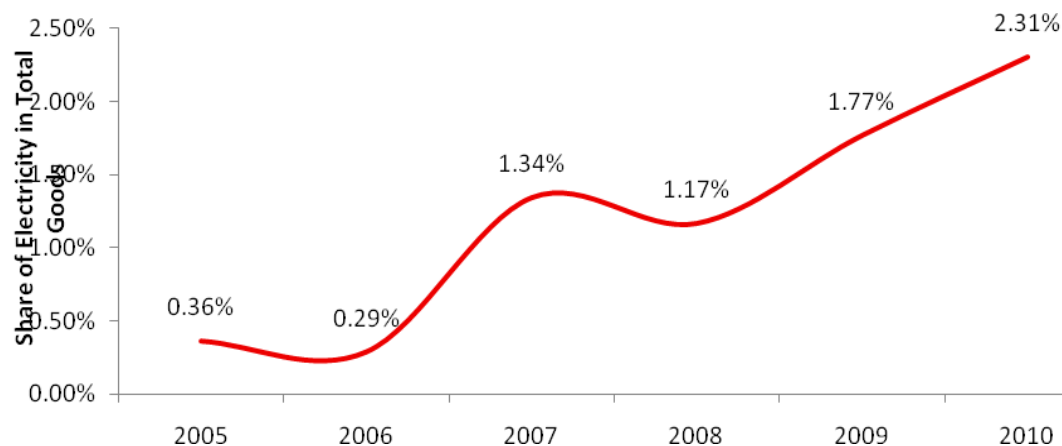
While analyzing the structure of electricity production sources, hydro resources remain the most promising source for the overall sector growth. Therefore, as Georgia has huge hydro potential most of which is still untapped (as mentioned above), the energy sector's future development perspectives tend to be quite optimistic.

1.1.3.3.3.2. Diversified Energy Sources and Export Destinations

Developments of recent years in the energy sector have been reflected in the increased levels of exported electricity share in the total export of the country. In 2010, this level reached more than 2% of Georgia's total export volume. With enlarged electric power generation capacity, Georgia has the potential to provide sustainable growth for this area of export in the future.

It is projected that electricity, generated through hydro resources, will gradually become one of Georgia main export items, with the utilization of country hydro potential and active promotion of investments in this area. (Chart 36)

Chart 36. Electricity Export of Georgia (2005-2010)



Source: Geostat

Increased private sector investment in the Georgian energy sector is an important development of recent years. In 2007 FDI in energy sector has been marked as 18% of total FDI in Georgia amounting 362 581 USD and this share increased in 2008 to up to 18.9%.

Another important component of energy sector development is the diversified energy sources, securing energy independence and stability of the country.

In order to summarize the overall condition of the Georgian energy sector, it can be concluded that the sector seems to be quite sustainable and promising for growth. As it was already mentioned above, last 5-7 years have been remarked with substantial changes in the energy sector. Nowadays, Georgia developed into an energy exporter country. Privatized energy companies and facilities with significant FDI inflows, strong governmental support for development of hydropower resources and increasing export destinations give profound base for new investments in the sector. The latter secures the growth of the sector and stable development, thus ensuring that energy is not a constraint for growth.

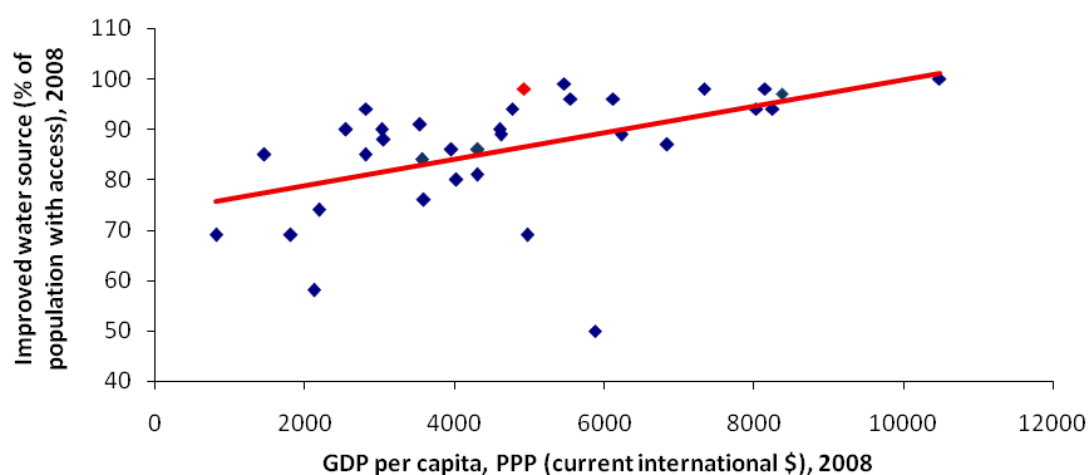
1.1.3.3. Water Supply Infrastructure

Access to water facilities remains a problem in Georgia, despite the fact that significant investments have been made in this area. This problem is even more evident in a number of Georgian regions, where water infrastructure is old and amortized and in some of them it doesn't exist at all. Development of water supply infrastructure can be considered as an impediment for steady development of the country, which needs particular attention from the government.

It is noteworthy that according to the World Bank data, 98% of Georgian population had access to water services in 2008. The World Bank indicator on improved water source (% of population with access) refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Therefore, this indicator mainly evaluates the access to drinking water, even including rainwater. Thus it does not capture the access to irrigation systems, which is a very important component of the water system and particularly relevant for agriculture development.

In order to better assess the situation regarding access to water services, the core team made a regression on percent of population with access to water services vis-à-vis GDP per capita (PPP). As the Chart 37 below shows, with its current indicator (presented by the World Bank) Georgia is above the regression line and demonstrates better result than majority of the lower-middle income group countries (as classified by the World Bank) but is still outperformed by benchmark countries Macedonia and Ukraine.

Chart 37. Access to Water Services vs. GDP per Capita for Georgia 2008



Source: World Bank, World Development Indicators

Government of Georgia pays particular attention to the development of water supply system, in order to increase access to the drinking water as well as irrigation systems. Government policy in water resource management includes:

- Increase of efficiency through private ownership. For this purpose, Tbilisi water Distribution Company was privatized and regional water companies are open for privatization.
- Improvement of water supply infrastructure through construction and rehabilitation of water and sewage systems. This process is financed by the state budget resources as well as various donors such as KfW, MCC, EIB and ADB.

The investment that has been provided in the Water Supply and Sanitation (WSS) during recent years, is insufficient and the need for additional investments still remains.

Until 2009, 66 water companies provided WSS services to local bodies across the country except Tbilisi and the peri-urban cities of Rustavi, Mskheta, and Gardabani, which were served by 4 independent water companies and were privatized in 2008 with the assets sold to the Georgia Water and Power Company. Institutional reforms in 2009 saw the unification of the 66 water companies into 3 companies – East, West and Adjara. Subsequently, in 2010, the Government further consolidated two water companies (East and West water companies) with the Water Supply Regional Development Authority forming the United Water Supply Company of Georgia (UWSCG).

United Water Supply Company of Georgia carries out rehabilitation and reconstruction of water supply and sewerage systems, as well as metering activities, using budgetary and donor funds. Progress has been achieved in this regard. As a result of significant investments in the area, water supply increased in many cities and regions of Georgia and according to latest data 88% of the urban population of the country has access to a piped water supply network. But situation is still problematic in the regions where UWSCG operates: 70% urban population has piped water supply and only 15% of the urban population in the same regions has access to a reticulated sewage disposal system. Additionally to this data, the Core Team also looked at the Village Infrastructure Census of 2011, conducted jointly by MCG and Geostat. According to the census 85.6% of village population has access to natural drinking water (well, natural spring and etc.) and for 14.4% in villages usage of water facility/service is not accusable. Although the access to drinking water increased significantly, this level of development is not enough for Georgia, which has the ambition to become the attractive tourism destination and in general, has tourism development as a policy objective.

Problems are mainly related to the existence of irrigation systems in the country. Underdevelopment of irrigation systems impedes the growth of agriculture sector in Georgia, which employs, in various forms, approximately half of Georgia's population (see agriculture overview in the general overview). Total agricultural land in Georgia amounts 800000 ha and only 180000 ha are irrigated so far. This means that 22.5% of arable land is irrigated and other 77.7% stays without centralized irrigation system. This data demonstrates, irrigation stays a serious problem for regional development.

Valuable contribution was made by the MCC financing water and sewerage systems rehabilitation in the regions of Georgia and 57.7 million USD was allocated for this purpose.

In 2011 was signed the loan agreement with ADB to fully rehabilitate water supply and sewerage systems in 6 big cities (Kutaisi, Poti, Zugdidi, Anaklia, Mestia, Marneuli). In the frame of the agreement is considered to provide investment with the total amount of 500 million USD. The rehabilitation works will start from 2011.

Also, EIB is investing more than 55 million USD, financing rehabilitation of water supply and sewerage systems in 28 municipalities of 7 regions. Tender procedures are completed and the rehabilitation works will start in the near future.

As it can be concluded from the analysis, water supply infrastructure remains a problem and a constraint for growth in the country despite the fact that much has been already done in this sector. Georgia invested a certain amount of resources in water infrastructure in recent years. However, this sector, in particular irrigation systems, is still insufficiently developed to serve the needs of agriculture development. The government has a plan to address the issues through privatization and public private partnership schemes on the one hand, and through budgetary allocations in the period before the establishment of private schemes.

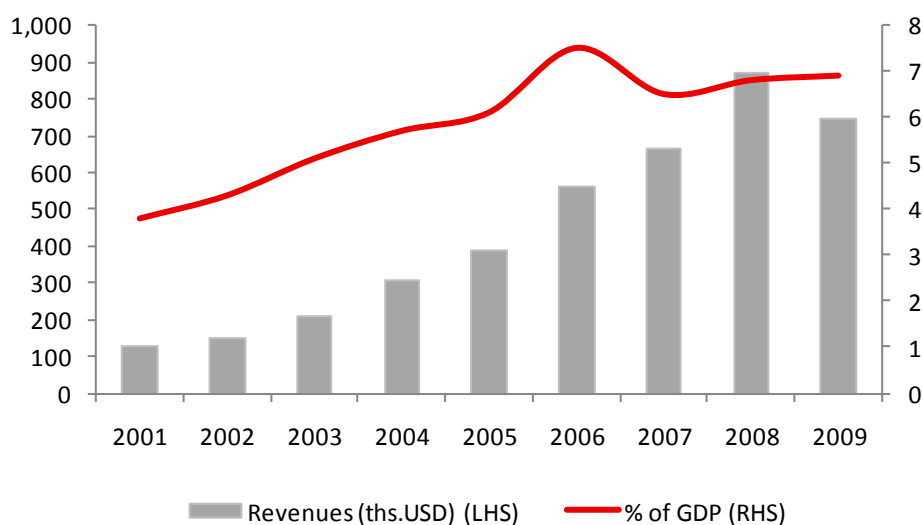
1.1.3.4. Telecommunications

Georgian telecommunications infrastructure is fairly modern and sophisticated for a small emerging economy such as Georgia and compared to benchmark countries. However, communications sector in the country needs further active development in order not to become an impediment for growth and development.

During the recent years, communications sector was one of the fastest developing segments of Georgian economy and this development included both reduction of costs and improvement of quality. Over the last several years it has been one of the main contributors to the overall economic growth, showing one of the highest growth rates among the sectors of economy - on average 13% in the period from 2004 till 2009. Besides, the communications sector was characterized with significant FDI inflows during the recent years.

Overall revenues of communications sector were increasing over the years as well as the share of revenues in GDP. Namely, since 2000, the share of revenues of the electronic communications service in the GDP was marked with a sustained increase. It grew from 3.8% in 2001 to 7.5% in 2006. In 2007, however, this indicator decreased against an unprecedented GDP increase in that year. The indicator increased again in 2008. The trend was similar in 2009 as well, however against the background of GDP decrease (see Chart 38).

Chart 38. Revenues of Georgia's Communications Sector 2001-2009



Source: Georgian National Communications Commission

Growth in the sector had a broad base that is well reflected in the numbers of telecommunication service subscribers. For example, the number of fixed network subscribers increased by 52.5% in 2005-2009. The growth tendency is even more evident for the mobile network subscribers in Georgia, the number of which increased by 165.8% in the same period.

The communications sector in Georgia is currently regulated by the national regulator, Georgian National Communications Commission (GNCC), and governed by the Law on Electronic Communications, which was adopted in 2005. The GNCC is an independent sector-specific regulatory authority, established in 2000. Its main functions relate to licensing, spectrum monitoring, tariff setting in regulated areas, maintenance of a competitive environment, and other technical aspects connected to the communications sector. The Department for Communications, Information Technologies and Innovation in the Ministry of Economy and Sustainable Development is responsible for the development of policy in the sector.

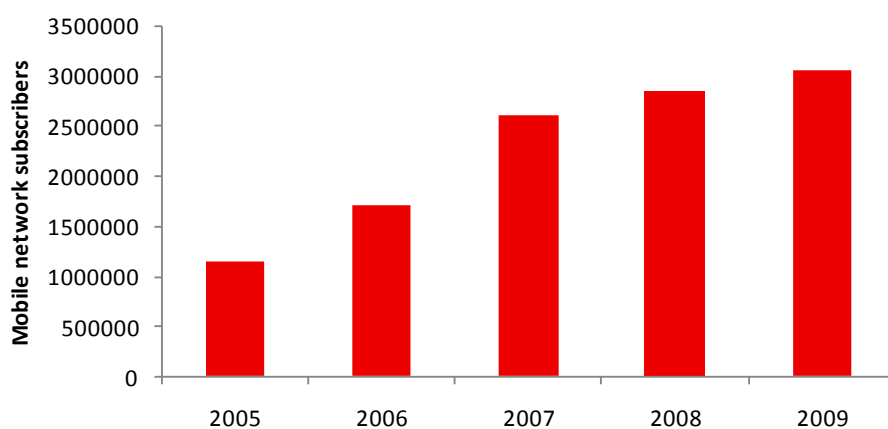
Below different segments of telecommunications sector are analyzed, which give the overall picture of sector development in the country.

1.1.3.4.1. Mobile Telephony

The mobile telephone industry is one of the fastest growing segments of communications market of Georgia. In 2008, penetration rate of mobile network subscribers was about 60%, up from about 10% penetration rate in 2002. Such a considerable growth of the market was stimulated by increased competition among the operators, all of which are private. Currently three companies operate on mobile telephony market of Georgia.

Number of subscribers of mobile network was increasing over the years and their total number exceeded 3 mln. in 2009, which is 68.2% of total population.

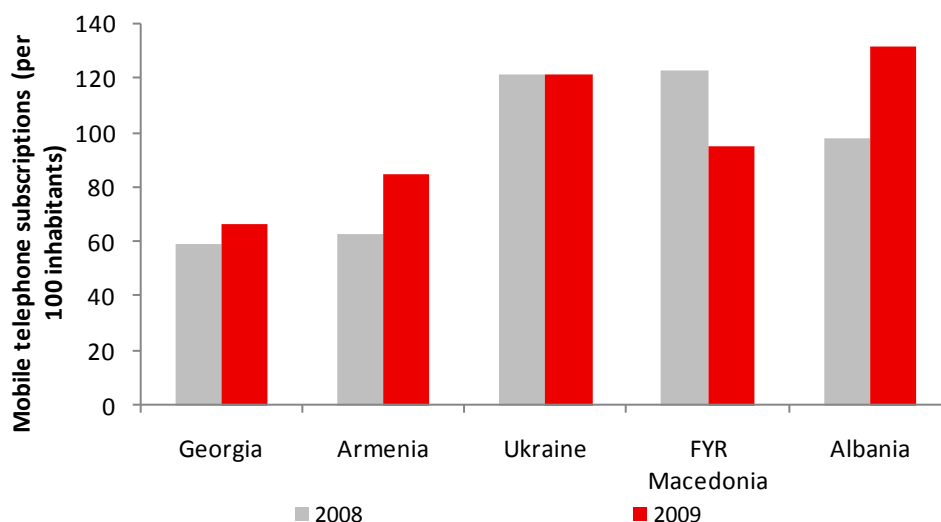
Chart 39. Mobile Network Subscribers in Georgia 2005-2009



Source: GNCC

According to the Chart below, Georgia's performance in mobile telephone subscriptions per 100 inhabitants is poor compared to benchmark countries. However, the situation in this area is improving very fast and there is a strong expectation that data of 2010 shows even better trend in this regard (the data of 2010 is not available yet).

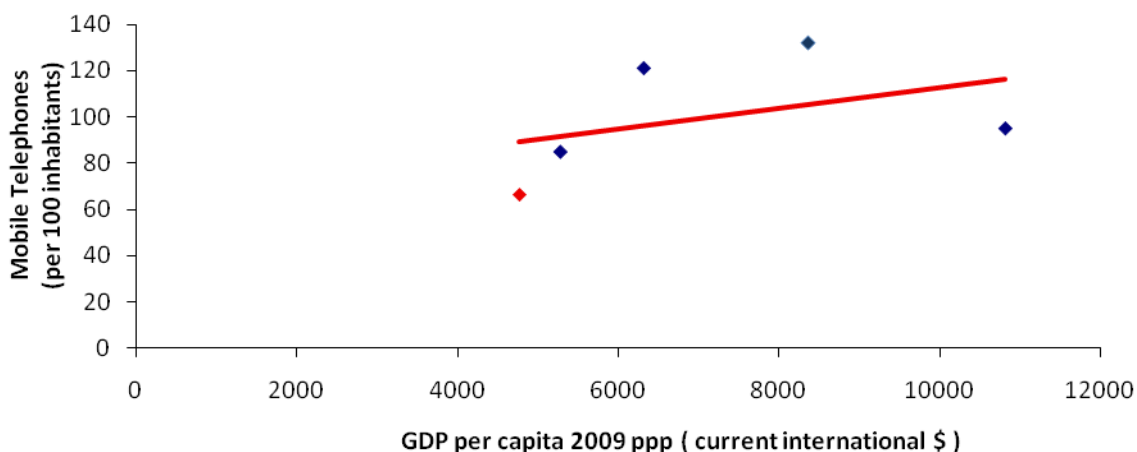
Chart 40. Mobile Telephone Subscriptions (per 100 inhabitants) in Georgia and the Benchmark Countries 2008-2009



Source: Global Competitiveness Report, World Economic Forum

As for the cross country analysis on the relationship between the number of mobile telephone subscriptions per 100 inhabitants and GDP per capita (PPP), the picture shows that Georgia is below the regression line and performs worse than benchmark countries (Chart 41).

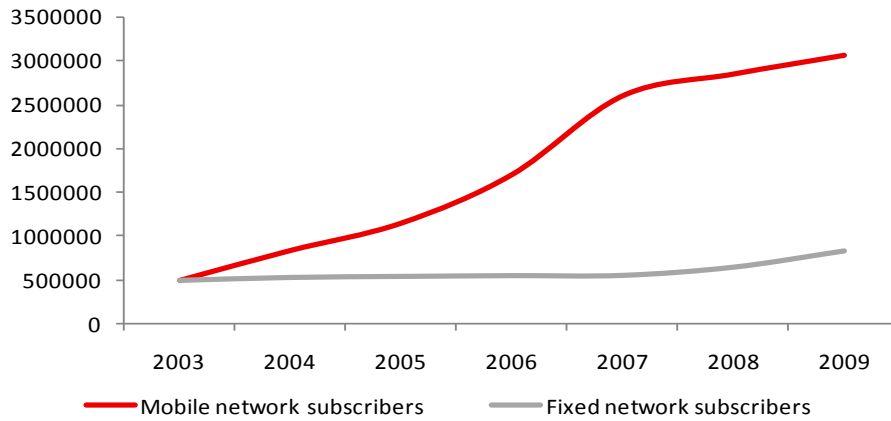
Chart 41. Mobile Telephone subscriptions (per 100 inhabitants) VS GDP per capita (PPP)



Source: Global Competitiveness Report 2010-2011, World Economic Forum

Number of the mobile network subscribers exceeded the number of those of fixed network subscribers as early as in 2003. Difference between them is substantial despite the fact that against the background of development and extension of the wireless fixed technologies, the number of the wireless fixed network subscribers grew, leading to the increase of the total number of fixed networks subscribers.

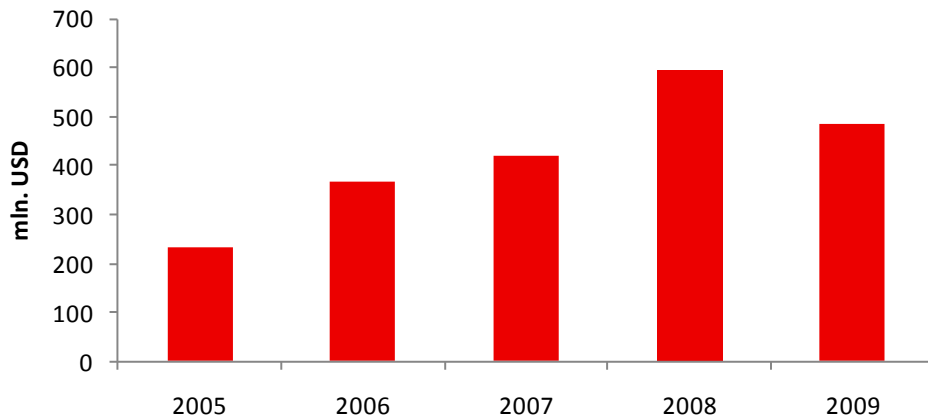
Chart 42. Subscribers of Mobile and Fixed Networks in Georgia 2003-2009



Source: GNCC

Revenues from mobile telephony have been increasing during the recent years. Slight decrease in 2009 did not have much impact on the share of the segment in total revenues of communication sector.

