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Poverty reduction in Azerbaijan: reality, problems and future challenges

Namig Taghiyev and Elvin Afandi

The analysis reviews official steps of recent period in the area of poverty eradication in Azerbaijan. The analysis of implemented reforms and the impact of it on poverty reduction are also investigated. At the end, the major problems regarding current poverty reduction measures are highlighted.

Adoption of poverty problem by global public opinion has brought to the focus the necessity of dealing with the factors of it. Appreciated necessity was expressed in more clear and systematic way in Millennium Declaration adopted at UN Assembly, in year 2001. All countries joining this treaty have taken responsibility for eradication of extreme poverty and hunger within the framework of Millennium Development Goals (MDGs), with the concrete numerical target of halving poverty level - measured by local poverty line of each country - by 2015.

Azerbaijan joined this declaration and within the sphere of internal and external government policy has started to make efforts in realization of assigned purposes and targets. First step was the launching of annual household survey with the purpose of poverty level identification. Another serious measure was the adoption of a program on poverty reduction and economic development for 2003-2005.

Based on results of Households' Budget Survey (HBS), the process of evaluation started, the absolute and relative poverty lines were identified. Thus, absolute poverty line of one year has covered range of daily consumption of 2200 calories and 70% of net consumption goods which was equal to USD 25.8. Relative poverty line presented to 60% of median consumption per capita and was equal to USD 15.5. Nevertheless, absolute poverty line indicator is not able to present the reality. At least due to the fact that adopted poverty line presents only food products and should be adopted not as entire poverty line, but as extreme poverty level.

By identification of poverty nature for year of 2002, absolute poverty level has included not only food products, but non-food products and services as well. Price of food was estimated by taking into account corresponding consumption prices, whereas prices of non-food and services were estimated by considering wholesale prices. The absolute poverty level equaled to USD 36 in 2002. It is notable that the relative poverty line was identified and evaluated based on criteria of 2001. However, noted fact does not give opportunity for objective comparison of indicators of poverty levels for 2001 and 2002. One of the major reasons was that the State Statistical Committee of Azerbaijan (SSC) has started holding HBS according to standards of Eurostat, whereas this fact indicates differentiation in methodology of survey data.

Since the compilation of SPPRED (State Program on Poverty Reduction and Economic Development) in 2003, the absolute poverty line and the subsistence wage started to be estimated by multiplying numbers since 2002 by consumer price indices (CPI). In more specific way, indicators presented the following figures in 2003-2005: USD 36.5, USD 39.5 and USD 45.0 correspondingly. Nevertheless, the above identified poverty lines could not present the reality. Since, if in 2002 by identifying of minimum prices on food and non-food products and services were taken based on different resources, it was necessary to indicate those criteria in estimation of absolute poverty level for the following years. On the contrary, while identifying absolute poverty line in noted years by multiplying indicator of 2002 by CPI of corresponding year cannot be compared to corresponding indicator of base year. In general, despite of these contradicts, it is reasonable to remind absolute poverty levels and lines for 2001-2006.

Table 1. Absolute poverty levels and lines in Azerbaijan, 2001-2006

	2001	2002	2003	2004	2005	2006
Population in absolute poverty (% of total population)	49.0	46.7	44.7	40.2	29.3	20.8
Absolute poverty line (AZN)	24.0	35.0	35.8	38.8	42.6	58.0
Absolute poverty line (USD)	25.8	36.0	36.5	39.5	45.0	65.0

Source: State Statistical Committee of the Republic of Azerbaijan, Households' Budget Survey

According to *Table 1,* absolute poverty level in Azerbaijan has decreased by more than 28 percentage points in 2001-2006, reaching 20.8% of the population. During the investigated period a serious change happened in absolute poverty line and noted indicator has increased from USD 25.8 in 2001 to USD 65.0 in 2006.