Chart 43. Revenues of Mobile Telephony in Georgia 2005-2009



Source: GNCC

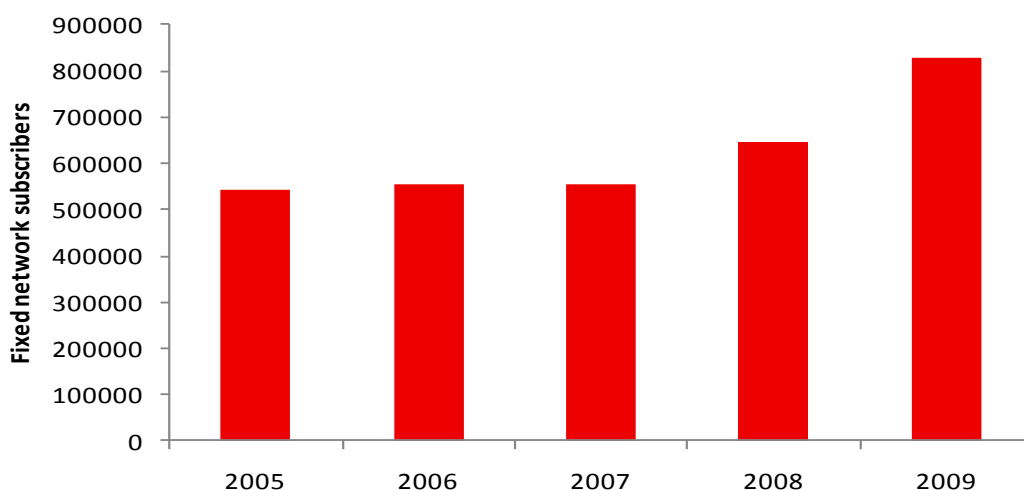
It is noteworthy that monthly revenues of mobile communication service per subscriber reduced from approximately 29.3 USD in 2000 to 13.2 USD in 2009, due to the reduced costs of communication.

1.1.3.4.2. Fixed Telephony

Fixed telephony sector appears to be one of the less developed segments of telecommunications market in Georgia although this segment is developing faster compared to previous years. Despite the fact that number of subscribers of fixed telephony was increasing during the recent years, network coverage is limited, especially outside the big cities and in rural areas. The situation improved in the last years following the privatization process in the sector, increase of competition on the fixed telephony market, and introduction of new services, such as fixed wireless networks. Currently, fixed telephony services in Georgia are divided into fixed wire telephony and fixed wireless networks. Introduction of fixed wireless networks significantly improved the coverage in the country and subsequently increased the revenues from this segment of electronic communications. This innovation also increased the competition on the respective market.

According to the statistical data, only in 2009 compared to 2008, number of fixed telephony subscribers increased by 28%, which is mainly caused by increase of the number of wireless network subscribers (Chart 44). Namely, in 2009, almost 170.000 new subscribers were connected to the fixed wireless network.

Chart 44. Fixed Network Subscribers in Georgia (2005-2009)



Source: GNCC

As for the revenues from fixed telephony, in 2009 compared to the previous year this indicator increased by 11.6%. While revenues of fixed wire networks increased only slightly, increase of revenues from the fixed wireless networks was significant.

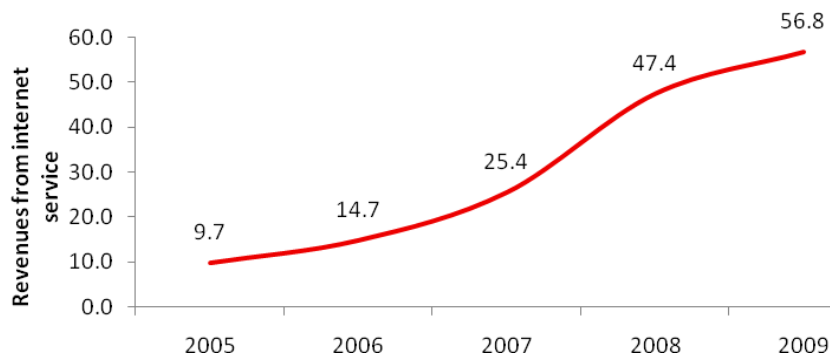
The number of the fixed network subscribers per 100 inhabitants reached 19.3 in Georgia. The relatively limited availability of fixed wire telephony is a result of Soviet legacy. Those who buy fixed phone now, opt for more flexible and up-to-date technologies such as fixed wireless telephony and mobile communication. Accordingly, companies in the sector show a preference to invest in the latter types of communication.

1.1.3.4.3. Internet

Internet market is a fast-growing segment of the communications market of Georgia. The major holders of internet resources at the national level are 4 private companies. Internet services are provided through various types of fixed wire networks (DSL, fiber optical cables and dial-up), wireless fixed network (CDMA 1x, Ev-Do, Wimax) and mobile communication network (GPRS, WAP/GPRS, Wimax, HSDPA).

As the Chart 45 below shows, revenues from this segment have been increasing over the years.

Chart 45. Revenues from Internet Service in Georgia 2005-2009

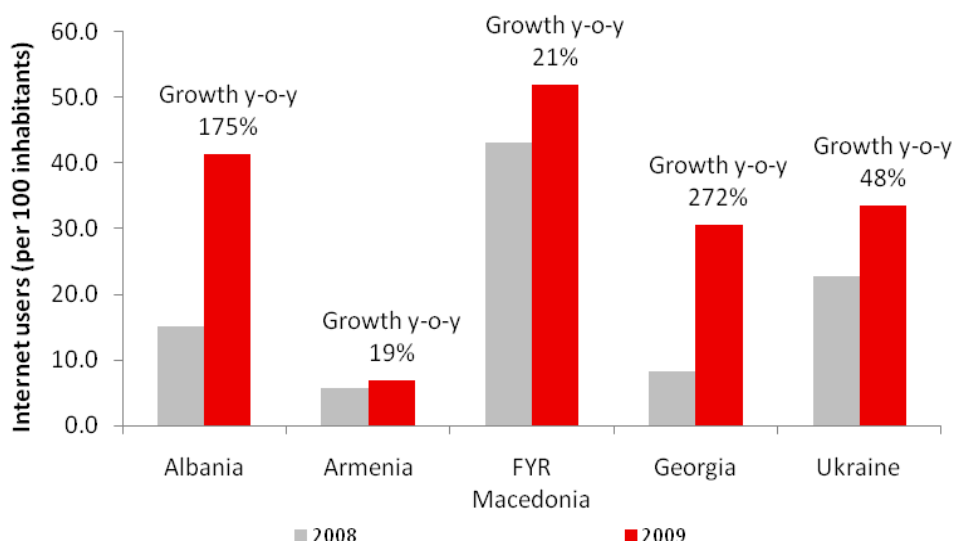


Source: GNCC

Subsequently was increasing the number of internet service users and for 2009 it reached 497.4 thousand people (both mobile and fixed internet users).

According to the data of Global Competitiveness Report, Georgia's performance in internet users indicator is second worst (after Armenia) compared to the benchmark countries. However, based on the same data, the situation is improving. Georgia showed the largest improvement in this indicator in 2008-2009. (see Chart 46)

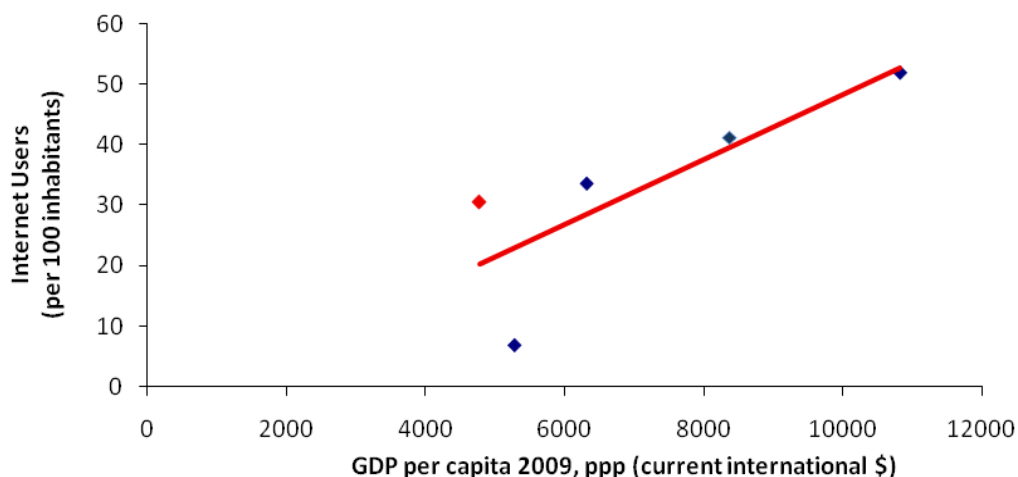
Chart 46. Internet Users per 100 inhabitants in Georgia and the Benchmark countries 2008-2009



Source: Global Competitiveness Report, World Economic Forum

As for the cross country analysis on the relationship between the number of internet users per 100 inhabitants and GDP per capita (PPP), the picture shows that Georgia is above the regression line, but performs worse compared to benchmark countries.(see Chart 47

Chart 47. Internet Users (per 100 inhabitants) vs GDP per Capita (PPP) for Georgia



Source: Global Competitiveness Report 2010-2011, World Economic Forum

Although Georgia ranks comparatively low in the group of benchmark countries in this indicator, the trend of development of the communications sector is clearly positive, considering the rapid growth rates, increasing competition and availability of the latest technologies in the country. Therefore, it can be concluded that potentially communications does not represent a constraint to economic growth. Government's open and liberal policy in the sector and an increasing number of private operators provide sufficient ground for positive outlook for communications sector growth.

Infrastructure Summary

In order to summarize the infrastructure part, it can be said that during the recent years, Government of Georgia has invested heavily in the infrastructure development in order to meet the country's development objectives. Improved regulation and extensive privatization policies in certain sectors of infrastructure, such as energy and water, increased competition and thus generated growth of the market, attracting more and more investors. The sector of telecommunication has also seen growing competition and thus increased number of services as well as subscribers. Whereas the energy sector has experienced most impressive experienced and energy does not pose a constraint to growth and development, water and communications are still in the process of development. Although these sectors demonstrate impressive growth record, Georgia does not perform sufficiently well compared to the group of benchmark countries. However, optimistic growth prospects and Government investment policies (the latter in particular in the water sector) provide positive signs for further development of these sectors.

The situation in the road infrastructure is somewhat different. Although Government has been studying various schemes of public-private partnership, the road network of Georgia is entirely state-owned. As of now, it is up to the Government to continue investing in road infrastructure, through mobilizing both state and donor funds.

Although substantial investment in road infrastructure was made starting from 2004, increasing investment is still needed in the years to come. If this is not the case, underdeveloped road infrastructure, in particular secondary road network will become a serious constraint for growth and development.

The relevance of road network development in Georgia has several dimensions, most importantly regional development and decrease of disparities between the center and the regions, better integration of rural population into economic and social progress of the country, tourism development, which is one of Georgia's key priorities, and agriculture development, in particular against the background that approximately half of Georgia's population is employed in agriculture, mainly in rural areas.

1.1.4. Is it Innovations?

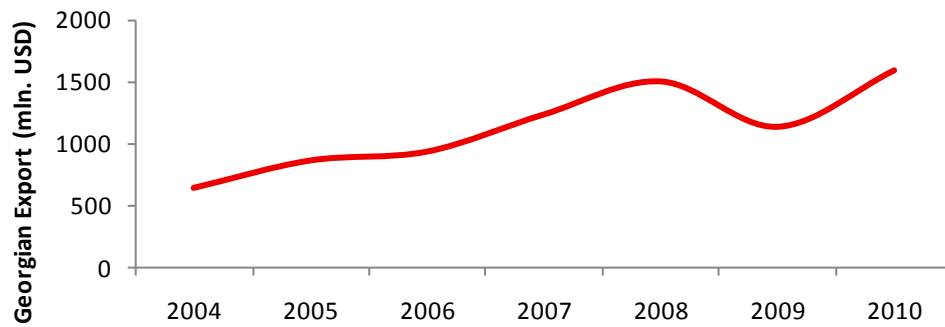
Development of high-technology and high-skilled production and export is one of the key contributors to development and robust economic growth. The analysis below illustrates that there is a lack of innovations in Georgia, which creates a constraint for the country's long-term sustainable development, and tries to identify its reasons.

1.1.4.1. The Export Basket Size and Composition

To illustrate to what extent Georgia has innovative capacity, the analysis looks at the development of Georgian export over the recent years with a particular emphasis on the export basket composition and diversification. It can be assumed that the more diversified the export basket, including value added products, the higher the level of innovative capacity.

Georgian export shows steady growth over the last years. Between 2004 and 2008 Georgia's export grew on average by 24%. Following the August 2008 war with Russia and the global financial crisis in 2008, export reduced, but according to the data of 2010, showed recovery and growth of 40% compared to the previous year (Chart 48). This increase of Georgian export is mainly caused by the diversification of export markets as well as export composition by product. It should be noted that the share of the biggest export item (ferro-alloys) in the total Georgian export is only 16.7% in 2010, while the share of Georgia's biggest trade partner (Turkey) in total trade turnover is 16.5%. There is no substantial dependency on any particular export market or export product, which in its turn contributed to Georgia's relative economic resilience even under the conditions of the global financial crisis.

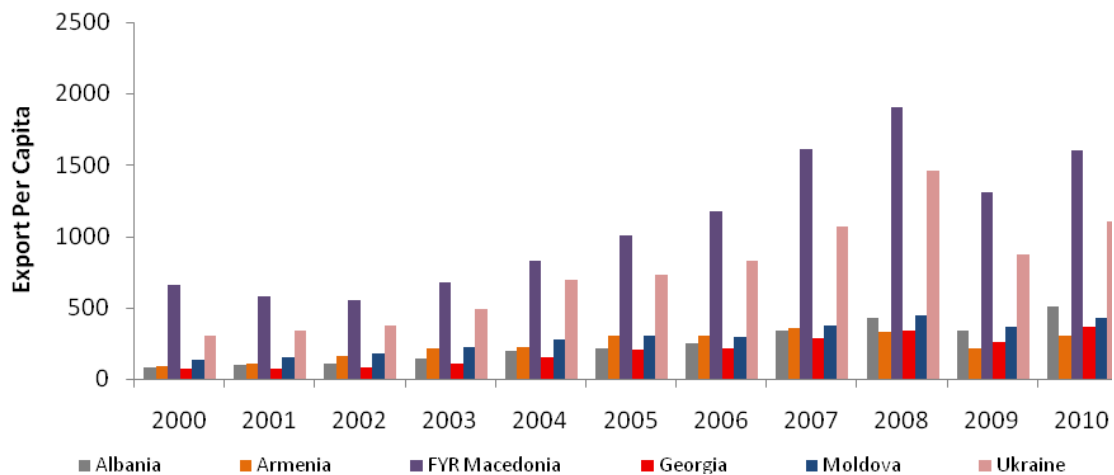
Chart 48. Georgian Export 2004-2010



Source: Geostat

To make international comparisons The Core Team has looked at the export per capita data, which shows that Georgia has the worst or the second worst performance among benchmark countries (see Chart 49).

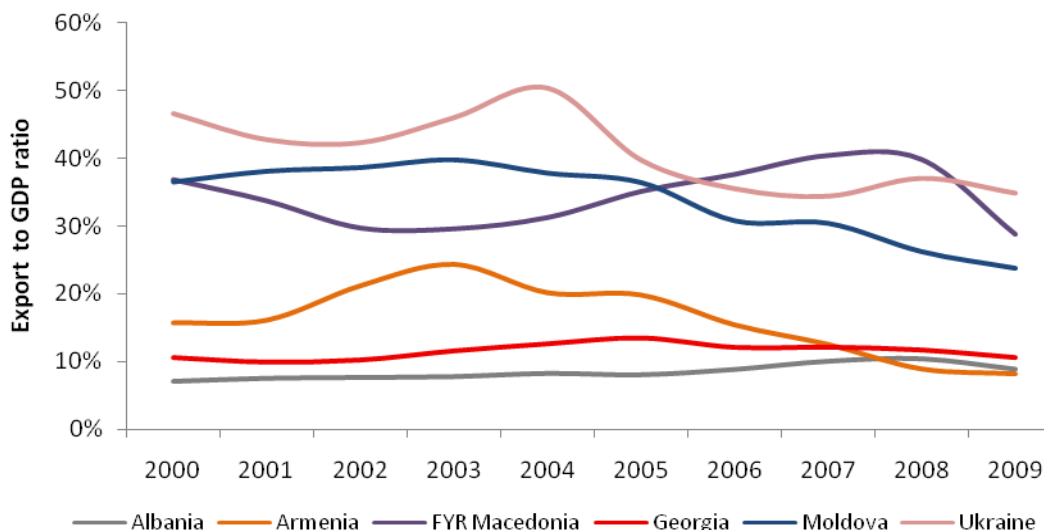
Chart 49: Export per Capita of Georgia and the Benchmark Countries



Source: UNCTAD STAT

Another comparison that indicates a country's export performance is Export to GDP ratio. Considering benchmark country data, Georgia has the second worst ratio after Albania. (See Chart 50)

Chart 50. Export to GDP Ratio for Georgia and the Benchmark Countries 2000-2009



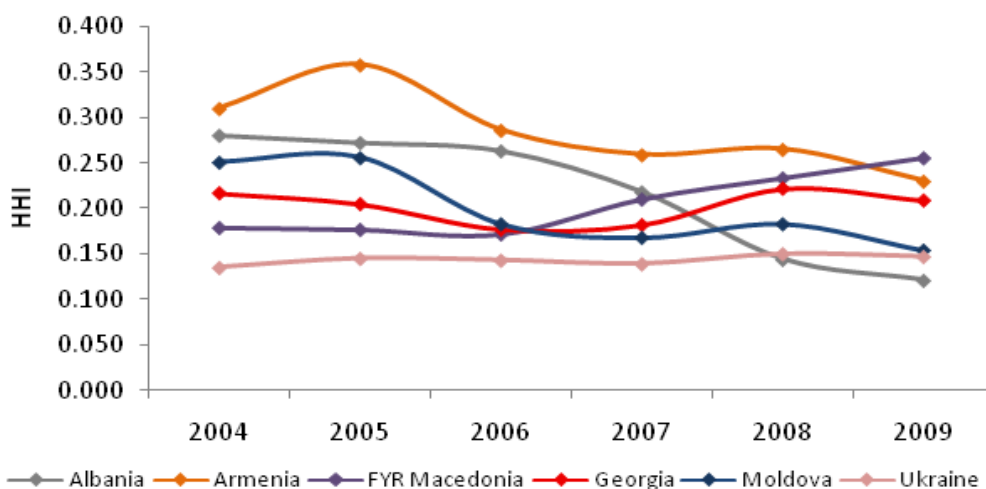
Source: UNCTAD STAT, IMF

These Charts do not present sufficient evidence to judge the level of export sophistication of a country. Without looking deeper into the export sophistication level, this info merely gives general description of Georgia’s export volume compared to benchmark countries.

In order to better analyze the diversification level of Georgian export and compare it with benchmark countries, the Herfindahl-Hirschmann Index (HHI) was taken, measuring the export concentration level. The index varies from 0 (not concentrated) to 1 (highly concentrated). Latest data available is for the year 2009 when Georgian HHI was 0.208. In 2008 this index was 0.221, the highest point from 2004 till now.

When compared with benchmark countries, Georgia’s performance the average of the group, as the Chart 51 below demonstrates. Despite the fact that Georgia does not perform particularly bad when placed in the group of benchmark countries, further diversification of it would be a positive development.

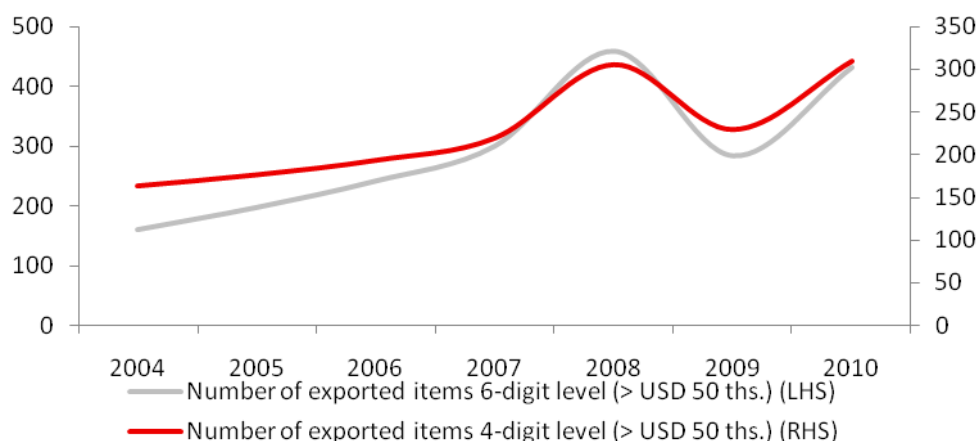
Chart 51. Herfindahl-Hirschmann Index for Georgia and the Benchmark Countries 2004-2009



Source: UNCTAD STAT

The Core Team also looked at the number of exported items over the years. According to the data of National Statistics Office of Georgia (Geostat), starting from 2004, number of exported items both on 4 and 6 digit levels has been gradually increasing, having the reduction tendency in 2009. However, after the short decline, in 2010, this indicator again showed increase. The Chart 52 below shows the development trend in the number of exported goods on 4 and 6 digit levels, with the value of over 50 thousand USD.

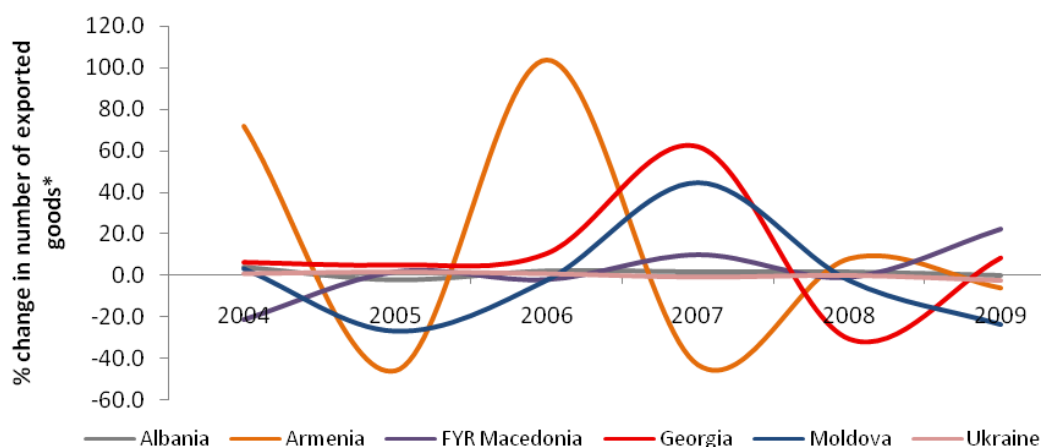
Chart 52. Number of Exported Items in Georgia 2004-2010



Source: Geostat

The comparison between Georgia and benchmark countries in the indicator of percent change in the number of exported goods shows that prior to 2008, Georgia's performance in this indicator was better than most of the benchmark countries. After the reduction in 2008, this tendency continued in 2009, where Georgia is outperformed only by Macedonia in this indicator (see Chart 53 below).

Chart 53. % Change in Number of Exported Goods for Georgia and the Benchmark Countries 2004-2009*



*3 digit level, value > 100.000 dollars or > 0.3% of total national exports

Source: UNCTAD STAT

Besides the abovementioned, it is useful to look at the composition of top-10 exported items. Based on the data of Geostat, during the recent years composition of top-10 Georgian export items on 4 digit level has been changing gradually. Compared to previous years, such industrial goods as cement, ethyl alcohol and other spirituous beverages and mineral waters moved to the top of the export list. In 2005 ethyl alcohol and other spirits were placed among top-10 Georgian export items, while mineral waters were moved to this list in 2006 and the next year 2007 – cement has become one of the top-10 exporting item of Georgia. (As for 2010, electricity emerged as one of the top export items (Table 16).

When analyzing composition of Georgian export, we have to pay particular attention to the fact, a number of high-technology export goods such as motor cars and aircrafts, are not produced in Georgia even if the statistically appear on the export product list. Aircraft or car production companies do not exist in Georgia. Cars appear in export statistics because Georgia is increasingly used as a regional distribution hub by foreign companies, which means foreign cars are imported to Georgia and then exported to neighboring countries of the region, thus been included in the list of exported items from Georgia. As for aircraft, Georgia has been doing repair works for air companies of CIS countries, but no production of aircraft. It should also be emphasized that these goods have one of the highest share in terms value in the total Georgian export. Excluding them from statistics would provide a completely different picture.

Table 16. Top Exported Goods from Georgia 2004-2010

2004		Rank	2010	
Item	Share in total (%)		Item	Share in total (%)
Ferrous waste and scrap	14.8	1	Ferro-alloys	16.7
Aircraft, spacecraft and spacecraft launch vehicles	13.0	2	Motor cars	14.4
Wines	7.5	3	Ferrous waste and scrap	6.9
Ferro-alloys	6.6	4	Gold	5.4
Sugar and chemically pure sucrose	5.3	5	Mineral or chemical fertilizers	4.6
Copper ores and concentrates	4.9	6	Copper ores and concentrates	4.5
Mineral or chemical fertilizers	4.4	7	Nuts	4.0
Wheat and meslin	3.5	8	Ethyl alcohol and other spirituous beverages	3.4
Mineral waters	3.0	9	Copper waste and scrap	2.6
Ethyl alcohol and other spirituous beverages	2.9	10	Wines	2.5
Gold	2.9	11	Electricity	2.4

Source: Geostat

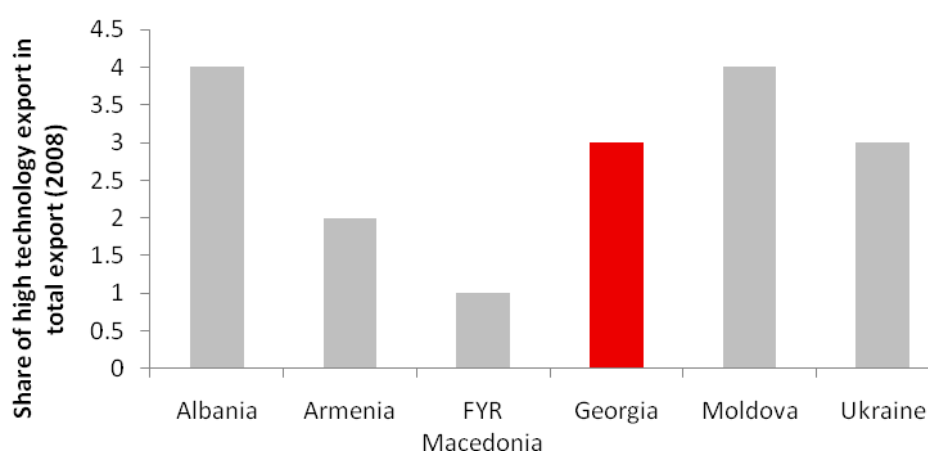
1.1.4.2. Export Sophistication level

In addition to the analysis of the growth and level of diversification of Georgian export, it is important to see how sophisticated export is. According to general trade theory, a country's export basket should reflect its endowment and technology capacity. Advanced countries, with superior technology, are expected to export more sophisticated goods such as electronic machinery. Less developed countries, with inferior technology, are expected to export less sophisticated goods.¹⁷ As it is demonstrated in this and subsequent chapters, the above mentioned general rule works in Georgia's case. It becomes obvious from the analysis of Georgia's export basket, top 10 export items are mostly low and medium technology goods, especially if we exclude high-technology items such as aircraft and cars, which are not produced in Georgia, but only transited.

As there was not enough data available to calculate EXPY index, in order to measure export sophistication level, the Core Team took the World Bank latest available data on the share of high technology (HT) export in total export. According to the World Bank data of 2008 (see Chart 54), Georgia's performance in this indicator is not very low compared to benchmark countries and in some cases is even high compared to bigger and more industrialized economies in the benchmark country group such as Ukraine.

However, considering the explanation presented above on some of the high-technology items listed in Georgian export, which in fact are not produced in Georgia, it can be concluded that the available World Bank data fails to capture this important aspect when analyzing the share of high technology export in total export of Georgia. In reality, this indicator seems to be much lower.

Chart 54. Share of High Technology Export in Total Export for Georgia and the Benchmark Countries (2008)

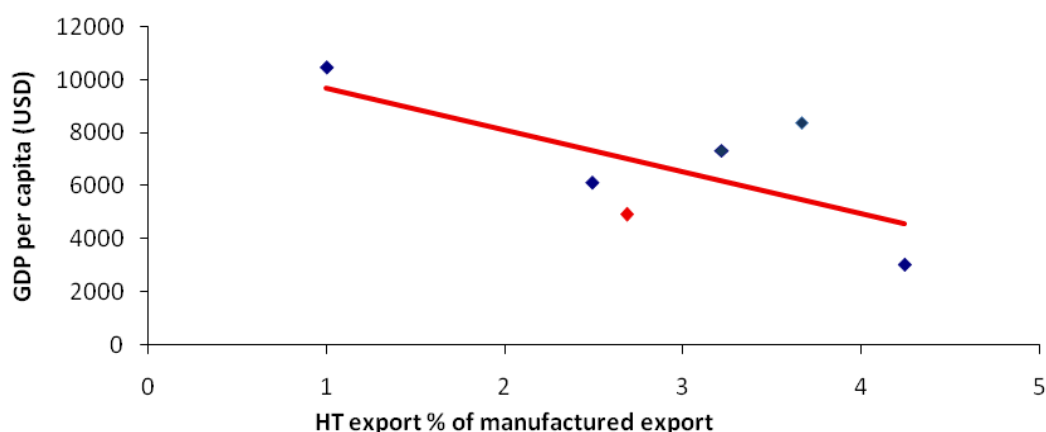


Source: World Bank, World Development Indicators

The regression on the relationship between high technology export and GDP per capita (PPP) shows that Georgia falls below the regression line (see Chart 55 below). This means that with its level of GDP per capita Georgia should actually have a higher share of high tech items in total export.

¹⁷ Source: <http://www.ceibs.edu/faculty/xubin/Measuring.pdf>

Chart 55. HT Export vs. PPP GDP per Capita for Georgia 2008



Source: World Bank, World Development Indicators

These indicators of high tech export items from Georgia mainly include re-exported products which are not actually produced in the country. Including motor vehicles such as passenger cars and micro-buses, aircrafts parts, motor cars for agricultural usage (tractors, vans, lorries etc.) or other special destinations in high-tech exported products gives a misleading understanding of Georgia's high tech production capacities. These items are not originally produced in Georgia and they are re-exported to neighbouring countries. According to Geostat data, the average share of high-tech items in Georgia's export has been 15% in 2004-2010, whereas the main component has been motor cars amounting on average 6.09% of total export in 2004-2010. On the second place, there have been aircraft parts with average share of 4.54% for this period. These aircrafts are imported from other countries in Georgia and after repair works, they are exported to same countries. Neither motor cars, nor those aircrafts are produced here, and their inclusion in the export statistics distorts the picture on the share of high tech products in total export.

Therefore in order to have an appropriate understanding of high tech share in total export re-exported high tech goods should be excluded from the calculation. However, due to the lack of raw data from benchmark countries it was impossible to do this exercise. Had the respective data on benchmark countries been available The Core Team assumes that Georgia's position would have been much worse.

1.1.4.3. Innovations at the Enterprise Level

In the chapter above, the Core Team analyzed the sophistication level of Georgian export, which appeared to be limited. The main reason for that is the low level of technology absorption in the country. This chapter of the document goes into the analysis of innovations and technology absorption by the private sector in Georgia.

First of all, it should be emphasized that based on the data of National Patents Office of Georgia, the number of both received applications and issued patents decreased in 2004-2010 by 19.4% and 4% respectively, which means decrease of innovative activities.

In order to analyze the situation with regard to innovation, several international rankings have been reviewed. First of all, the World Bank's Enterprise Survey was taken. As the Chart 56 below demonstrates, Georgia is one of the least developed in the benchmark country group. Namely, in terms of technology license from foreign companies, Georgia is the second worst after Moldova and in terms of internationally recognized quality certificates it is ahead of only Moldova and Ukraine. In terms of firms using own websites, Georgia's performance is the worst among the benchmark countries.

Chart 56. Innovation and Technology related Firm Data for Georgia and the Benchmark Countries 2008

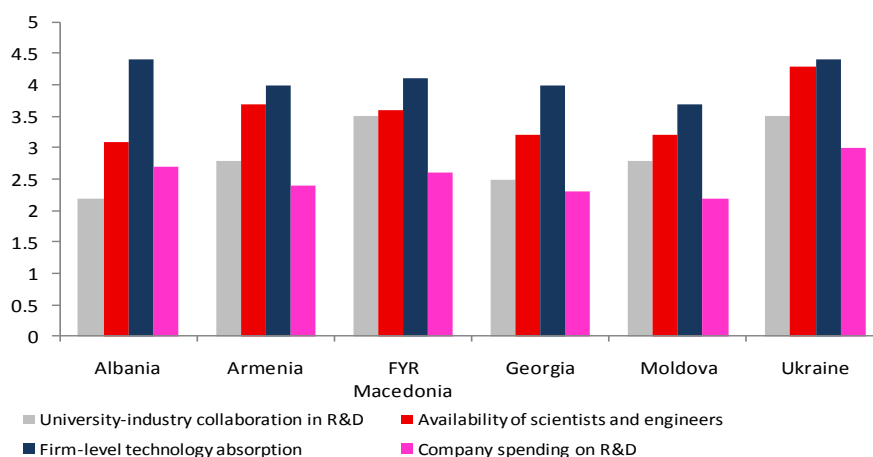


Source: World Bank Enterprise Survey

Another useful source to make cross-country comparison is Global Competitiveness Report. The Core Team looked at the data related to university-industry collaboration. According to the Chart 57 below, Georgia's performance in university-industry collaboration in R&D is second worst among the benchmark countries. Georgia outperforms only Albania.

Georgia's performance in availability of scientists and engineers is also very low and the country is only ahead of Albania in this regard. Georgia is also second worst performer in the firm-level technology absorption indicator being ahead of only Moldova. As for the companies' spending on R&D indicator, Georgia's score is again second worst in the benchmark country group, only Moldova having worse performance.

Chart 57. Innovation Capacity Related Data for Georgia and the Benchmark Countries (GCR 2010-2011)



Source: World Economic Forum, Global Competitiveness Report 2010-2011

In order to explore whether lack of innovation capacity presents a constraint for Georgian companies, this issue was covered at the focus group conducted at the MCC Core Team request. Among others the focus group integrated Georgian companies from telecommunications and IT sectors. Focus group participants have clearly identified their discontent with the qualification of engineers, and other relevant personnel who, generally lack required technical skills and knowledge. These findings largely coincide with the international comparative statistics. The data presented above is an indication of supply and demand mismatch on the labor market.

The deeper look at the Georgian import data illustrates that Georgia does not produce high-tech products, with high value, but imports them. According to the Geostat data, the average share of high tech production in total import has been 25.4% for the last two years which is a significant figure for the country's economy. As technology import is mainly investment driven, with growing levels of investment, this results in increase of the country's trade deficit, which in its turn is a macro-economic concern. Lack of highly qualified human capital in these fields creates additional shadow costs for investors, hindering them from investing in these sectors, as they would need to spend substantial resources to train people. As mentioned earlier, this sentiment has been revealed at the focus groups and meetings with business representatives.

Innovations Summary

To summarize, it can be concluded that innovations constitute a constraint for growth in Georgia. As it can be seen in the chapter on export composition and growth dynamics, development of these indicators demonstrates a positive trend. However sophistication of export is relatively limited. This is mainly caused by the lack of innovations in Georgia. As it is explained in the chapter on innovations at the enterprise level, adoption of innovations and absorption of technologies by the private sector in Georgia is limited and shows that the country is technology-averse. International comparisons also prove that Georgia is one of the worst performers in innovations indicators among the benchmark countries, especially in availability of scientists and engineers.

According to the abovementioned, it can be concluded that the root of the problem regarding the lack of innovations lies in the relatively limited availability of scientists and engineers, and therefore limited ability of firms to absorb new technologies. It is obvious that transition of Georgia to innovation-driven economy is impossible without development of highly-qualified and skilled human capital in relevant fields. Current low level of technical education in Georgia hinders this process.

1.2. Is it Low Appropriability?

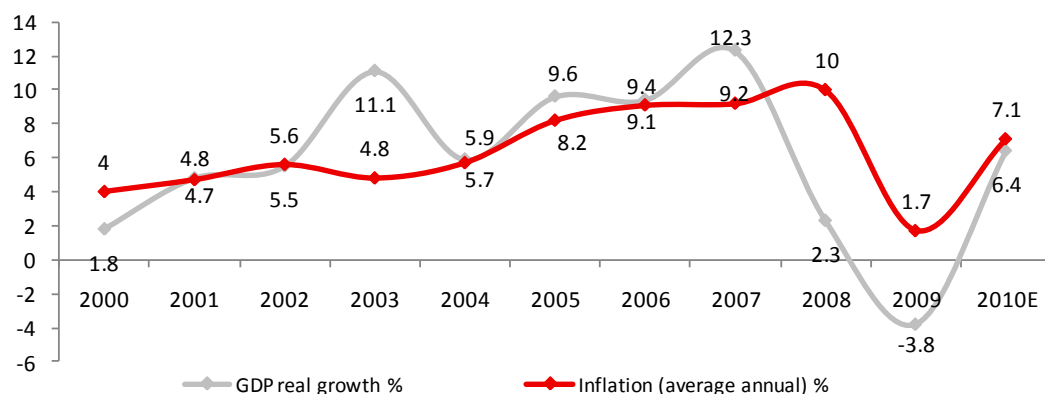
1.2.1. Is it Macro Risks?

Macroeconomic environment has the major role in long-term stability and economic growth of the country. Ensuring macroeconomic stability is the key objective of the government. In order to analyze Georgia's macroeconomic policy, tendencies in economic growth, inflation, fiscal deficit and external position of the country over the recent years are looked at the following sections. As the analysis further reveals, macro environment is not a constraint for growth in Georgia.

1.2.1.1. GDP Growth and Inflation

As it was mentioned before (in the General Overview chapter), during the recent years, starting from 2005, Georgian economy showed steady growth, which was driven by strong economic reforms, significant improvement of business climate as well as high investment inflows (see Chart 58). It should be noted that 2003 also experience impressive growth of over 11%, but this time it was mainly conditioned through one factor, investment in the oil pipeline transporting oil from Central Asia to Europe through Georgia.

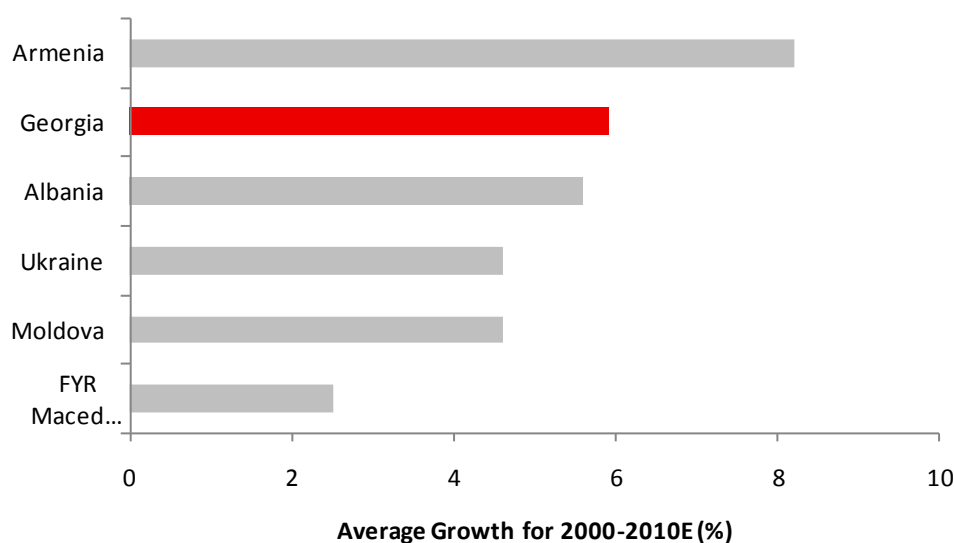
Chart 58. GDP Growth and Inflation in Georgia 2000-2010



Source: Geostat, IMF

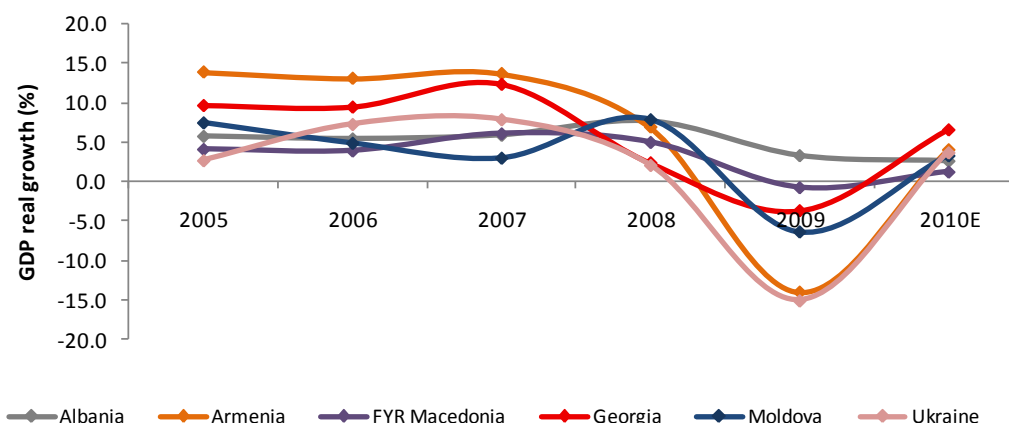
As the Charts 59 and 60 show, over the recent years, Georgia's economic performance was relatively high compared to the benchmark countries. In terms of average growth, Georgia is the second best performer (after Armenia) among the benchmark countries. According to the preliminary data of 2010, Georgia is the best performer in terms of GDP real growth among the benchmark countries.