The SPPRED itself

Many have attributed low rates of decrease of absolute poverty level in last 5 years to implementation of SPPRED. The contribution of the mentioned program and its measures to the development of welfare were not really satisfactory. However, many aspects included can be evaluated as positive. The noted strategy was prepared based on 6 strategic objectives: create of profitable environment for increasing opportunities to obtain revenues; maintain macro-economical stability; improve quality and arrange equal affordability of major healthcare and educational services; improve infrastructure (roads, public utilities, communication, etc.); implement reforms in social security system for rational protection of sensitive social groups; improve welfare of refugees and compulsory migrants.

This strategic document developed by local and foreign experts of SPPRED Secretariat under the authority of Ministry of Economic Development has seemingly included all significant directions. It is notable that after the compilation of the program, the noted secretariat has provided systematic control in implementation and realization process, presenting general evaluation and analysis in annual reports. Reports include the levels of absolute and relative poverty, the description of poverty profile, the analysis of measures and the aspects of program monitoring.

Reports indicate that regardless changing poverty statistics, characteristics and the profile of poverty remains the same. Current poverty profile is characterized by following aspects. First, the risk of poverty for families in rural areas is much higher than those living in cities. The poverty level in Baku[1] suits the country average, however is lower than those in other cities. Second, the larger is the size of a family, the higher is the risk of poverty. Presence of two children in a family strongly influences probability for poverty, whereas in families with more than three children, the risk is precipitously increases. Third, the risk of poverty among children in 1-15 years age is much higher than among the people above 60 years of age. Fourth, gender factors from position of consumers' expenditures do not influence this risk of poverty. Probability to be poor between females and males can be considered as equal. At the same time, position of female or male as a household head does not influence probability to be poor. Fifth, the risk of poverty in families with household head being a refugee or compulsory migrant is very high. Finally, the poverty level in families with household head with higher education is low.

1 Baku is the capital of Azerbaijan

The relation of economic performance and poverty

According to some local experts we can indicate that current economic growth in Azerbaijan cannot be termed as pro-poor, as richer population benefits from currently observed record growth more than poor.

By the method of employment elasticity it is possible to evaluate relation between sectoral development and development of welfare. The employment elasticity of output growth connects the growth of jobs and the economic growth in one indicator, measured as the proportionate change in employment divided by the proportionate change in GDP during a given period. However, the employment elasticity should be interpreted with caution. Elasticity greater than unity imply declining labor productivity, and an elasticity of less than unity means that employment expansion is taking place alongside an increase in productivity. But the distance of elasticity index from one should not be large if we consider economic growth a core positive factor for employment growth. For this purpose, formula is used in relation of percentage growth of employment in any sector to growth rate of occurred additional cost. With assistance of noted formula, we have estimated employment elasticity through a number of leading activity sectors of economy in 2001-2006 (*Table 2*).

Table 2. Employment elasticity of economic sectors, 2001-2006

Sectors	2001	2002	2003	2004	2005	2006	Average, 2001-2006
Agriculture	0.088	0.158	0.179	0.124	0.028	0.184	*0.127*
Production and manufacturing	0.051	0.090	0.081	0.049	0.008	0.069	*0.058*
Reprocessing	0.031	0.028	0.027	0.069	0.196	0.176	*0.088*
Transport, warehousing and communication	1.056	0.094	0.054	0.096	0.030	0.143	*0.245*
Construction	1.009	0.016	0.019	0.026	0.163	1.256	*0.415*
Wholesale and retail	0.137	0.112	0.089	0.069	0.054	0.048	*0.085*
Education	0.222	0.547	1.053	0.176	0.194	0.153	*0.391*
Healthcare and social services	0.234	1.122	0.028	0.170	0.184	0.207	*0.324*
Average, total	**0,041**	**0.068**	**0.113**	**0.289**	**0.107**	**0.280**	***0.150***

Source: State Statistical Committee of the Republic of Azerbaijan

According to data of *Table 2*, average employment elasticity in 8 leading economic sectors for the period 2001-2006 was equal to 0.15 that is significantly lower than the world average or the average of developed countries. Elasticity coefficient zero indicates that productivity is high, however financial compensations of employed is low. Consequently, the whole lately observed economic growth in Azerbaijan from the point of view of employment provision was unsatisfactory and satisfactory regarding of its productiveness.

With the purpose of solution of poverty and increase of welfare of low-income population, the President of Azerbaijan, Ilham Aliev has signed law named “Targeted state social benefits” in October 2005. For identification and provision of assistance to low-income population, a necessity criterion came into use. For the first time, since July 2006 a necessity criterion was stated at AZN 30 (around USD 25)[2]. In other words, where per capita income of a family is lower than AZN 30, each member of the family should get financial support to raise per capita income to AZN 30. Noted assistance is evaluated for 6 months and low-income families receive it in monthly payments. Thus, amount of necessity criterion was increased with the purpose of adoption particular factors (especially price developments) into income of the population through the criterion of necessity to stated cost of living. From January 2007, the necessity criterion was increased to

2 USD/AZN 1.18 exchange rate of National Bank of Azerbaijan

AZN 35 (USD 30), and in July of same year to AZN 40 (USD 34). However, this criterion is still below poverty line, which proves somehow usefulness of system of social support in poverty fighting in specific way.

Current problems and future challenges

Overall, there are following problems in area of poverty eradication in Azerbaijan. From the point of view of the observed fast growth of economy, poverty level reduction is insufficient. The institutions of job generation, through increase of employment and reducing unemployment, thus solving problem of poverty are inadequate. The socio-economic development among regions is unbalanced. The children poverty is still very high. Due to lack of financial aid for social security payments, changes are made in state budget for pensions and other substitutes, which indicates distinctive approach for social security and payments of social support. Despite of social and economic changes since 1991, social security system was left unchanged, not revealing newly generated reality. There are problems in collection of necessary state social security aids and payment of pensions, which are important in aspect of provision of pensions in the framework of social security system. Finally, the criterion of necessity in targeted social benefits is below the poverty line and cost of living.

Free industrial zones and the analysis of related issues in Georgia

David Chelidze[3]

The topic of free industrial zones is of great importance as these organizations give additional opportunities for countries to encourage international trade, improve export potential. Georgia also made steps in order to exploit the advantages of duty free production areas. However the current legislation has several weaknesses, particularly concerning money laundering and room for criminal interactions.

The first free industrial zones (FIZ) were created in the USA in 1934 in order to boost international trade activity and increase export potential. Two basic types of special economic zones (SEZ) are distinguished from conceptual point of view. One is based on territorial approach and comprises benefits to all the residents of the territory. The other one is characterized by functional features and means to benefit specific enterprises and entrepreneurs through each part of the country, irrespectively of geographical location. Economic theories comprise classification of SEZ according to the specializations. Therefore, fundamental varieties of SEZ are distinguished through customs, trading, industrial-productive, scientific-technical, service and other types of economic areas.

Notwithstanding the great variety of SEZ, the description of the United Nations' experts on economic essence and urgency is as follows: "free (special) economic zone is the part of the country's territory with special economic, legal, administrative and tax policy that provides expansion of the foreign political links and development of innovative technologies, basically export oriented modern enterprises*".*

Taking into consideration recent undesirable tendencies of external trade balances of Georgia (*Table 3*); adopting a special Law on Free Industrial Zones on 3 June 2007 could be considered as entirely logical decision.

Table 3. Main data on international economic relations

Figures	2003	2004	2005	2006	2007 Jan-Jun.
GDP (USD million)					
International trade turnover (USD million)	1602.6	2492.5	3355.4	4670.4	1778.0
Registered export, FOB (USD million)	461.4	646.9	865.5	992.6	548.6
Registered import, CIF (USD million)	1141.2	1845.6	2490.0	3677.8	2229.4
International trade balance (USD million)	-679.8	-1198.7	-1624.5	-2685.2	-1680.8
Trade balance (% of GDP)					
Growth of trade deficit (%, 2003=100)	100	176.3	239.0	395.0	247.2

Source: http://www.statistics.ge/main.php?pform=92&plang=2

The above mentioned law does not consider any new approaches to the legislation of Georgia. Namely, the legislative norms stimulating different fields and directions of business (especially of export) existed even before adopting this law. This can be confirmed even by the statement in the 1st paragraph of the 3rd article of the newly-adopted law according to which FIZ is such a variety of free zones, defined by the Customs Code of Georgia, where additional tax privileges are in effect.