Chart 59. Average Growth of GDP for Georgia and the Benchmark Countries 2000-2010



Source: IMF

Chart 60. GDP Real Growth for Georgia and the Benchmark Countries 2000-2010



Source: IMF

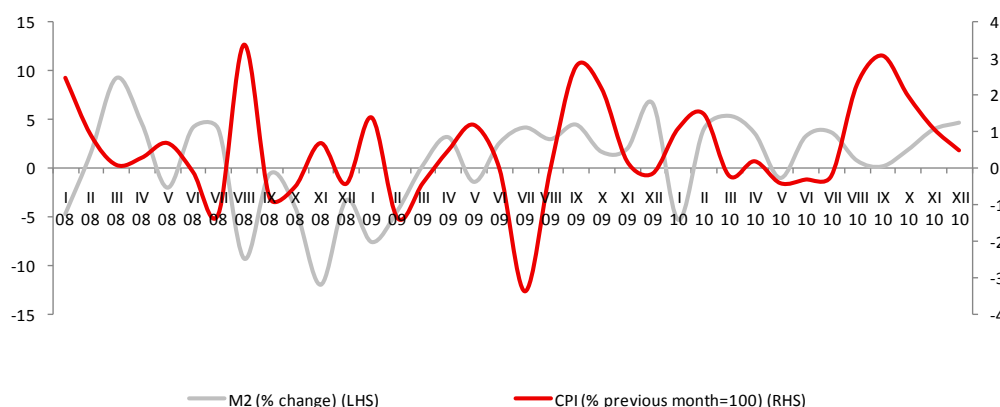
As it is mentioned in the General Overview chapter, in 2010, GDP real growth is estimated at 6.4%. During this period, GDP growth was mainly driven by: banking sector (loans increased by 21% y-o-y and deposits by 35% y-o-y), export (increased by 39.7% y-o-y); tourism (number of visitors increased by 40+% in 2010), agriculture export (primarily wine) and investments in infrastructure including investments in energy sector. 2011 GDP growth rate is conservatively estimated at 4.5%.

Insuring price stability is another key point in macroeconomic performance. For this purpose the main direction in the monetary and foreign exchange policy of the National Bank of Georgia (NBG) is to meet the medium-term target of inflation, independently set by the NBG. The target inflation rate for the following three years is stipulated in the Main Directions on Monetary and Foreign Exchange Policy, which is approved by the Parliament together with the Law on State Budget of Georgia. For 2011-2013 inflation target is defined at the level of 6%.

In 2010 end of period inflation was 11.2% and average annual inflation – 7.1%. The increase of inflation rate (both average annual and end of period) is caused by several factors, which are exogenous rather than endogenous.

The Chart 61 demonstrates that is no strong correlation between change in monetary aggregates (M2) and inflation rate. This fact proves that inflation in Georgia is generated by non-monetary or “imported” factors.

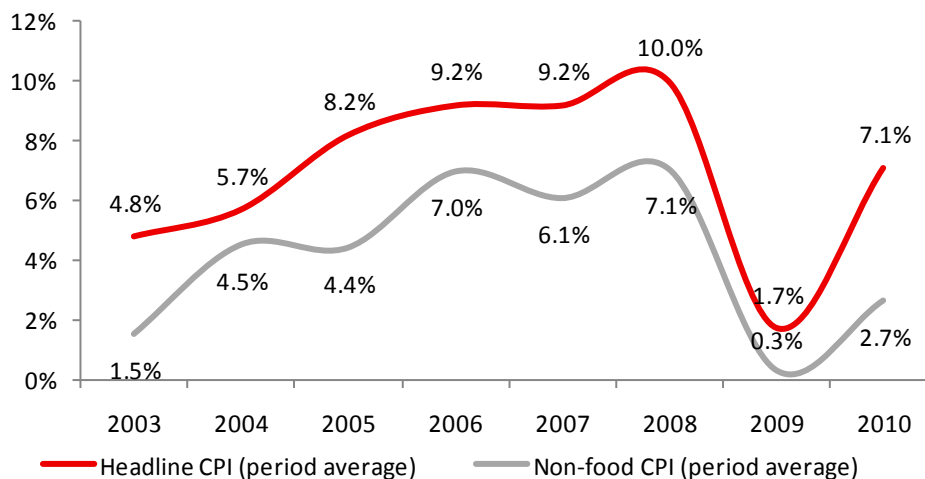
Chart 61. Inflation Rate and M2 for Georgia 2008-2010



Source: Geostat, NBG

As it was already mentioned, high inflation rate in Georgia is mainly caused by exogenous factors. Namely, high inflation rate of 2010 can be explained by the significant price increase on the world food market during the year 2010, which had its impact on the local market prices. This is proved by the fact that nonfood price inflation remained low and consistent with regional trends (Chart 62). As for the internal factors influencing inflation rate, compared to the previous 2 years (2008-2009), increased economic activity in the country should be mentioned.

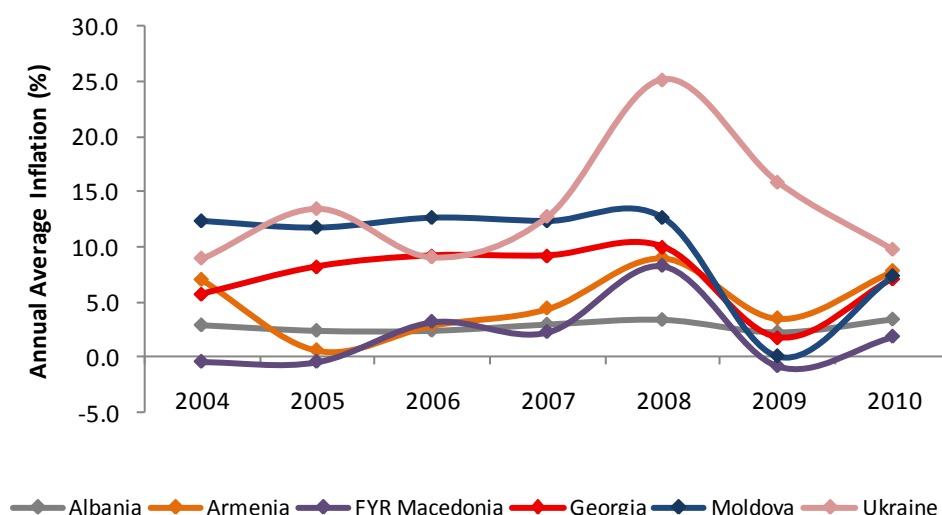
Chart 62. Non-food Inflation in Georgia 2003-2010



Source: Geostat

If taking several years to track the tendency of inflation rate, it is obvious that compared to benchmark countries and taking into consideration economic growth, Georgia's performance in this indicator average among the benchmark countries (Chart 63).

Chart 63. Annual Average Inflation 2004-2010



Source: IMF

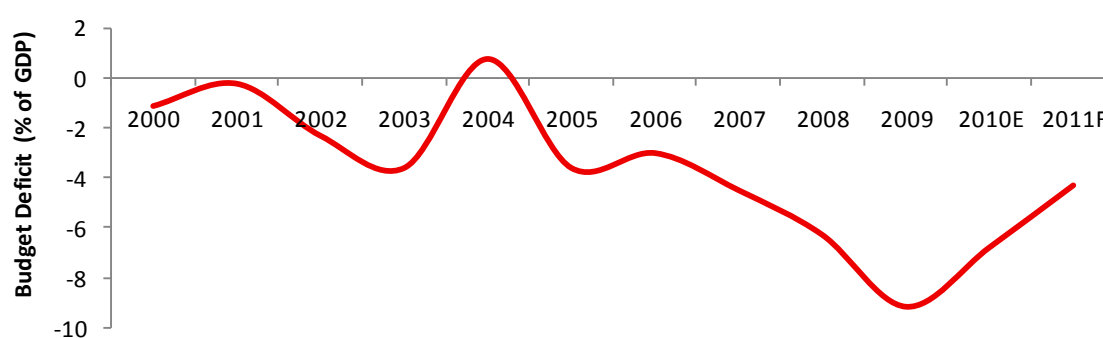
According to the preliminary projections, there are strong expectations that first half of 2011 inflation in Georgia will be high single digit.

1.2.1.2. Fiscal Policy

1.2.1.2.1 Fiscal Deficit

General government budget deficit is an important indicator in overall macroeconomic environment. This indicator in Georgia widened to 9.2% of GDP in 2009 (see Chart 64 below) owing to: (a) revenue shortfall due to the global economic downturn, (b) the associated economic contraction (real GDP growth was -3.8% in 2009) and (c) government's countercyclical fiscal stimulus measures. The latter were mainly funded by concessional donor financing in order to boost confidence and minimize economic contraction in the short term and to lay ground for sustained growth in the future.

Chart 64. Budget Deficit of Georgia 2000-2011



Source: Ministry of Finance of Georgia

The Government of Georgia is committed to deliver on its strong commitment to the fiscal consolidation stance, which targets deficit to GDP ratio of below 3 percent of GDP by 2013. As a result of pro-active expenditure containment measures and also measures to enlarge the existing tax base while at the same time sustaining liberal and competitive taxation framework, general government fiscal deficit in 2010 shrank to estimated 6.8% (down from initially projected 7.4%), which represents an improvement of approximately 26% compared to the previous year. There are no budget earmarks, no entitlements and no indexation in the budgetary framework.

Further deficit reduction to at least 4.3% percent of GDP is planned in 2011, driven by continued expenditure containment measures and by additional revenue measures effective from January 2011, which

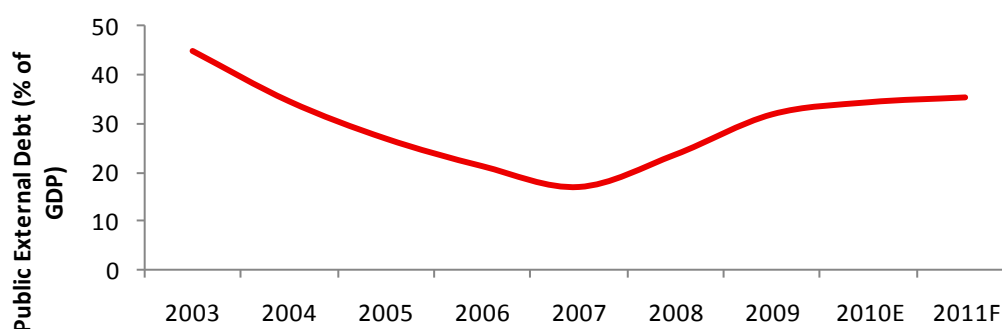
With the operating balance shifted to the positive from 2010 onwards, the main 'below the line' contribution to the general government deficit comes from borrowing for capital spending purposes – the 'above the line' expenditure line which is to a large extent driven by the implementation of the donor pledges made in October of 2008 at the International Donor Conference for Georgia in Brussels. It is expected that the Brussels Donor Conference pledge will be processed in its entirety till the end of H1 2011 (i.e. Georgia will enter into firm contractual commitments with respect to all amounts pledged).

On 15 September 2008 the Executive Board of IMF approved SDR 477.1 million under the Stand-By Arrangement (SBA) for Georgia to support Georgian authorities' macroeconomic policies, rebuild gross international reserves, and bolster investor confidence. On 6 August 2009, IMF approved an augmentation of access under the SBA to the aggregate amount of SDR 747.1 million aimed at facilitating an orderly exit from fiscal and external deficits. As of 31 December 2010, Georgia's total outstanding purchases under the SBA stood at SDR 577.1 million. On 12 January 2011, the IMF Executive Board completed the seventh and eighth reviews of Georgia's economic performance under SBA.

1.2.1.2.2. Public Debt and Sustainability

Public external debt stock stood at \$3.9 billion as of end-December 2010. The bulk (87.3%) of this stock is owed to official development creditors, IFIs and bilateral donors on concessional terms. The remaining 12.7% represents the principal amount of Georgia's current benchmark Eurobond due 2013 (Chart 65). On April 7, 2011, Georgia successfully priced a new 10-year \$500 million Eurobond and in parallel redeemed \$417 million (83%) of its existing \$500 million previous bond due 2013, thus adding to the stability of the domestic financial system and increasing long-term predictability.

Chart 65. Public External Debt of Georgia 2003-2011

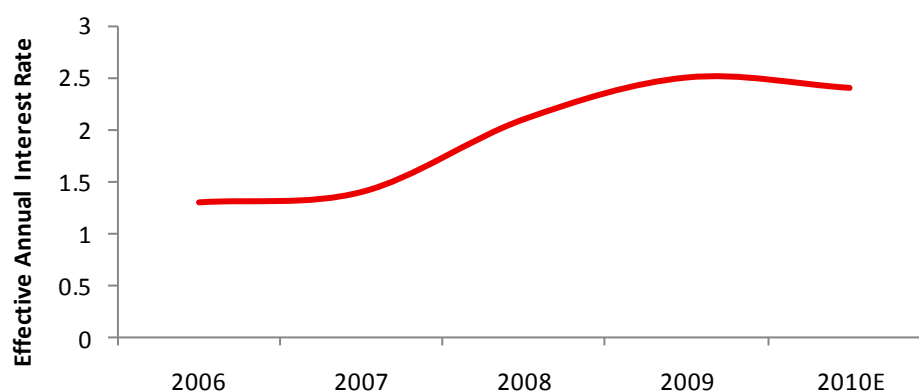


Source: Ministry of Finance of Georgia

The increase of the external debt was a result of abovementioned donor pledge of USD 4.5 bln approved by Brussels Donor Conference held in October 2008. But it should be noticed that at the same time this pledge guaranteed foreign inflows to Georgia during the global financial crisis and in particular in the aftermath of the Russian invasion, when FDI inflows to the country significantly declined and Georgia was associated with increased security risks.

Such debt composition accounts for very low weighted average interest rate of circa 2% per annum, long average contractual maturity of more than 19 years and long average residual maturity of circa 10 years (as of end-December 2010). Roughly 70% of the public external debt portfolio bears fixed interest rate. Amortization profile is mainly flat with easily affordable annual repayment volumes (general government external debt service, including principal and interest, amounted to only 4.4% of budget revenues in 2010). The chart below presents effective annual interest rate in the period 2006-2010. (Chart 66)

Chart 66. Effective Annual Interest Rate in Georgia 2006-2010



Source: Ministry of Finance of Georgia

According to the IMF latest statement¹⁸: “Backed by the steady implementation of the program’s economic policies, Georgia’s economic recovery has strengthened, as evidenced by better-than-expected growth and the stabilization of the exchange rate. The authorities’ economic policies, focused on tighter monetary and fiscal policies and exchange rate flexibility, will lay the groundwork for achieving macroeconomic stability and growth based on private sector financing and investment. The budget for 2011, which provides for a further reduction of the deficit of about 2½ percent of GDP, is consistent with the authorities’ objective of reestablishing fiscal sustainability. The authorities’ commitment to cap expenditure in 2011 is commendable... The banking sector’s high levels of capital and provisioning continue to provide adequate buffers against adverse shocks.”

1.2.1.3. External Position

Another important indicator of macroeconomic stability is external position of the country. In order to analyze Georgia’s situation in this regard, the Core Team first looked at the current account deficit (CAD) of the country.

Current account deficit remains an issue of particular attention from the Government of Georgia. Based on the data of the National Bank of Georgia and Ministry of Finance of Georgia, this indicator was rather high during the recent years. In 2009, CAD decreased and amounted to 1 216.5 mln. USD (see Chart 53 below), which is 58.3% less than the same indicator in the previous year. The decline of CAD was due in part to stronger tourism receipts, remittances from abroad and revenues generated from the transport and transit of energy.

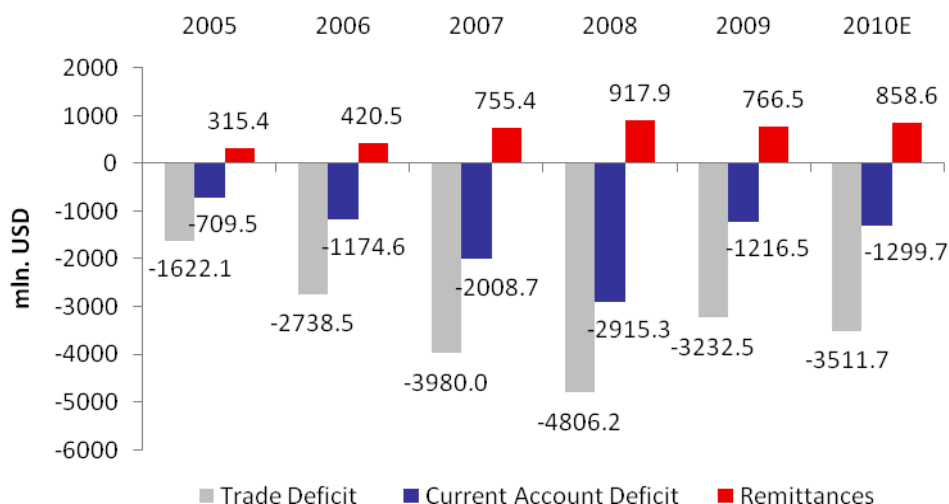
In 2010, this indicator is projected at 11.8% of GDP. It stood at 11.3% in 2009, 22.8% in 2008 and 19.8% in 2007. Looking at the trend as a whole and not just an annual figure, it is obvious, that the overall trend is positive. GoG expects it to further reduce CAD amid growing export.

The Chart 67 below also shows that during the recent years, remittances were gradually increasing. According to the estimated data of 2010, remittances comfortably cover 66.1% of the current account deficit. (Chart 67)

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Source: <http://www.imf.org/external/np/sec/pr/2011/pr1107.htm>

Chart 67. Current Account Deficit in Georgia 2005-2010

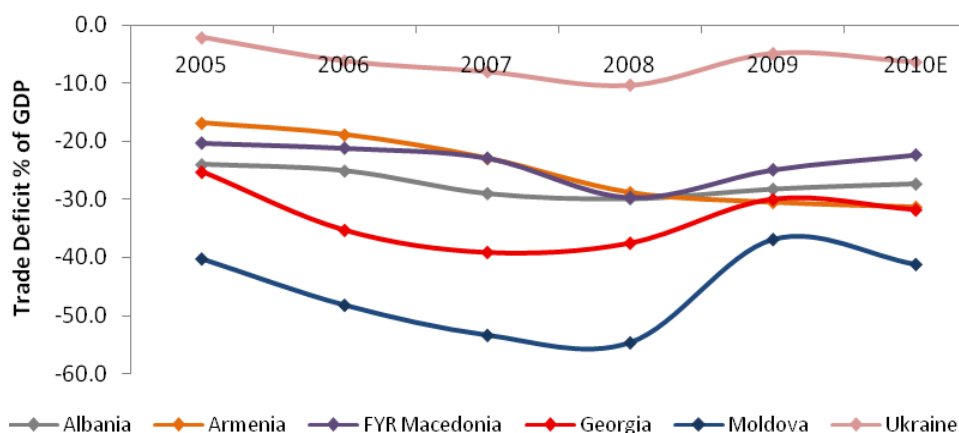


Source: Ministry of Finance of Georgia

Another important aspect of the external position is external trade of Georgia. As analyzed above (in the General Overview chapter), Georgia's trade turnover was increasing over the recent years, with reduction in 2009 and again recovery in 2010.

Chart 68 below shows, the cross country comparison of trade deficit as a percent of GDP. As it can be concluded, Georgia's trade deficit as percent of GDP is rather high compared to the benchmark countries. It should be noted, that one of the main reasons of high trade deficit was the increase of import during the recent years. Import increase was mainly investment driven. Following the investment boom in Georgia in 2005-2008 and implementation of large-scale investment projects, private companies were upgrading their technical basis through the import of the equipment and machinery. This is proved by the fact that following the double shocks of 2008-2009, when the investment inflows in Georgia decreased, the trade deficit decreased subsequently. Another contributor to deficit decrease is the increase of export. In 2010, compared to 2009, growth of export (40%) was significantly higher than that of import (16.7%).

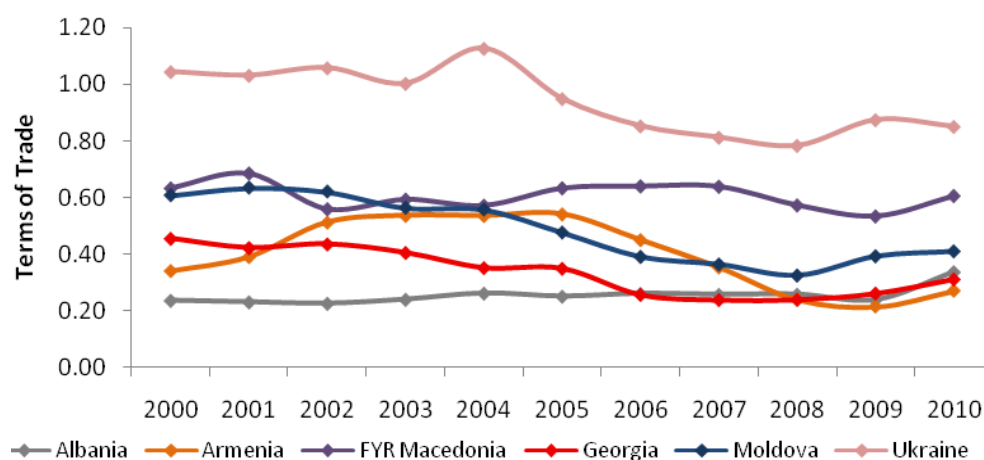
Chart 68. Trade Deficit as % of GDP in Georgia and the Benchmark Countries 2005-2010



Source: Geostat, IMF, UNCTAD Stat

The same argumentation is valid when explaining the worsened terms of trade for Georgia in the period 2003-2010 as compared to the benchmark countries (Chart 69).

Chart 69. Terms of Trade of Georgia and the Benchmark Countries 2000-2010



Source: UNIMTS

Besides all the above-mentioned, in order to get the complete picture the country's external position, it is useful to look at the international credit ratings of Georgia. Some of the major sovereign rating strengths of Georgia according to the credit rating agencies (Fitch, Standard & Poors and Moody's) are as follows: (1) moderate levels of general government debt, which is mainly owed to multilateral lenders on very favourable terms (with long maturities, grace periods and low interest rates); (2) Government's political commitment to market-oriented policies and structural reforms; (3) favourable business climate, which is unique for the region; (4) credible fiscal and monetary framework that permits the Government to run counter-cyclical policies; (5) strong financial support from IFIs, as well as strategic partners (US and EU); (6) significant progress in building social, political and economic institutions; (7) high potential growth rate.