3 PhD in Economics

Besides the FIZ, the Customs Code of Georgia considers special system of goods' processing at customs area. It means to provide businesses opportunities of processing in the Georgian territory and exporting the goods produced by foreign raw materials without paying custom, excise and value added taxes. Georgian Tax Code also considers important export stimulating privileges such as the ability of excise and value added tax return on imported and local raw materials used for producing goods for export. Thus, the adoption of law on FIZ modernizes and standardizes the aforementioned legislative norms and aims to increase country's industrial (especially export) potential.

However, some negative tendencies can be observed since the new law is in effect. As it was mentioned, according to the Georgian law on FIZ, free industrial zones are considered as a variety of free zones defined by Georgian Customs Code. According to the 153rd article of Georgian Customs Code, it is not always mandatory to submit the customs declaration to import goods to free zones. This can be risky as goods (including cash) might be imported to the Georgian FIZ without declaration. In this situation these kinds of areas might become attractive for criminals, occupied with terrorism, trafficking, selling drugs and weapons, to legalize their illegal income (money laundering).

The situation cannot be generally changed by the Law on Free Industrial Zones, according to which the rules of creating, organizing and functioning of FIZs have to be determined by the decision of Georgian government. This decision declares the necessity of declaration of goods' (including cash) import, but from lawful aspects it cannot be effective because of the hierarchy of normative acts, as Customs Code norms will be superior to any demand of Georgian government's decision.

According to the Law on the Protection of Consumers' Rights, cash and clearing forms of billing are equally accepted in Georgia. The 8th paragraph of the newly adopted law on FIZ allows billing in any currency in free industrial zones. It's obvious that criminals have easy possibilities of money laundering. In this situation illegal money gets rid of customs declaration as well as converting in banks and/or exchange points and hence, financial monitoring barriers set by Georgian legislation. All these give advantages to criminals to invest their so-called black money without problems in goods, import these goods worldwide and sell them even for symbolic price and legalize illegal financial income.

To overcome this situation, it is important to make corrections in the Georgian Customs Code's 153rd paragraph on necessity of mandatory declaration of cash in free industrial zones. In the resolution to be adopted by the Georgian government, there must be inevitably solved the settlement (billing through banks) in FIZs between business, and between businesses and the physical persons exporting goods bought in the FIZ at wholesale trade. These arrangements would help to get rid of expected danger of creating FIZ as money laundering centers.

According to the aforementioned factors and the regulations of the 2nd and 3rd paragraph of the Article 9th of Georgian Law on Free Economic Zones, enterprises in the free economic zones are eligible to import all needed raw materials without paying value added tax (VAT). It means that they have opportunity to benefit from tax credits. Besides, taking into consideration the fact that delivery of the goods is free from VAT inside the country, supposedly the companies in the zone will get the opportunity to produce unrated and cheap electric power. The recent circumstance is noteworthy from another point of view, according to the 7th and 3rd paragraphs of the 9th and 10th Articles of the law, companies in the FIZ are allowed to export cheap products rated only by the VAT (outside the SEZ) in the whole territory of Georgia. Considering the fact of close territorial distribution and small costs of transporting clarify the advantage of the products towards the goods manufactured in different parts of the country. Thus, it is obvious what problems the similar enterprises outside the zone through the consumers market can face.

Thus, after having the legislation in force, we consider the privileges ensured by the Georgian law on Free Industrial Zones, paragraph 7th and 3rd Article 9th on eligibility of distributing goods produced in the FIZs in the rest of Georgian territory rated only by the VAT, which should be utilized only in case of importing alternative product, in order to avoid threats of demolishing free competition circumstances irrelevant to the key market economy principles. In order to practically realize the requirements of the given legislation, the list of exported alternative goods should be determined, affirmed and revised by the regulations of Georgian Government.

Strategic dimensions of higher education reform in Kyrgyzstan

Samagan Aitymbetov

Transition affecting all sectors of Kyrgyzstan forced stepping to the next stage of the higher education system reforms. In the context of MDGs and sustainable economic growth, the government develops new strategy for the next decade, which is denoted to ensure accessible and high quality tertiary education, strengthened training and methodological basis for educational institutions, economic efficiency and financial sustainability in the education system.

Poverty remains a key concern in the development challenges of Kyrgyzstan. The future of this landlocked country depends on the quality of its labor force. Achieving sustainable human development priorities, the Country Development Strategy for 2007-2010 includes access to increased and affordable education services. In this context, authorities are committed to achieve the Millennium Development Goals (MDGs) and Education for All (EFA) targets by 2015, demonstrating its support by announcing an increase of the education budget share to 5.6% of GDP by 2010. This commitment is expressed in a number of key national documents including the already mentioned Country Development Strategy and the Education Development Strategy of the Kyrgyz Republic for 2007-2010.

Despite the political turmoil, the country tries to pass on with the next phase of education reforms. Particularly, in the Regional MDG Forum for Central Asia and the Southern Caucasus held in 19-20 July 2007, in Bishkek, the participants have called on the states of the two regions to channel the benefits of favorable economic growth in recent years into lagging social sectors, education and health care services. While the region has achieved full primary education enrollment, progress also needs to be made in improving vocational and higher education in accordance with the labor market needs and the objective to combat poverty.[4]

In June 2007, on the National Educational Forum “Higher Education Reform in The Context of Country’s Development” in Bishkek the Ministry of Education and Science (MoES) presented the Conceptual Framework for Higher Education Development till 2017, prepared in a participatory manner. The document considers the tertiary education to be the locomotive of economic growth, raising competitiveness and providing economic security.

From MDG-2 to higher education reforms

The education system faces challenges in every sector: declining attendance and low performance at primary level (grades 1-4); increasing drop-out rates and poor preparation at lower and upper secondary level (grades 5-11); outdated primary (vocational) and secondary professional training; governmentally highly controlled, often inadequate and corrupt tertiary education. The government has been invested budgetary resources and through several donors’ projects (World Bank, ADB, USAID, JICA etc.). Those investments have built up capacity in policy formulation and kept reasonably high levels of education in quantitative terms, while the qualitative feature of it remained uncompetitive in the world labor market. This gap is especially salient in tertiary education, professional and vocational training.

Due to budgetary constraints, in Country Development Strategy only two directions are indicated as priority for the educational policy: the provision of accessibility and increasing quality of general secondary and

4 “Challenges Remain for Achieving MDGs in Central Asia”, ADB News Release, July 16, 2007.

primary professional education. In 2005, primary school enrollment was 92.9%, and secondary school enrollment (grades 1-11) 89.9%. This strategy envisages increasing primary school enrollment to 100% and secondary school enrollment to 99.5% by 2010, which will meet MDG-2.

Table 4. Structure of education system in Kyrgyzstan, 2006/2007

Education Stage	Grade	Age	Institutions
Postgraduate	-	>23	-
Tertiary	-	17-24	47 universities or other tertiary education institutions
Secondary vocational	-	17-18	22 secondary education institutions
General secondary or primary vocational	10-11	16-18	116 secondary schools/lyceums 112 primary vocational education institutions
General education	1-9	7-15	2 045 general education schools
Primary or elementary school	1-4	6-9	-
Preschool ("K" level)	-	3-6	416 kindergartens/preschools

Source: Asian Development Bank, own estimates

The recent Education Development Strategy is also based on concentration of the main resources in primary and secondary education including optimization of financing and management. But challenges in tertiary education system, labor market relevant education and the reform of vocational training systems are still responded insufficiently. Though, the tertiary education is a part of national education system and responds to the demands of secondary education. Moreover, the investments in both types of schooling – secondary and tertiary – should get the largest weight to assure long-run development.[5]

Higher education policy has been based on two principles, on the one hand maintaining past successes (multi-channel financing, anti-corruption examination, relations with post-soviet universities etc.) and from the other hand implement innovative reforms to allow educational institutions to integrate into the international educational system. The combination of inadequate financing together with the lack of operational experience under free market conditions create a number of problems for higher education institutions (HEI): erosion of the quality of education, low teaching staff salaries, outflow of qualified teachers, tutors, lecturers and the deterioration of materials and technical supplies. According to the MoES, public expenditures on education in 2006 amounted to 4.6% of GDP (7.1% in 1991), where spending on primary and secondary education is about 65% of the total expenditures on education, higher education share – about 20-23% (or 0.98% of GDP). The government is committed to raising expenditure on education to 5.5% by 2010.