Table 17. Long-term Foreign Currency Sovereign Credit Rating of Georgia and the Benchmark Countries

	Fitch Rating	Standard&Poor's	Moody's
Georgia	B+ / Positive	B+ / Positive	Ba3 / Stable
Armenia	BB- / Stable	Not Rated	Ba2 / Stable
Moldova	Rating Withdrawn	Not Rated	B3 / Stable
Ukraine	B / Stable	B+ / Stable	B2 / Stable
FYR Macedonia	BB+ / Stable	BB+ / Stable	N/A
Albania	N/A	B+ / Stable	B1 / Stable

Fitch ratings shown as of 3 March 2011

Standard&Poor's ratings shown as of 28 January 2011

Moody's ratings shown as of 19 January 2011

Macro Risks Summary

Based on the analysis presented above, it can be summarized that macro economic situation is not a constraint for growth in Georgia. As the analysis revealed, some of indicators such as inflation rate, fiscal deficit to GDP ratio, public debt and current account deficit worsened in 2009 due to the double shocks faced by the country. However, the same situation was observed in the benchmark countries and more broadly worldwide.

It should be mentioned that in the medium-term, these potential risk factors are manageable by the prudent government policy. The Government of Georgia aims to continue its policy in the same direction in order to maintain macroeconomic stability in the country.

1.2.2. Is it Micro Risks?

As mentioned earlier, the Government of Georgia puts special emphasis on creating of favorable business environment in the country. To this end government has been pursuing special policies which resulted among others in low and flat taxes, limited red-tape, smart regulations, liberal trade regimes with main trading partners and substantially improved property rights protection. This situation has been widely appreciated by the business sector, as well as, by relevant international institutions assessing Georgia's business climate.

The current chapter presents an analysis of Georgia's micro environment, and adding on to the deliberations in the general overview part of the current document, offers the outcome that there are no micro-economic risks in Georgia which would serve as constraints to the country's growth and economic development.

For the purpose of this analysis, the World Bank's Doing Business (DB) and Enterprise Survey (ES) data are used.

Overview of Microeconomic environment

As a result of the continuous improvement of the entrepreneurial environment in Georgia, the World Bank's 2011 Doing Business survey ranks the country 12-th out of 183 economies in terms of ease of doing business. It is noteworthy that in 2006 Georgia was on the 126th position. In addition, the Doing Business 2011 named Georgia as the world's top reformer country for the five year period (2005-2010).

Georgian economy is the 29th freest in the Heritage Foundation's Economic Freedom Index for 2011. Georgia is ranked 15th out of 43 countries in the Europe region, and its overall score is higher than the world average. The Georgia has maintained its status as a "mostly free" economy in the 2011 Economic Freedom Index. NoTable reforms in business freedom, trade freedom, fiscal freedom, and labor freedom have spurred economic development in recent years.

The 2010 Global Corruption Barometer by the Transparency International rates Georgia 1st in the world in terms of the (public perception of the) decrease of the level of corruption, with 78% of the surveyed claiming the corruption level has decreased. Georgia is placed in the least corrupt group of countries with merely 3% admitting to have paid a bribe within the last 12 months.

According to the World Bank report „Investing Across Borders 2010" (IAB), Georgia is one of the most open countries to foreign equity ownership among 87 countries, as measured by the Investing Across Sectors indicator.

In what follows a characterization of the country’s microeconomic environment is presented (see also General Overview chapter).

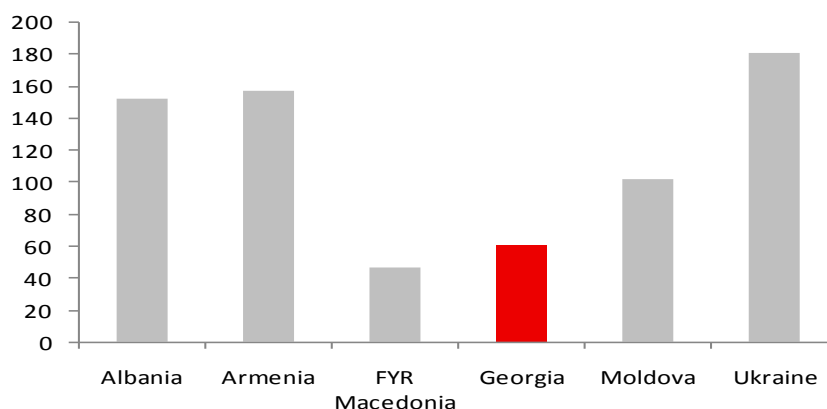
To enhance Georgia’s investment & business Climate, the Government has dramatically overhauled its tax system since 2004. By implementing a liberal reform agenda, Georgia has simplified its processes and has reduced the number of taxes from 21 in 2004 to only 6 today.

Georgia’s taxation system is designed to be highly attractive for the business community. Taxes in Georgia are low and flat. There are only six taxes rates, of which five (Personal Income Tax, Corporate Income Tax, Value Added Tax, Excise Tax, and Import Tax) are state-wide, and one (Property Tax) is a local tax. There

are no capital gains, inheritance, wealth, property transfer, social, branch remittance, or other taxes in Georgia. The income tax rate is a flat 20 percent. There is no other tax on income.

Ranked at 61st position in the Doing Business 2011 in Paying Taxes indicator, Georgia is behind only Macedonia among the benchmark countries (see Chart 70).

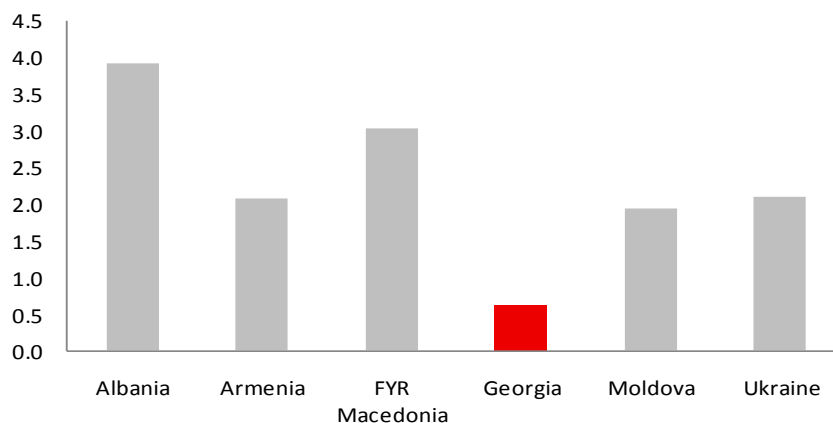
Chart 70. Paying Taxes Rank of Georgia and the Benchmark Countries in 2010



Source: Doing Business 2011

Georgia’s performance is better than that of the benchmark countries when it comes to the administrative costs of paying taxes, as measured by the average number of visits or required meetings with tax officials. Georgia ranks 1st among the benchmark countries by the World Bank’s enterprise survey (see Chart 71)

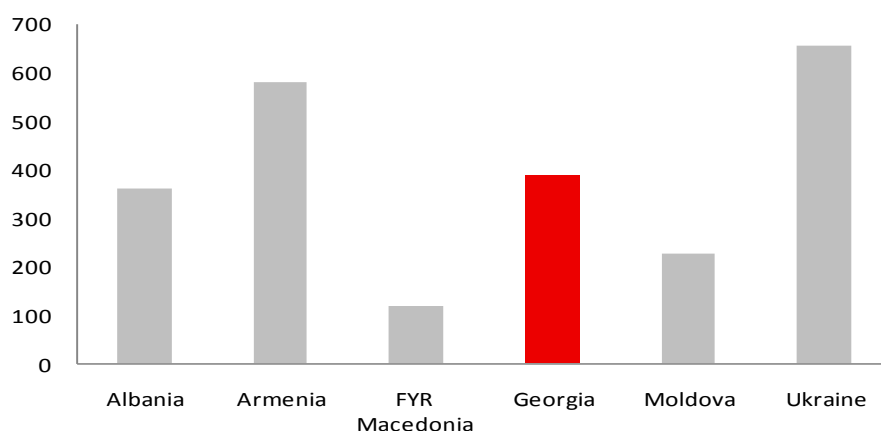
Chart 71. Average Number of Visits or Required Meetings with Tax Officials for Georgia and the Benchmark Countries (2008)



Source: WB Enterprise Survey

Regarding the time spent on paying taxes, accounting for the complexity of tax regulation and bureaucracy, Georgia scored third among the benchmark countries (behind Armenia and Ukraine), with the 61st position among 183 economies (see Chart 72).

Chart 72. Hours per Year for Tax Payment for Georgia and the Benchmark Countries in 2010



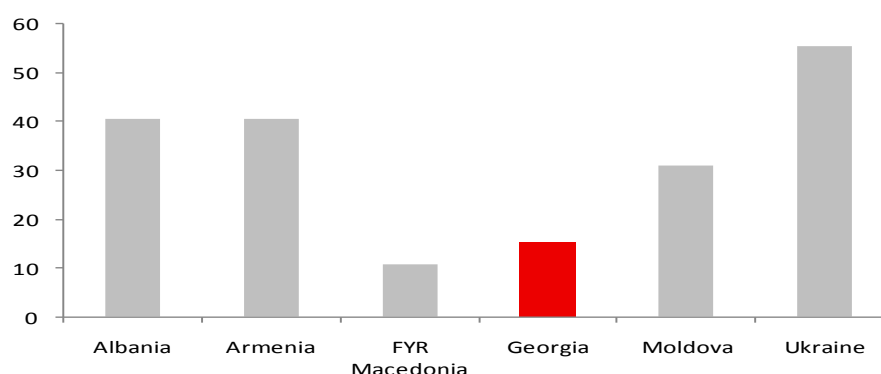
Source: Doing Business 2011

Government pays particular attention to enhancing the country's taxation system. In 2011 a new Tax Code was adopted, which even further streamlines the regulations. The new Tax Code aims to increase confidence of private sector towards the Georgian tax system and enhance trust in the Georgian tax authorities, by improving communication between taxpayers and the tax authorities, by protecting the taxpayers' rights, by making administration more efficient, and by harmonizing the Georgian laws with the best international tax practices.

Starting from 2009 Georgia introduced electronic tax filing, which reduced time, needed for paying taxes. As of end 2010, 89% of companies were using electronic tax filing.

If comparing the benchmark countries by the percentage of profit paid for taxes, Georgia is 2nd best in the group with 15,33%, (only Macedonia is ahead with 10.62%) and occupies the 10th position in the overall DB survey (see Chart 73).

Chart 73. Total Tax Rate as % of Profit for Georgia and the Benchmark Countries 2010



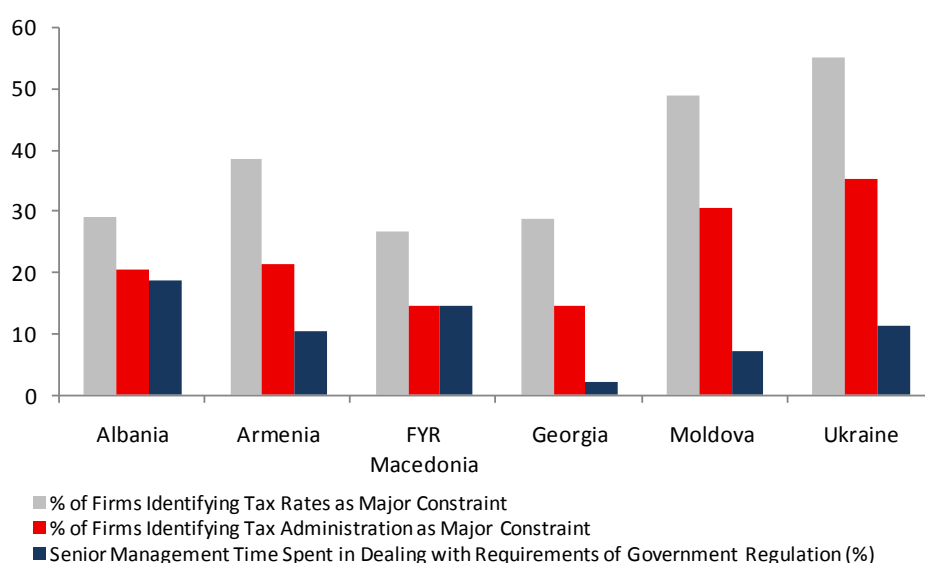
Source: Doing Business 2011

In addition to favorable domestic tax legislation, Georgia has established double taxation avoidance regimes with a growing number of countries, which is yet another attractive characteristic for the country's business climate.

As for the percentage of firms identifying tax administration as a major constraint the country performs rather well, with only Macedonia having a better result across the benchmark countries (see Chart 74).

As for the existing level of red-tape in the country, the Enterprise Survey measuring senior management's time spent in dealing with government regulations shows that Georgia performs better than the benchmark countries (Chart 74).

Chart 74. Regulations and Tax Administration for Georgia and the Benchmark Countries 2008



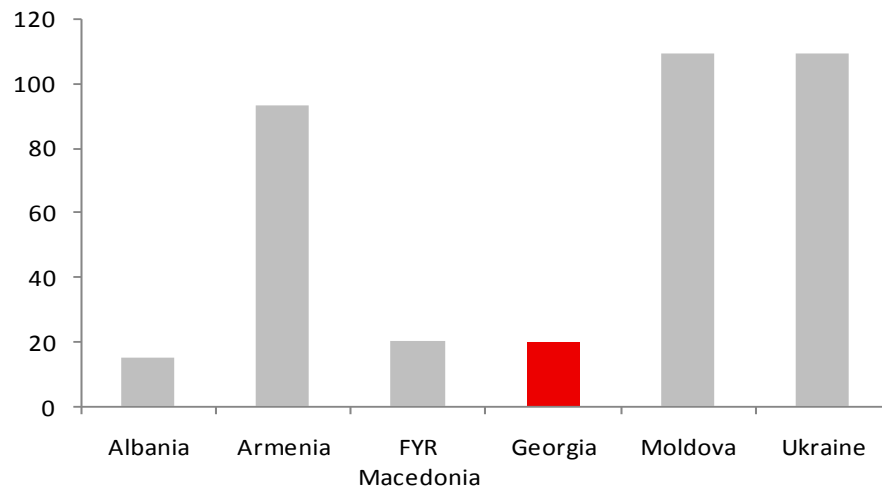
Source: WB Enterprise Survey

With regard to protection and enforcement of property rights in the country, further enhancement of the relevant legislative environment is a priority for the Government.

At present, Georgian legislation offers equal treatment for resident and non-resident ownership of land and property. Foreign firms can freely participate in privatization. Residents and non-residents may hold foreign exchange accounts. In addition, Georgia has streamlined property registration procedures, which can now be done electronically within one single day. Registering property in Georgia requires one single procedure. The World Bank's Doing Business Report 2011 ranks Georgia as one of the most efficient countries in property registration – second best worldwide.

Georgia also strengthened investor protection by allowing greater access to corporate information during the trial. Georgia is ranked 20th and is only behind Albania in the benchmark country group according to the Protecting Investors ranking of the Doing Business report (see Chart 75)

Chart 75. Ranking on Protecting Investors for Georgia and the Benchmark Countries in 2010

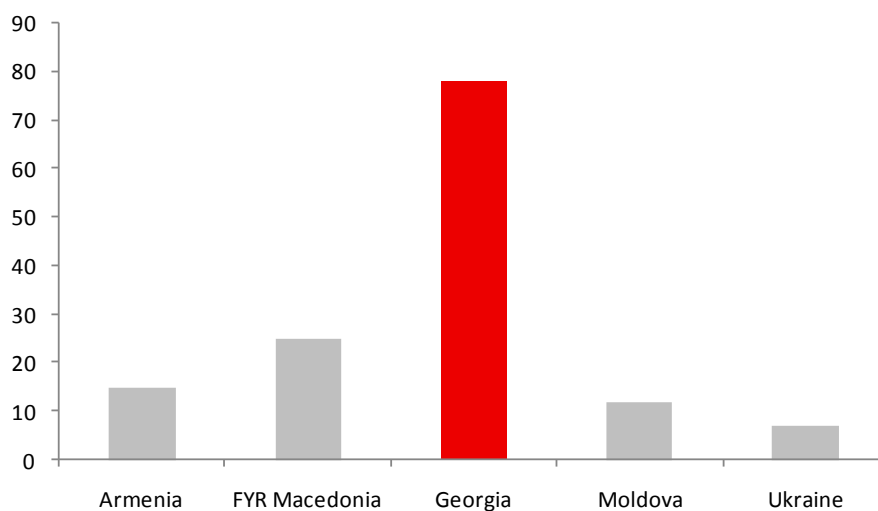


Source: Doing Business

Another very important aspect of a favorable business climate is level of corruption in the country. Georgia has been successfully fighting corruption since 2004. As mentioned earlier, corruption level has significantly decreased in the country during recent years. However, the GoG continues to implement anti-corruption measures to even further improve the situation.

The 2010 Global Corruption Barometer by the Transparency International rates Georgia 1st in the world in terms of the (public perception of the) decrease of the level of corruption, with 78% of the surveyed claiming the corruption level has decreased. (see Chart 76)

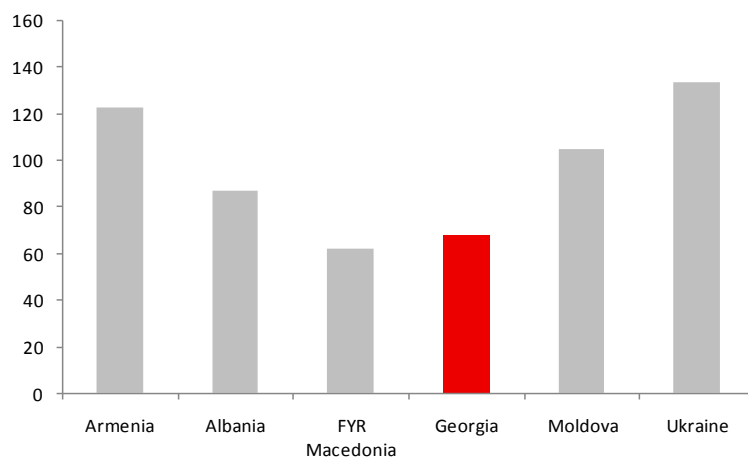
Chart 76. % Decrease of the level of corruption for Georgia and the Benchmark Countries 2010



Source: TI, The 2010 Global Corruption Barometer

Georgia is placed in the least corrupt group of countries with merely 3% admitting having paid a bribe within the last 12 months. The same average score for the EU and North America is 5%. In this ranking Georgia is outperformed only by Australia, Denmark, Finland, Switzerland, Germany, Norway, United Kingdom, South Korea and Netherlands (see above). Georgia is the second best after Macedonia among benchmark countries in TI Corruption Perception Index 2010 (see Chart 77).

Chart 77. Corruption Perception Index for Georgia and the Benchmark Countries 2010

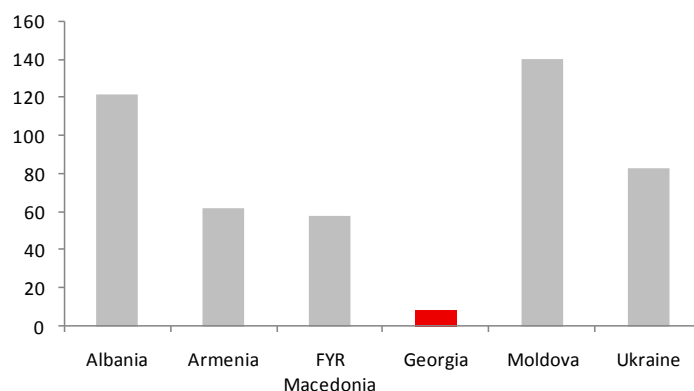


Source: TI, Corruption Perception Index 2010

Labor regulations are another important aspect to be considered when analyzing business environment. Georgia's labor regulations are regarded to be extremely flexible and business-friendly. According to the DB ranking Georgia is the sixth easiest place to employ workers globally (after the Marshall Islands, United States, Singapore, Tonga, and the Maldives). Major characteristics of the existing labor legislation are the following: the non-salary cost of employing a worker can be moderate, and dismissing an employee is not burdensome; rules on work hours are extremely flexible; there are no restrictions on the duration of term contracts and overtime work. In addition, Georgia reformed its social tax system and as a result the 20 % social tax is paid by the employee. As a consequence no social expenditures arise for the employer other than expenditures based on voluntary decision and agreement in the individually negotiated contract.

Georgia holds 9th position in the factor of employing workers and is among the world's best performers. Within the group of benchmark countries it is the leader and is ahead of the nearest comparator Armenia by 53 positions (see Chart 78).

Chart 78. Ranking on Employing Workers for Georgia and the Benchmark countries (2010)



Source: Doing Business 2010

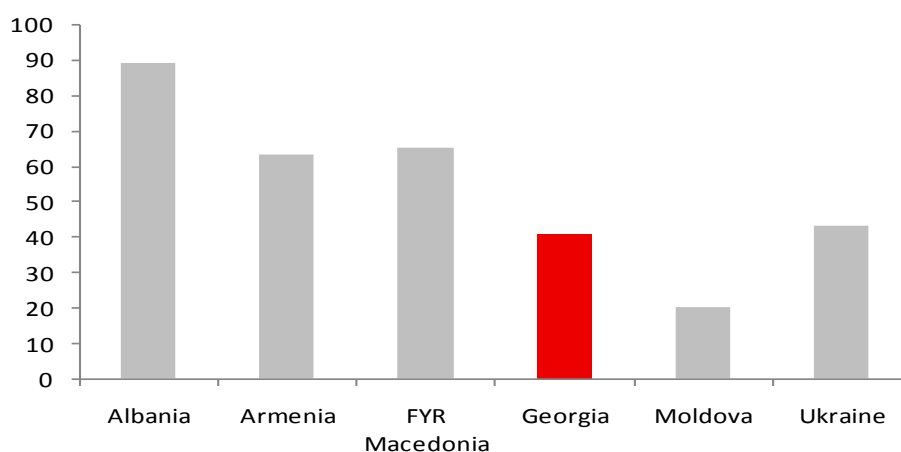
Labor regulations in Georgia have become extremely flexible in recent years, although it failed to be adequately reflected on the unemployment rate. This is an indication that there are other reasons keeping the unemployment level high.

Alongside the issues mentioned above, important factor for development of business friendly environment is well functioning courts.

According to the Doing Business report, Georgia made enforcement of contracts easier by streamlining the procedures for public auctions, introducing private enforcement officers, and modernizing its dispute resolution system.

Georgia is 41st in Enforcing Contracts indicator in DB 2011. In the group of benchmark countries Georgia is behind Moldova, which ranks number 20 (see Chart 79)

Chart 79. Enforcing Contracts Ranking for Georgia and the benchmark countries (2011)



Source: Doing Business 2011

GoG is striving continuously to improve the entrepreneurial environment in the country. One of the most recent initiatives, cementing the achievements and adding-on to the sustainability of investment attractiveness of the country, was a special set of constitutional amendments initiated by the government aimed at creating strong fundamentals for macroeconomic stability and prudent fiscal policy. The government initiated a special piece of legislation, called 'Liberty, Opportunity and Dignity Act.' The main rationale behind the so called 'Liberty Act' is to create more fiscal stability and predictability in the country, to promote principles of free entrepreneurship and of less state regulatory involvement in microeconomic interaction, as well as to provide more substantial social security guarantees for the population. These are viewed to be achieved, *inter alia*, by further promoting fundamentals of economic liberty, through legislatively ensuring proper functioning of the free market, highly disciplined and responsible long-term macro-economic policy, and smart regulations.

Micro Risks Summary

Overall, Georgia's business climate is rather favorable, both, worldwide and across the benchmark countries. Nevertheless, further enhancement of the business climate is on the agenda of the Government.

The Doing business report of 2011 Georgia ranks 12th out of 183 economies and 1st among the group of benchmark countries. Georgia is amongst the world leaders in indicators such as Starting a Business Ranking - 8th position, Construction Permits - 7th position, Registering Property - 2nd position. Georgia has been recognized as the top reformer in the World Bank/IFC Doing Business report 2011 for the period of 2005-2010. Government does its best to identify problematic issues and tackle them. Georgia in particular showed progress in the following areas of business regulation: protecting investors (allowing greater access to corporate information during the trial), closing a business, getting credit (central collateral registry with an electronic database accessible online) and enforcing contracts (streamlined procedures for public auctions, introduced private enforcement officers and modernized its dispute resolution system.)

According to Transparency International, Georgia is the top country in the post-soviet region (except the Baltic States) in terms of fighting corruption. The Global Corruption Barometer 2010 ranks Georgia the first worldwide in the terms of decrease of corruption level.

Taking into account the relative performance of Georgia compared to benchmark countries and globally and the ongoing reforms, it should be concluded that micro risks is not a constraint for further growth development of the country.

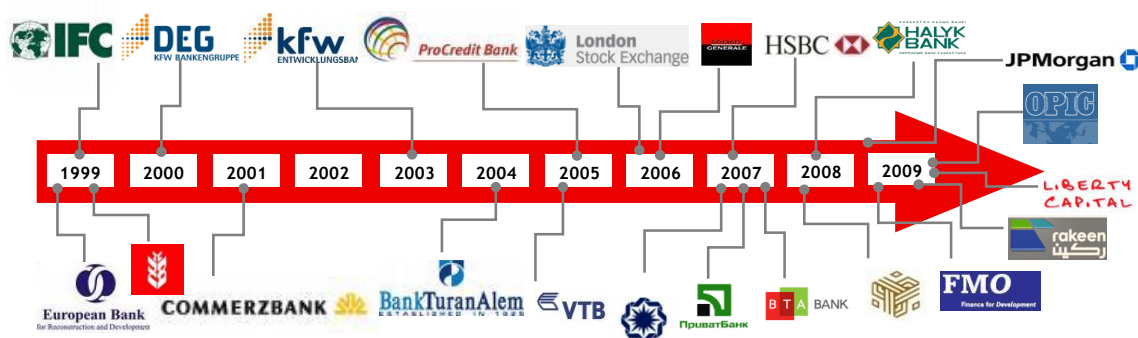
2. Is it Finance?

In this part of the document, the Core Team analysed financial sector of Georgia, taking the regulatory framework of the financial market and main indicators such as interest rates, lending practices, products as a basis for the analyses.

Georgian financial sector is dominated by the banking system, representing more than 90% of the financial sector's total assets with the remaining part primarily represented by insurance companies and microfinance institutions. Banking sector is one of the most developed sectors of Georgia's economy was one of the main attractions for foreign investments over the recent years.

Overall, financial intermediation was one of the driving sectors of economic growth in Georgia, which managed to be resilient even in the most challenging period in 2008-2009, in the aftermath of the Russian invasion in 2008 and during the 2008-2009 global financial crisis. The average yearly growth of the sector in 2004-2009 amounted to 20.6%. This remarkable growth was mainly due to the significant investment inflows in the sector. The Chart below presents various types of financial institutions, including foreign banks, which entered Georgian financial market during the last decade (Chart 66).

Picture 2. International Financial Institutions Entering Georgia



As for the insurance market, this area of financial sector is rather new, but rapidly increasing market in Georgia. Public has sufficient access to insurance services. By the end of 2010 there were 16 insurance companies in the Georgian insurance market. Currently, over 1.5 mln. people (about 35% of Georgian population) have health insurance, which almost doubled since 2007. However non-existence of some types of insurance (e.g. sophisticated life assurance policies) is due to underdeveloped securities market and minor demand for these types of insurance (see detailed explanation on insurance in the Human Capital chapter).

2.1. Is it Local Finance?

2.1.1. Regulatory Environment

Banking system legislation and generally Georgian banking system is investor friendly and globally integrated. There are no restrictions or any barriers for foreign investors. Legislation does not distinguish local and foreign entities and they are equally treated. As a result, over 80% of total paid-in capital is owned by non-resident shareholders and they are controlling 94.5% of total banking assets. Besides, Georgian legislation stipulates the simplified procedures of banking license acquiring for those banks of developed countries, which have the high ratings from the competent international rating agencies. Such group of commercial banks is categorized as “foreign trusted banks” by Georgian legislation.

The National Bank of Georgia (NBG) is the sole regulator and supervisor of the financial services sector in Georgia, including banks, credit unions, insurance companies, securities market participants, microfinance organizations, currency exchange bureaus and money remittance services.

The banking sector legislation regulates loan classification and allowance for loan reserves. The foundation for any loan review system is accurate and timely classification, which involves an assessment of credit quality and leads to the identification of problem loans. The loan review system consists of five stages and classification process is based on the loans past due status and collaterals quality. Allowance for all loan losses are calculated from 2% to 100% which is clearly described in the respective legislation.

Allowance calculating system does not use projected cash flow discounted process and accordingly, is more conservative than IFRS principle, as it was shown after the global financial crisis and August war of 2008.

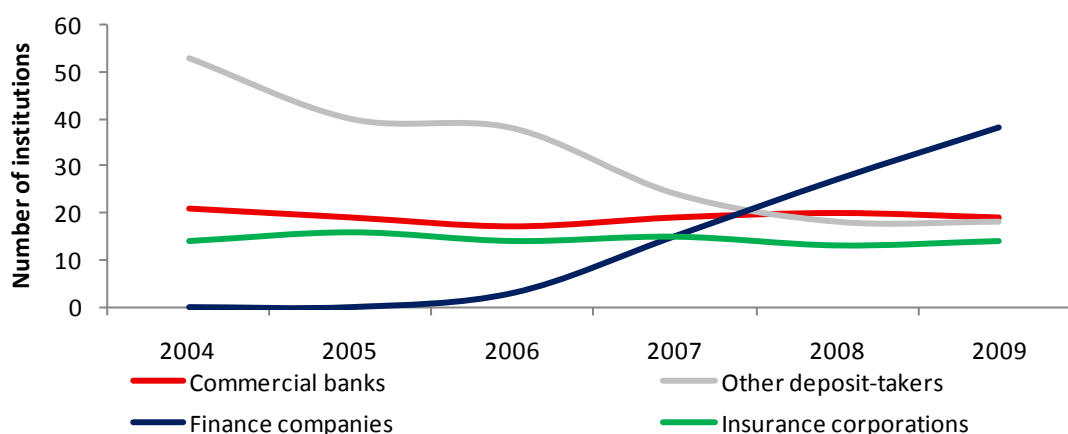
The credit bureau – “Creditinfo Georgia” has started operating in 2005. Nowadays, information on about 805 000 individuals and 11 500 legal entities is shared among thirty eight participants via “Creditinfo Georgia”. Distortion elimination abilities are limited as information is shared just for clients having loans less than \$100,000.

2.1.2. Competition

The banking system of Georgia is diversified. Currently, there are 19 commercial banks and foreign bank branches operating in Georgia, out of which 17 (including 2 branches of foreign banking institutions) have foreign capital participation. This fact shows that Georgian banking sector is open for foreign participants. Banks with foreign capital accounted for 94.5% of the system's total assets. European and regional banking institutions, as well as IFIs are well-represented shareholders in the banking system of Georgia. Although, two largest banks accounted for more than half of total assets, the rest is rather diversified and therefore, the competition in this sector is quite well developed. Banks have diversified their products over the years and actively try to attract new clients and depositors and increase their share on the market. This process is supported by the respective legislation and the regulatory framework, which promotes the market competition in this sector.

The number of commercial banks and insurance companies has been stable during the last several years, although the number of commercial bank branches has been decreasing, indicating the banking sector maturity. At the same time, an increasing trend in the number of financial institutions other than banks suggests that the financial market is not saturated yet. As of 31 December 2010, the total assets of operating domestic commercial banks and foreign bank branches amounted to approximately 6 bln. USD (Chart 80).

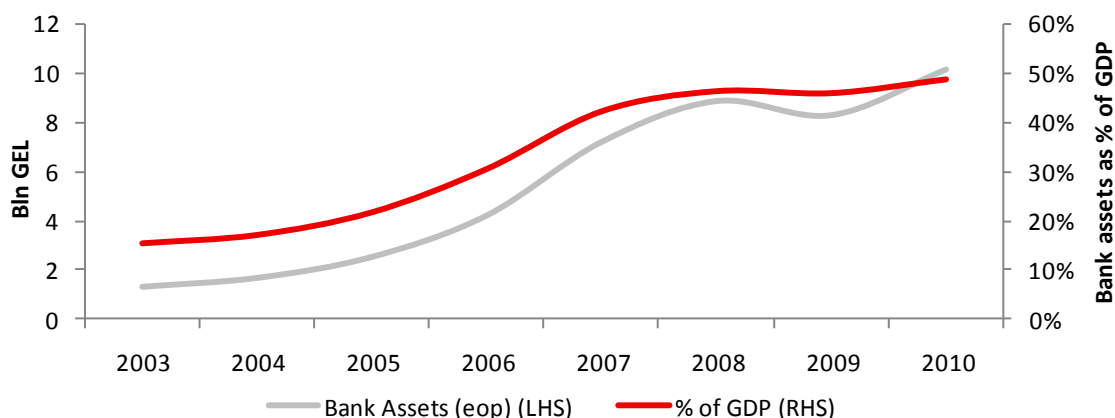
Chart 80. Financial Institutions in Georgia 2004-2009



Source: National Bank of Georgia

As shown in the Chart 81 below, Georgian banking system's total assets have been steadily growing both in volume and as a share of GDP, against the background that GDP has been growing rapidly in the same period. Growing percentage indicates that the banking system is trusted and being used for more financial transactions.

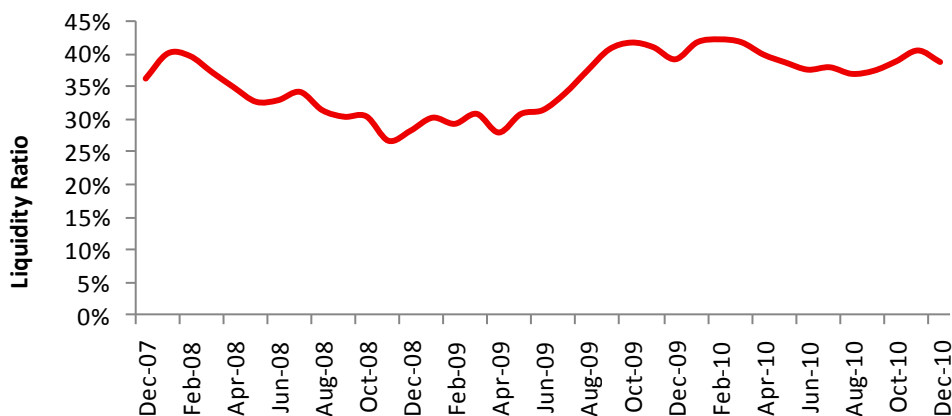
Chart 81. Bank Assets in Georgia 2003-2010



Source: National Bank of Georgia

A for the banks liquidity ratio, according to the NBG regulations, this indicator is stated at 30%. From global perspective, this is a quite strict regulation. As the Chart below shows, in the beginning of 2008 (before the crisis) banks liquidity ratio was about 40%. However, during the crisis period NBG changed its regulation on liquidity ratio and this ratio reduced to 20%. Pursuant to the Chart 82, starting from August of 2009, banks liquidity ratio started to increase and accordingly NBG changed its regulation to 30% liquidity ratio.

Chart 82. Bank Liquidity Ratio in Georgia December 2007 - December 2010



Source: National Bank of Georgia

2.1.3. National Savings

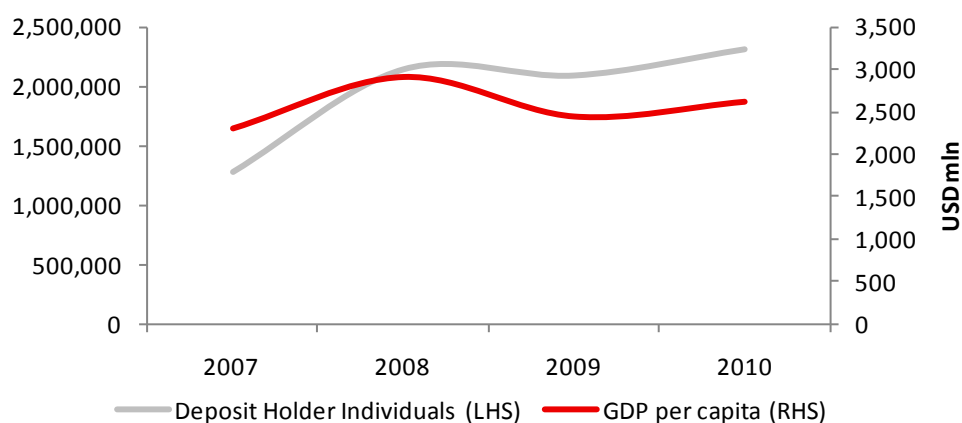
National savings in Georgia remains a problem, as Georgia is a country with low level of savings. According to IMF calculations¹⁹, the gross national saving rate was -1.2% to GDP in 2008 and 3.1% for 2009. However, based on the 2010 projections, this indicator is increasing to 3.4% of GDP with further upward trend in the next years.

Low level of national savings can be explained by several reasons. First, it is a lack of culture to make savings among the Georgian population. Another reason may be the low level of average incomes among the population. However during the recent period the culture of saving is being gradually strengthening in Georgia.

Due to the overall shortage of domestic savings, foreign resources are of crucial importance for Georgian financial sector. Therefore, the continuation of economic growth significantly depends on foreign capital inflows. Besides the foreign resources, in 2010 sharp increase of non-bank deposits (39% annual growth in December in national currency terms) in commercial banks was observed, while the growth of loans of commercial banks to non-bank sector was 20.4% for the corresponding period. These indicators create the reasonable basis for optimistic projections.

The number of the deposit holders in Georgia was growing steadily before 2008 double shocks, however, after the crisis the growth tendency went on. Nowadays there are about 2.3 million savings deposits. Total deposits for 2010 amounts to USD 4.5 bln. As Chart 83 demonstrates, the number of deposit holders and GDP per capita are highly correlated. With growing GDP, bank deposits are expected to grow.

Chart 83. Number of Deposit Holders and GDP Per Capita level in Georgia 2007-2010



Source: National Bank of Georgia

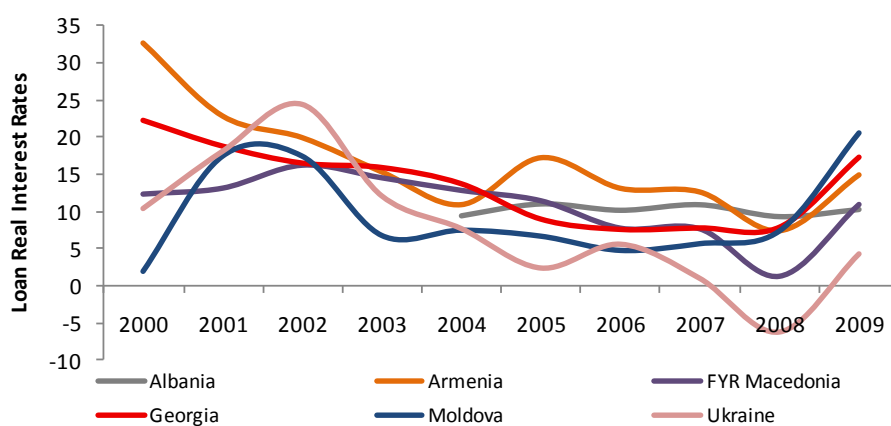
¹⁹ <http://www.imf.org/external/pubs/ft/scr/2011/cr1131.pdf>

2.1.4. Interest Rates

High interest rates are another problem in the financial sector which can be considered as a constraint for growth in Georgia. Generally, high interest rates in the country are mostly due to the high country risk.

In order to analyze the situation regarding the interest rates in Georgia, cross country comparison in this indicator was made. After the Rose Revolution in 2003 and subsequent economic recovery, the situation regarding interest rates started to improve, with rates falling down. As it is demonstrated in the Chart 84 below, in 2005-2007 Georgia performs relatively well in the benchmark country group. Up to 2007 there was a distinct downward trend in loan real interest rate level in Georgia, which reverted due to the double shock faced by the country in 2008, showing more than doubling of loan interest rates in 2009 from 7.8% to 17.3%.

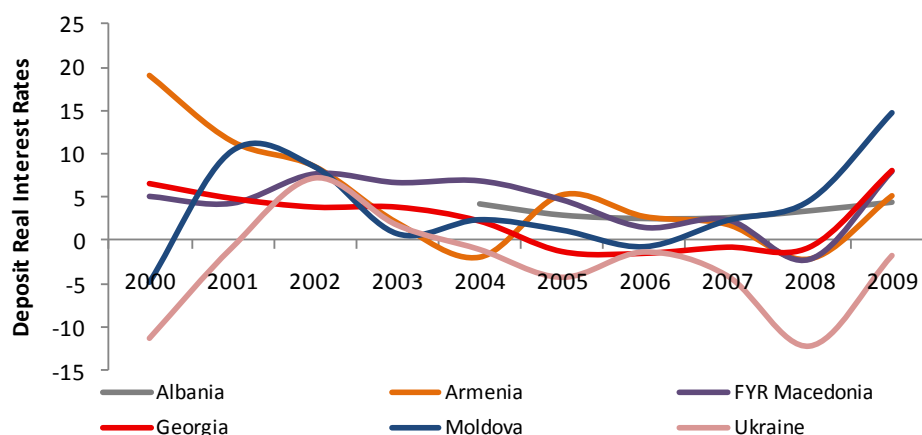
Chart 84. Loan Real Interest Rates in Georgia and the Benchmark Countries 2000-2009



Source: National Bank of Georgia

The deposit real interest rate has been negative for most of the past years, although this is not only the case for Georgia – same can be observed for benchmark countries, such as Armenia and Ukraine, where this indicator is even worse (Chart 85).

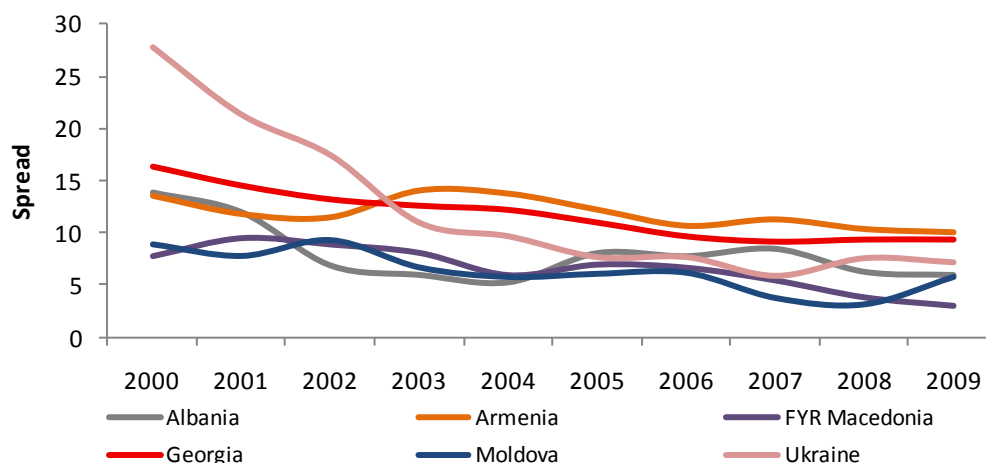
Chart 85. Deposit Real Interest Rates in Georgia and the Benchmark Countries 2000-2009



Source: National Bank of Georgia

According to the Chart 86 below, spread (bank margin) in Georgia has a distinct downward trend, which would indicate an increase in banking sector competition. However spread is still worse compared to benchmark countries.

Chart 86. Interest Rate Spread in Georgia and the Benchmark Countries 2000-2009



Source: National Bank of Georgia

In general, dollarization of loans and deposits in Georgia is very high, 74% and 68% respectively as of to the end of 2010. Therefore, interest rate changes in foreign currency denominated loans and deposits to the large extent determine the overall interest rates on loans and deposits.

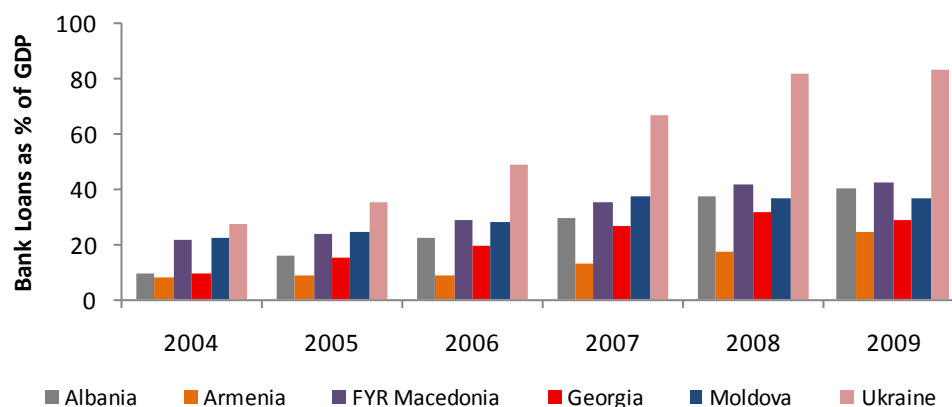
2.1.5. Lending Practices

Under the high real interest rates on loans and relatively low inflation rate in 2009 (3% e-o-p) the lending nominal interest rate was still quite high in Georgia. In 2009 it exceeded 20%. However, since the second half of 2010, the interest rates on lending in foreign currency started to decline, with the inflation rate increasing up to the double digit level by the end of year. In December 2010 real interest rate on loans declined to 6.9%. The reason of declining of interest rates lied in switching of banks to more aggressive lending policy throughout 2010. From global perspective, lending interest rates in Georgia remain very high.

Besides, due to the country risk, the banks look for higher revenues and thus finance projects with higher marginal return, causing significant margin between deposit and loans rates. It should be noted that currently the level of bank deposits is historically high and has surpassed the pre-crisis level, which means that there is no problem of fund scarcity in the banking sector.

Bank loans to GDP ratio is quite high in Georgia and there is a distinct upward trend. However, this ratio is still low compared to benchmark countries. (Chart 87)

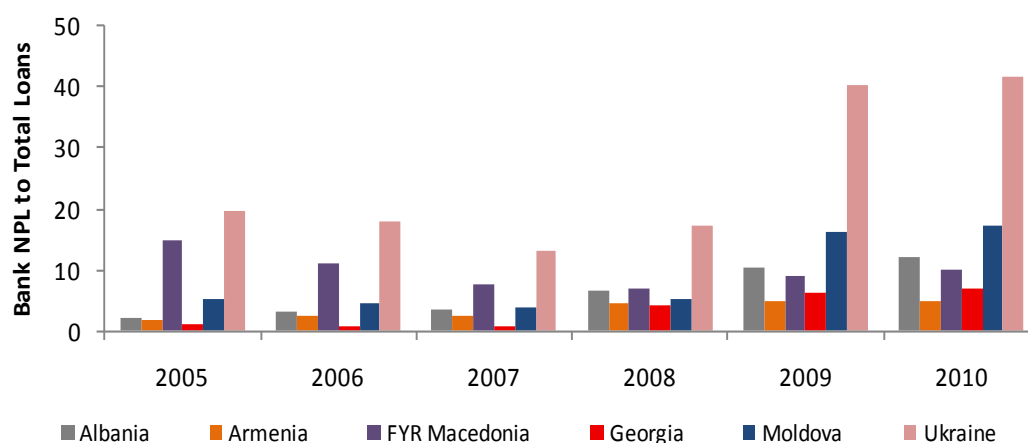
Chart 87. Bank Loans as % of GDP in Georgia and the Benchmark Countries 2004-2009



Source: National Bank of Georgia

As a result of the global financial crisis, the Non-Performing Loans (NPL) share in total loans has grown in Georgia. However, due to the banks' sound risk assessment systems and reasonable lending policies Georgia still shows a lower indicator compared to the most of the benchmark countries. (see Chart 88)

Chart 88. Non-Performing Loans in Georgia and the Benchmark Countries 2005-2010



Source: National Bank of Georgia

The Core Team also looked at the international rankings in order to make cross country assessment of existing lending practices. According to the World Economic Forum Global Competitiveness Report 2010-2011 Georgia leads among the benchmark countries in the ease of access to loans and availability of financial services indicators and is the second in the affordability of financial services (after Armenia).

On the other hand, Georgia has the worst rating among the benchmark countries in the Interest Rate Spread. In addition, Georgia has one of worst ratings in Country Credit Rating. Although it should be mentioned that Georgia sovereign credit ratings, assessed by leading credit rating agencies such as Fitch and S&P, which were downgraded as a result of Russian invasion, started to rebound and demonstrated improvement since 2010 (mentioned below in detail).

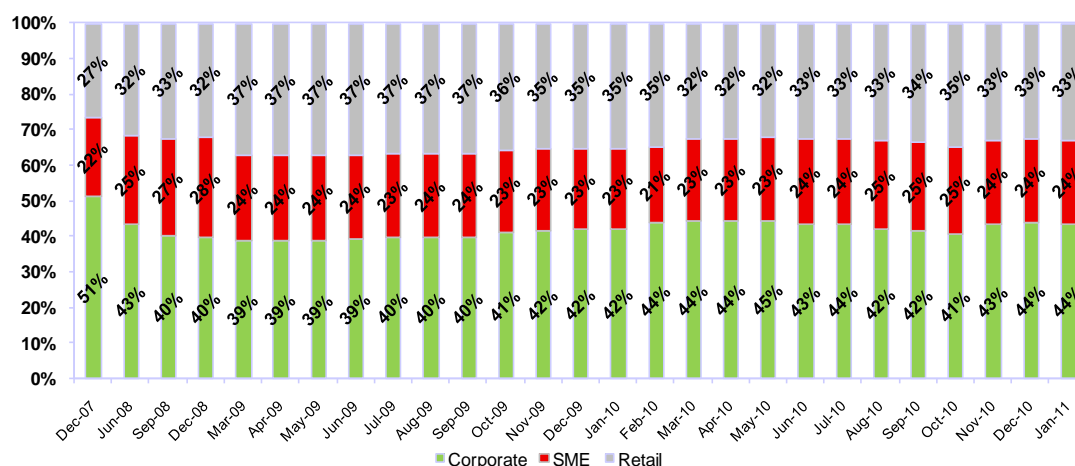
It would be useful to include the data on effective interest rates and collateralization requirements. However no specific data is available because these parameters are defined by commercial banks individually in any certain cases and there is no aggregated data. Generally, commercial banks mostly use real estate as collateral for loans.

2.1.6. Products

The products of the banking sector are widely diversified in Georgia and have been developing actively during the recent years.

Currently, lending to customers is the primary activity of banks operating in Georgia. By the end of 2010, the highest lending share comes on corporate lending with about 45% of total loans. Loans to small and medium enterprises comprised around 25% of total loans during 2007-2010. (Chart 89)

Chart 89. Credit Portfolio by Products in Georgia Dec 2007 – January 2011



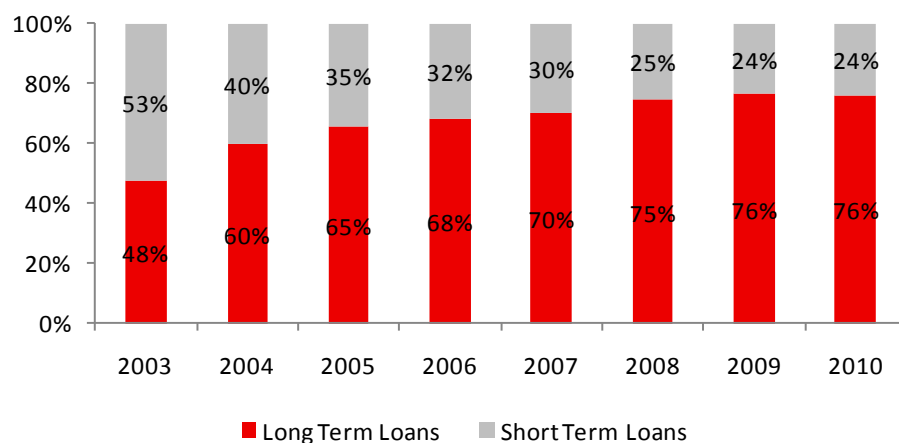
Source: National Bank of Georgia

The Core Team wanted to analyze the contribution to the GDP made by small, medium and large enterprises. Unfortunately there were no sufficient data available.

It would have been helpful breaking down all Charts by sizes of the enterprises. This would have shown a more detailed picture of the Georgian financial sector. However, there are no unified criteria for differentiating small, medium and large enterprises. All commercial banks have their own criteria and there are no legislative thresholds available for this purpose.

Long term loans' share was growing from 2003 to 2009, and since then has been stable around three-quarters of total loans. Growing shares of longer-term credits indicates healthy levels of liquidity, capitalization and gains in banking sector. (Chart 90)

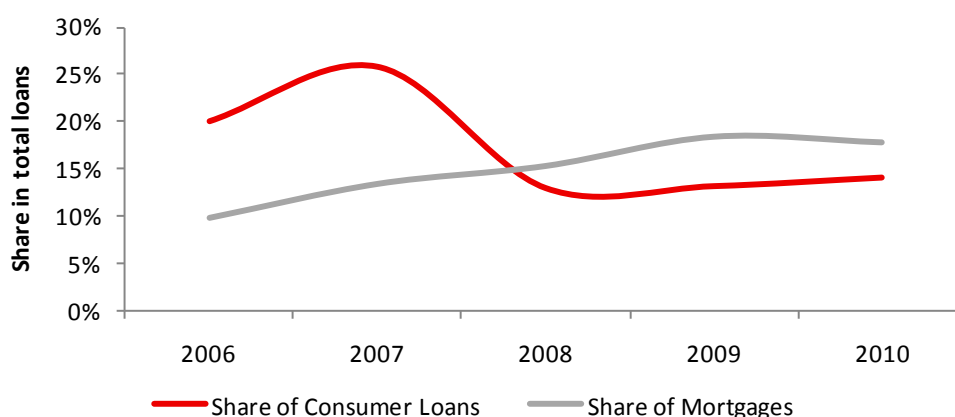
Chart 90. Long Term and Short Term Loans in Georgia 2003-2010



Source: National Bank of Georgia

Share of consumer loans fell sharply in 2008, but started to rise in the period after. As for the share of mortgage loans, this indicator has been slightly increasing over past years. (Chart 91)

Chart 91. Shares of Consumer Loans and Mortgages in Georgia 2006-2010



Source: National Bank of Georgia

2.2. Is it Foreign Finance?

Despite the recent years' robust economic growth in Georgia, foreign financial resources still constitute the important source of country's overall economic development. This chapter analyzes the main sources of foreign finance in Georgia and country risk ratings. As the analysis further reveals, foreign finance does not constitute a constraint for growth in the country.

2.2.1. Country Risk Rating

Before starting the analysis of foreign financial sources in Georgia, it is useful to look at the country risk ratings which have been briefly mentioned earlier. According to international risk rating agencies Georgia's country risk rating is the following:

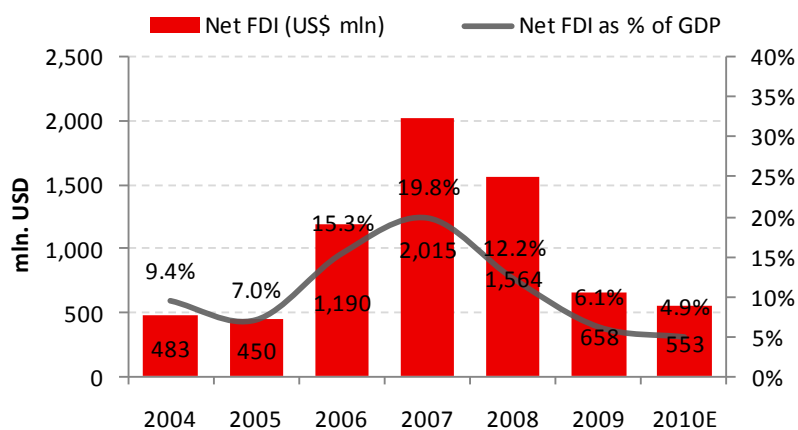
- On March 29, 2011 Standard & Poor's Ratings Services revised its outlook on Georgia to positive from stable. At the same time, S&P affirmed 'B+' long-term and 'B' short-term sovereign credit ratings on the sovereign. They also affirmed Georgia's '4' recovery rating.
- On March 3, 2011 Fitch Ratings has revised the Outlook on Georgia's Long-term foreign and local currency Issuer Default Ratings (IDR) to Positive from Stable and affirmed them at 'B+'. The agency has also affirmed Georgia's Short-term IDR at 'B' and Country Ceiling at 'BB-'.
- In October 2010, Moody's Investors Service has assigned first-time Ba3/Not-Prime foreign and local currency issuer ratings to the Government of Georgia. The outlook is stable.

2.2.2. Foreign Direct Investment and remittances

The analysis in the previous chapters (infrastructure and macroeconomic overview parts) of the document already revealed that donor assistance still plays an important role in Georgia's overall economic development. In this chapter, the Core Team focuses on the analysis of such important aspect of foreign financing, as foreign direct investments (FDI).

During the recent years, improved business climate resulted in a substantial increase of FDI inflows in the country and implementation of a number of wide-scaled investment projects. Net investment inflows in Georgia reached its historical maximum in 2007, but following the double shocks in 2008-2009, level of FDI significantly reduced, and it never (up to now) managed to fully recover (see Chart 92).

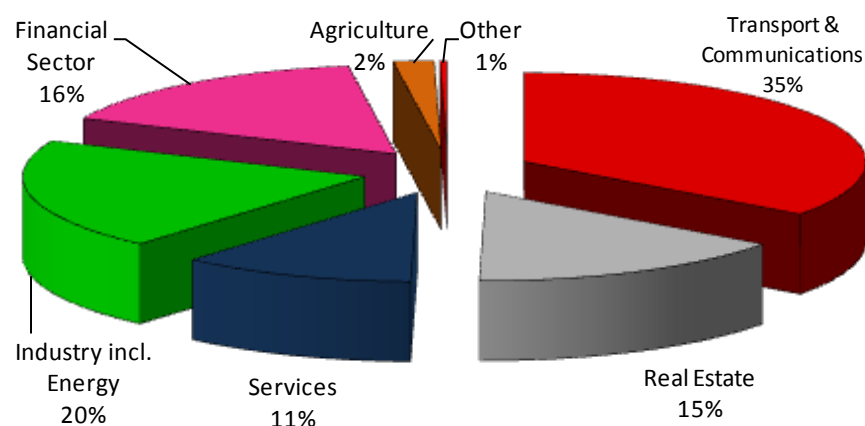
Chart 92. Foreign Direct Investment in Georgia 2004-2010



Source: Geostat

As for the FDI characteristics, during the last several years, the FDI inflows in Georgia were diversified both, by sector and by sources. According to the Geostat data, the sectors of transport, communications, energy, industry, and hospitality were attracting highest levels of investment. The Chart 93 below shows 2010 FDI by sectors.

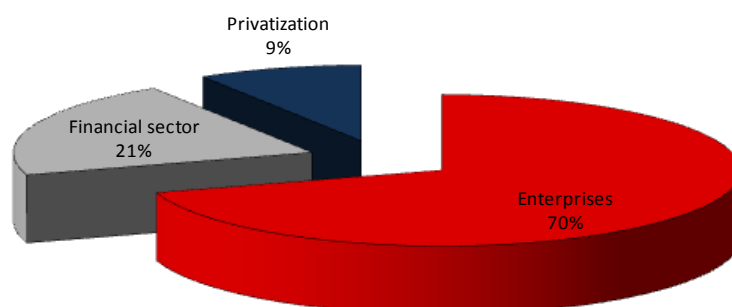
Chart 93. Foreign Direct Investment by Sectors in Georgia, 2010



Source: Geostat

During the last few years, FDI in enterprises constituted the main destination for FDI in Georgia. The most recent tendencies show increasing financial sector investment, becoming the second biggest source of FDI in Georgia, retaking the reducing share of privatization-attracted investment (Chart 94).

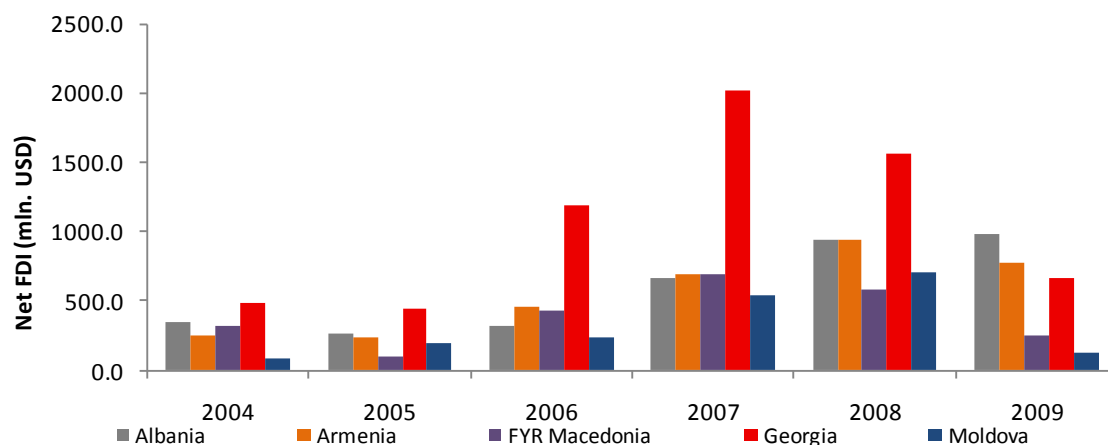
Chart 94. Foreign Direct Investment by Type in Georgia, 2010



Source: Geostat

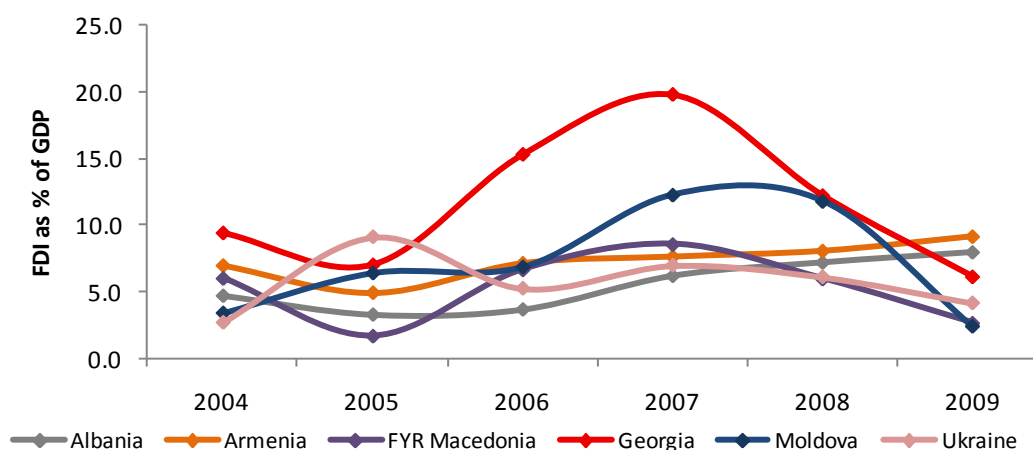
In order to make the cross country comparison of net FDI and percent of FDI in GDP, World Bank indicators were taken. According to the Chart 95 and Chart 96 FDI inflows to Georgia were significantly voluminous before 2008, both in real terms and as a share of GDP and therefore were higher than in the benchmark countries. However, the Charts also show the significant reduction of FDI in Georgia in 2008-2009.

Chart 95. Foreign Direct Investment in Georgia and the Benchmark Countries 2004-2009



Source: World Bank (World Development Indicators)

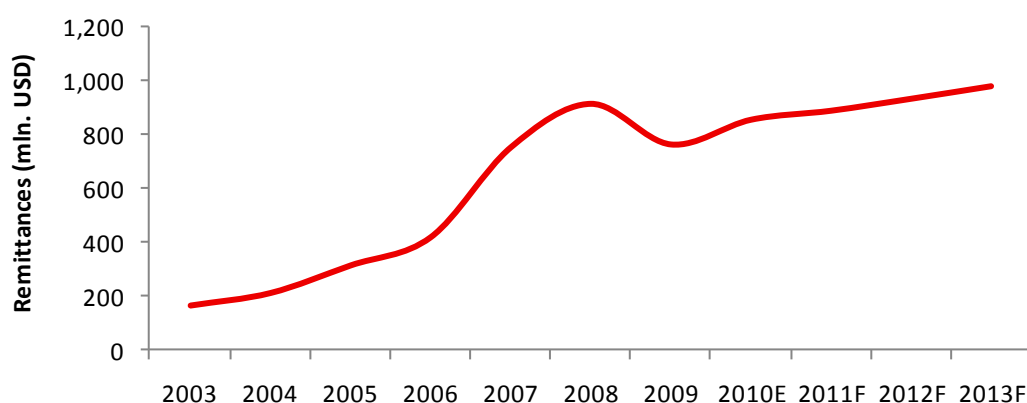
Chart 96. Foreign Direct Investment in Georgia and the Benchmark Countries as % of GDP 2004-2009



Source: IMF, World Bank

In addition to the abovementioned, in order to analyze the foreign financing sources in Georgia, it is useful to look at level of remittances in the country. Remittances provide essential injections for Georgia's economy, reaching about 5-10% of annual GDP in 2003-2010. There is a definite upward trend in remittance flows, accounting for the slight seasonality and decline during the crisis period in 2008-2009 (Chart 81).

Chart 97. Remittances in Georgia 2003-2013



Source: National Bank of Georgia

Finance Summary

According to the analysis presented above, it can be concluded that finance is not a binding constraint for growth in Georgia. As it was explained, level of FDI and remittances lays sufficient ground to consider that foreign finance is not a constraint.

As for the local finance, Georgian financial sector is developing very fast. Banking sector is rather well-developed compared to other areas of the financial market. Overall banking sector can be considered as resilient. This is best proved by the fact that even in the most challenging time of 2008-2009, Georgian banking sector managed to emerge from the global financial crisis and the domestic economic downturn in substantially good condition. This was a result of the solid pre-crisis capital and liquidity positions of banks, the support of international financial institutions as well as the countercyclical fiscal, monetary and supervisory policies.

However, there are still some issues of concern regarding the local finance, such as high interest rates, mostly caused by the high country risk, which can be considered as a constraint for growth in Georgia.

Conclusion

The MCC Core Team undertook a Constraints Analysis for Georgia according to the growth diagnostics model developed at the Kennedy School of Government of the Harvard University. While following the methodology as closely as possible, the Team also took into account realities on the ground and specific characteristics of the Georgian economy at its current stage of development.

Growth diagnostics methodology turned out to be a useful tool for revealing constraints for growth and development at this particular point in time where constraints optimization and increased focus on specific areas is needed. Whereas starting from 2004 Georgia simultaneously pursued institutional and regulatory reforms in all areas of economic life, today the country's priority is to lock-in and further advance reform achievements, make the latter irreversible and identify key remaining bottlenecks that hinder further long-term growth. Government reform policies related to economic areas, privatization and fight against corruption were overly successful leading to economic growth generated to the largest extent through private sector development. Liberalized and open business environment and smart regulation helped Georgia, *inter alia*, to recover relatively well from the double shock of the Russian invasion in August 2008 and global financial crisis in 2008 and 2009, especially if compared with regional peers and countries of similar size.

In the post-crisis period, starting from 2010, Georgia has been striving to identify and address the remaining bottlenecks that hinder private sector growth and economic development. In this context not a laundry list of reforms, as it was done in 2004-2008, but a prioritized list of binding constraints to growth was to be identified. Whereas back in 2004 the same analysis would have revealed a long list of binding constraints, today such a list is relatively limited. However, it has to be emphasized that there is a number constraints to growth – not binding ones – which either need to be addressed through some form of intervention, or will gradually be eradicated when other related factors are addressed or the existing tendency of development and growth in the sector continues.

The analysis identified binding constraints, constraints and non-constraints.

Binding constraints create highest hurdles for growth and development and if not addressed in a consequent manner by the Government, will inhibit long-term prospects of the country's development. Two areas - quality of human capital and road infrastructure - have been identified as such.

Insufficient quality of human capital is mainly caused by the low level of development of higher education in Georgia and conditions relatively high level of unemployment. Recent years' impressive growth record of Georgia has not been transformed into any substantial reduction of unemployment and growth has been largely jobless. Solving the problem of quality of human capital through offering improved quality of education, would help decrease the existing mismatch of supply and demand on the labor market, thus help reduce unemployment, and also make Georgia a more competitive place for private investment offering qualified human resources.

As for road infrastructure, it requires increased levels of state investment – the road network being entirely state owned at this stage – in particular in regional roads. Construction and rehabilitation of (regional) roads, in its turn will help decrease existing substantial disparities between the center and the regions, better integrate rural population into economic and social processes, contribute to agriculture development, in which approximately half of Georgia's population, mainly those leaving in Georgia's regions, is employed, increase tourist potential as today some of major tourist attractions are hardly accessible. Although the road sector has seen high levels of investment in recent years, continued investment, at least in the same scale and at same speed is needed. Road construction and rehabilitation will contribute to increasing Georgia's role as transport and transit hub, thus generating increased economic activities and revenues.

The MCC Core Team cross checked these findings through various forms of public consultation, including a general population survey. These process revealed results that confirm the abovementioned.

Apart from binding constraints, the Core Team identified areas which constitute constraint for further growth and development. These areas are water infrastructure, innovation and access to finance.

Georgia invested a certain amount of resources in water infrastructure in recent years. However, this sector, in particular irrigation systems, is still insufficiently developed to serve the needs of agriculture development. The government has a plan to address the issues through privatization and public private partnership schemes on the one hand, and through budgetary allocations in the period before the establishment of private schemes. In the next 1-2 years total investment of 100 mln USD is envisaged, both trough public and private resources.

Innovation by private sector is a constraint to growth because it hinders development of high technology production and thus export diversification. After having analyzed locally available and international data, the Core Team came to the conclusion that one of the major reasons for lack of innovation is the lack of sufficiently qualified human capital in relevant fields. Lack of innovation, in connection with lack of highly qualified human capital, which is a binding constraint, can be mitigated through improving high education in relevant fields.

As for the access to finance, the main concern here is relatively high interest rates, mainly conditioned by security risks and increased risk premiums associated with Georgia (the Russian factor). Although the Georgian banking sector is well developed and sophisticated, interest rates are still high. However, it can to be mentioned that in the post crisis period the rates started to decrease.

Areas such as geography, micro and micro environment, energy, and telecommunications have been identified as non-constraints.

Apart from the areas mentioned above, the Core Team focused on a number of sectors, which are not integrated in the growth diagnostics methodology *per se*, but are relevant for Georgia's development. The growth diagnostics model does not provide for sector analysis, but rather focuses on institutional and regulatory aspects of growth and development. Therefore, the Core Team integrated analysis of a number of sectors in the general overview of the papers. These sectors are agriculture, tourism and social sphere. Currently existing challenges in some of these areas, such as agriculture and tourism, can be handled through addressing the problems of insufficiently developed regional infrastructure, including roads, improving the qualification of human capital in these areas, and encouraging private investment through promotion. As for the social area, it is relevant for Georgia because part of its population has not yet been able to benefit from growth and development and government designed special policies to address the needs of the most vulnerable and poor segments of the population.

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Annexes

Annex I

Consultative Process

Within the process of preparing the Constraints Analysis document, following the MCC guidelines, the Georgia MCC Core Team embarked upon the consultative process activities. The aim of the activities was to involve the stakeholder groups in the process of the Constraints Analysis elaboration and to take into account their sentiments and views. More specifically, through organizing meetings and focus groups, and conducting qualitative discussions with the stakeholders, the findings of the Constraints Analysis were cross-checked with relevant stakeholder groups and the grassroots sentiments, in order to identify their views on growth constraints to the economy of Georgia. The activities conducted in the framework of consultative process are summarized in the table below.

	Essence/Counterpart	Date	Topic	Participants
MCC Core Team	Creation of MCC Core Team	January, 2011	Preparatory process for MCC Georgia second compact	Transparency International Georgia, New Economic School of Georgia, Business Association of Georgia, Representatives of relevant state institutions
Meetings with Business Community	Business Association of Georgia	February 28, 2011	Overview of the economic policy of Georgia, constraints to growth and development, definition of those economic sectors to which resources under the possible MCC second compact could be channeled.	Prime Minister of Georgia Mr. Nika Gilauri, MCC Core Team, representatives of business sector.
	Business Association of Georgia	March 24, 2011	Overview of the economic policy of Georgia, constraints to growth and development, business development needs.	MCC Core Team, representatives of business sector, MCC economist Mr. Jeffrey Tanner, MCC resident country office representatives.
Consultative Meetings with the Civil Society	NGO Community	March 14, 2011	Introduction of the second compact development process.	MCC Core Team, NGO Representatives, MCC resident country office representatives.
	NGO Community	March 24, 2011	Main constraining factors to the economic	MCC Core Team, NGO Representatives,

			growth of Georgia. The meeting focused on the discussion of the preliminary findings of the Constraints Analysis.	MCC resident country office representatives, MCC economist Mr. Jeffrey Tanner.
	NGO Community	May, 2011	Gender and Social situation in Georgia and priorities of the compact in this particular field.	MCC Core Team, MCC Gender and Social Expert Ms. Michelle Adato, NGO representatives.
Discussions with the MCC Economists	MCC Meetings in Washington DC	February 2011	Initial discussions for the preparation of CA first draft	MCC Core Team, MCC staff and MCC economists.
	Videoconference for MCC economists and MCC Core Team	March 17, 2011	Initial discussions of the CA draft preparation	MCC Core Team, MCC economist Mr. Jeffrey Tanner, MCC resident country office representatives
	MCC Economist visit to Georgia	March 21-25, 2011	The series of meetings were dedicated to the profound discussions of the CA first draft.	MCC Core Team, MCC economist Mr. Jeffrey Tanner.
	MCC Meetings in Washington DC	May 2011	Discussion of CA last draft and initial project concept papers	MCC Core Team, MCC staff and MCC economists.
Access to the Information for Public	Creation of the link on government's web-page www.georgia.gov.ge	February, 2011	In order to make the public outreach efforts more effective, a web-access to the information regarding the CA preparation was ensured through a government's web-page. The final draft CA was published on the mentioned web-page on April 21, 2011 making it available for civil society and public to present their comments on the document until May 1, 2011.	MCC Core Team
Surveys	Public Opinion Research	March, 2011	Evaluation of the sentiments of Georgia's population regarding the urgent needs for growth and development and constraints that hinder the latter in the country	BCG Research, Population of Georgia
	Research of Higher Education System Service of Georgia	April-May, 2011	Identification of the existing expectations and new demands for higher education in Georgia	Baltic Surveys/The Gallup Organization
	Distribution of simple questionnaires	June, 2011	Receiving feedback on the American branch university project from business society	MCC Core Team, Business Representatives

Focus Groups	Business Representatives	March, 2011	Provision of additional valuable source of feedback and information for the CA from relevant stakeholders and in certain instances to cross-check results obtained through quantitative analysis and available local and international research	BCG Research, Business Representatives
Consultative Meetings on Educational Issues	Meetings at the Ministry of Education and Science of Georgia	May 2011	Gender and Social situation in the education system and priorities of the compact in this particular field.	Deputy Minister of Education and Science of Georgia, MCC Gender and Social Expert Ms. Michelle Adato, MCC Core Team, MCC resident country office representatives.
	Meeting at the Ministry of Health and Social affairs of Georgia	May 2011	Gender and Social situation in Georgia and priorities of the compact in this particular field.	Deputy Minister of Health and Social Affairs of Georgia, MCC Gender and Social Expert Ms. Michelle Adato, MCC Core Team, MCC resident country office representatives.
	Meeting at Tbilisi State University	May 2011	Gender and Social situation in the education system and priorities of the compact in this particular field.	Rector of the Tbilisi State University, MCC Core Team, MCC Gender and Social Expert Ms. Michelle Adato, NGO representatives.
	Meeting with population in Akhaltsikhe	May 2011	Gender and Social situation in the education system and priorities of the compact in this particular field. Getting public opinion.	MCC Gender and Social Expert Ms. Michelle Adato, NGO representatives.
	Meeting with the Minister of Education and Science	May 2011	The meeting was a part of the examination of the higher education system of Georgia and the demand on the higher education for the recent years and the trends were discussed	Minister of Education and Science Mr. Dimitri Shashkin, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson.
	Meeting with the Deputy Minister of Education and Science	May 2011	The meeting was a part of the examination of the general education system of Georgia	Meeting with the Deputy Minister of Education and Science Mrs. Irina Kurdadze, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson.

	Meeting with the Ex-Minister of Education and Science	May 2011	During the meeting participants discussed the situation in higher education system of the country and implemented reforms	Ex- Minister of Education and Science Mr. Gia Nodia, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson
	Meeting with the Deputy Minister of Education and Science	May 2011	The meeting was a part of the examination of the higher education system of Georgia and the demand on the higher education for the recent years and the trends were discussed	The Deputy Minister of Education and Science Mr. Nodar Surguladze, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson
	Meeting with President of Georgian Foundation of Strategic and International Studies Mr. Alexander Rondeli	May 2011	Situation of Georgian higher education system and implemented reforms were discussed	Mr. Alexander Rondeli, MCC Core Team, MCC Consultant Mr. Richard Johanson
	Batumi State Maritime Academy	June 20, 2011	The meeting was a part of the examination of the education system of Georgia; Inter-alia the curricula and studying facilities were examined, as well as reform plans were discussed	Academy Rector Mr. Nick Tsiklauri, MCC Core Team, MCC Education Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson, MCC Country Director Mr. Jim McNicholas.
	Maritime Private College "Anri"	June 20, 2011	The meeting was a part of the examination of the education system of Georgia. The meeting illustrated intensive private sector interest in this field.	Training centre administration, MCC Core Team, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson, MCC Country Director Mr. Jim McNicholas.
	Meetings with the Deputy Minister of Education of Adjara	June 20, 2011	Minister and Director accompanied visitors throughout the visit in the region and provided for them all the necessary	MCC Core Team, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr.

	and the Director of the Education Department of the same ministry		information.	Richard Johanson, MCC Country Director Mr. Jim McNicholas.
	Batumi State University	June 20, 2011	The meeting was a part of the examination of the education system of Georgia. Inter-alia the curricula and studying facilities, existing problems and reform plans were discussed.	University Rector Mr. Aleksander Bakuridze, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson, MCC Country Director Mr. Jim McNicholas.
	"Adjara Education Fund"	June 20, 2011	The meeting was a part of the examination of the education system of Georgia; Inter-alia the curricula and studying facilities were examined, reform plans were discussed as well.	Administration of the Educational Institution, MCC Core Team, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson, MCC Country Director Mr. Jim McNicholas.
	Batumi State Vocational College "Black Sea"	June 20, 2011	The meeting was a part of the examination of the education system of Georgia; Inter-alia the curricula and studying facilities were examined, reform plans were discussed as well. Specific facilities of various professional education fields were examined.	Training center administration, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson.
	National Examination Centre	June 23 2011	The meeting focused on the structure of Georgian examination system. The results of the recent years and trends were discussed.	Head of the National Examination Centre Ms. Maia Miminoshvili, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson.
	National Center for Educational Quality Enhancement	June 23 2011	The meeting focused on the details and procedures of accreditation system of the Georgian high education institutions. In addition general information of Georgian	Director of the center Mr. David Kereselidze, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and

			higher education system was provided.	Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson.
	Georgian State Technical University	June 23 2011	<p>The meeting was a part of the examination of the education system of Georgia. Inter-alia the curricula and studying facilities were examined, reform plans and existing problems were discussed.</p> <p>Discussions revealed that: Number of English speaking professors is very low (1-3%), average age of professors is rather high, there are many non-technical faculties, University had a problem of accreditation few years ago.</p>	Professors and Administrative staff, MCC Core Team, MCC Deputy Country Director Ms. Jennifer Lappin, MCC Education, Health and Community Development Director Mr. Van Crowder, MCC Consultant Mr. Richard Johanson

Mincer wage Regression Stata Output

e regressed *wage_log* – the dependent variable, which is the *ln* of the market wage level of employed workers, on the following independent variables: *grade*- covering the years spent on getting education, *t1l_exp*, which is generated by *age - grade - 6* and represents the years of potential experience, which a person of certain age with certain years of education may have, *t1l_exp2* –which is the square of potential experience. The database covers **11 042** observations.

```

name: <unnamed>
log: D:\Documents And Settings\Desktop\data.smcl
log type: smcl
opened on: 16 Feb 2011, 17:21:09
. reg wage_log t1l_exp grade t1l_exp2

```

Source	SS	df	MS	Number of obs = 11042		
Model	743.599399	3	247.866466	F(3, 11038) =	108.38	
Residual	25244.6739	11038	2.28706956	Prob > F =	0.0000	
Total	25988.2733	11041	2.35379705	R-squared =	0.0286	
				Adj R-squared =	0.0283	
				Root MSE =	1.5123	

wage_log	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
t1l_exp	.0309333	.0039687	7.79	0.000	.0231539	.0387126
grade	.1183323	.007348	16.10	0.000	.103929	.1327357
t1l_exp2	-.000618	.0000755	-8.19	0.000	-.000766	-.0004701
_cons	4.390969	.1116174	39.34	0.000	4.172179	4.609759

In order to increase the reliability of the model, other relevant variables were added, and the best explanatory power was shown by the following selection of variables. This model increased the R-squared value to circa 5.7%.

Additional variables added were: a dummy variable 'male', defining sex and a variable 'degree' – depicting different levels of education (code 1 for 9 years of school education, code 2 – complete secondary education, code 3 – professional education, code 4 – Bachelor's degree, code 5 – Master's degree (or previously existing higher education), Code 6 for doctoral degree.)

```

. reg wage_log grade t1l_exp t1l_exp2 degree male

```

Source	SS	df	MS	Number of obs = 11042		
Model	1474.48718	5	294.897436	F(5, 11036) =	132.76	
Residual	24513.7861	11036	2.22125644	Prob > F =	0.0000	
Total	25988.2733	11041	2.35379705	R-squared =	0.0567	
				Adj R-squared =	0.0563	
				Root MSE =	1.4904	

wage_log	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
grade	.0775278	.0207872	3.73	0.000	.0367812	.1182745
t1l_exp	.0331224	.0039674	8.35	0.000	.0253456	.0408992
t1l_exp2	-.0006324	.0000758	-8.34	0.000	-.000781	-.0004839
degree	.1015078	.0306176	3.32	0.001	.0414919	.1615237
male	.5176367	.0289449	17.88	0.000	.4608996	.5743738
_cons	4.240321	.1885343	22.49	0.000	3.87076	4.609881

Summary List of Comments on Draft Georgia Constraint Analysis

The Economic Policy Research Center (EPRC) presented its comments on the Constraints Analysis document and its findings prepared by the MCC Georgia core team. It is noteworthy, that these comments are based on the older version of the Constraints Analysis document (which was confidential), therefore unfortunately the comments are outdated to a certain extent. The EPRC comments are the following:

- EPRC agrees with the core team that **geography** is not a constraint as Georgia possesses very advantageous location within a region of south Caucasus and is an important potential transit route from West to East.
- EPRC considers that **macro risks** can still potentially hamper the economic development of the country. This assumption is based on such factors as the volatility of FDI flowing to Georgia, large current account balance deficit and increasing dependency on exogenous sources in BOP.
- As regards the **micro risks**, according to the EPRC comments, decreasing agricultural sector can be a serious constraint for growth in the country. The solution in EPRC's opinion lays in the creation of a functional land market by means of finalization of nowadays incomplete agricultural land registration process and helping the process of land consolidation and flow of credit to rural sector.
- EPRC does not agree with the GoG's assumption that **energy** is not a constraint for growth. In EPRC's opinion, despite the recent development of the sector, serious capacity building is still required in this area. In order to clearly judge whether energy is a constraint to development or not, in EPRC's view it is necessary to conduct a benchmark cross country study comparing the availability of energy resources and their affordability (prices) by population and businesses. If such a study identifies that the costs of energy to businesses in relation to its availability is higher in Georgia than in some other countries with similar level of development or the institutional arrangements do not favor business consumption of electricity, it can be concluded that energy sector is the constraint.
- As for the **telecommunications** sector, EPRC thinks that telecommunications sector volume and sophistication is adequate to the current level of development of the Georgian economy, taking into consideration very impressive development capacity of the sector.
- EPRC agrees with the MCC core team that largely **water supply infrastructure** is a constraint but not a binding one, taking into consideration weak drainage and irrigation systems in the country.
- EPRC does not consider **innovations** as a major constraint due to the fact that Georgia's recent economic growth has essentially been jobless and vast potential is regarded unused.
- In relation to **access to finance**, EPRC disagrees with the core team and thinks that access to finance is not a major constraint at this given time. Rather, demand on investable assets is a problem to the country, despite the fact that private credit to the economy is just slightly above of 32% of GDP. In supporting this argument EPRC uses the lending dynamics to the general economy, as well as availability other sources of capital, such as FDI and remittances.
- EPRC agrees with the core team on the main finding that **human capital** is indeed a problematic area for economic development of Georgia. EPRC thinks that this area needs further clarification as to which aspect of human capital (primary education, secondary education, technical education) is the key.
- EPRC disagrees with the MCC core team on the issue that **road infrastructure** is a major constraint for Georgia at this moment of time. Despite the fact that EPRC agrees that the roads quality leaves better to desire even if Georgia appears to be ahead of majority of

benchmark countries in this particular regard, in their point of view, this area has a relatively limited multiplier on the economy as such. Plus, roads in the short term period have more articulated positive effects on the imports, not the exports, demand on which is essentially a function of foreign consumers.

- EPRC also considers **health** as a serious constraint to growth, while MCC core team did not identify health as a constraint in the last draft of the CA unlike the initial draft.
- As a summary EPRC suggests that health and agriculture, together with the relative lack of demand on investment assets and obvious external macroeconomic developments are somewhat binding constraints to growth.