Table 5. Development of expenditures on education in Kyrgyzstan in 2002-2006

Year	2002	2003	2004	2005	2006
GDP (KGS[6] million)	75 367	83 421	94 078	100 116	111 113
Public expenditures (KGS million)	15 190	18 896	18 842	20 144	22 975
Expenditures on education (KGS million)	3 350	3 753	4 357	4 918	5 103
Share in budget (%)	22.1	22.2	23.1	24.4	22.2
Share in GDP (%)	4.45	4.5	4.63	4.9	4.6
Exchange rate (KGS/USD)	*46,94*	*43,72*	*42,67*	*41,01*	*40,16*

Source: Ministry of Education and Science of the Kyrgyz Republic

5 Ramcharan R., 2002. "Columbia or High School? Understanding the Roles of Education in Development", IMF Working Paper, WP/02/36

6 KGS – Kyrgyz som

In 1991, Kyrgyzstan had 12 HEIs with 58.8 thousand students, and in current 2007 year 47 HEIs train degree holding specialists, unfortunately such increase doesn't lead to improvement of quality. These include 32 public, 15 non-governmental (including private) and provide higher education programs to over 237 thousand students. The number of students per 10 thousand head of the population has increased from 141 in 1995 to 465 today.

Now, the majority of students attend public universities – over 216 thousand, which is 91.1% of the total number of students. Over 187.5 thousand of them are paying tuition (as of September 2007). Over 200 specialties are offered, but there are imbalances in favor of certain specialties. The most popular choices of students are economics, management and law, followed by foreign languages, computing and political sciences. Meanwhile, training of agricultural and engineering specialists has declined sharply. About 2.9 thousand people or 1.4% of all Kyrgyz students goes abroad to study (Russia, Turkey, Germany, Kazakhstan, USA) – the lowest rate in Caucasus and Central Asia.[7]

Assessing the performance of HEIs, control of quality of educational institutions also remain serious problem, mainly connected with reducing state contributions and low salaries of teaching staff. In the past, no HEI has been refused a license and all have successfully passed accreditation, despite employers continually express discontent with the competence of graduates. In 2006-2007, the MoES revised the mechanisms and criteria for assessing the licensing and state accreditation procedure of HEIs to assess the quality of higher education. Some institutes and universities were closed because of license violation, low quality of education, moreover MoES decreased public enrollment rate of tuition-based education by 10 thousand students in 2007.

Educational institutions have increased their volume of paid services and at present a multi-channel system of financing of education is formed. The tuition fees vary from USD 200 to USD 2000 in average. Government expenditures cover only 15-20% of annual average cost per one student, the remaining part comes from HEIs commercial revenues.

Table 6. Structure of the higher education financing (percent)

Year	2001	2002	2003	2004	2005
Budgetary resources	25.1	19.7	22.0	18.7	30.4
Commercial revenues	74.9	80.3	78.0	81.3	69.6

Source: Brunner J.J., Tillett A. "Higher Education in Central Asia. The Challenge of Modernization"

Among other non-governmental funding sources, the export of educational services need to be mentioned, as the low cost of education and relatively high quality make Kyrgyzstan a venue for foreign study especially with neighboring CIS countries. In 2002, foreign students accounted for 7% of all HEI students. During academic year 2005/2006 around 23.5 thousand or 10.7% of the total students were foreign citizens; with two thirds from Uzbekistan.[8]

Increasing enrollment in higher education demonstrates that many young people perceive a university education to be a worthwhile investment. However, this has important implications in terms of the size of the population and economic structure of Kyrgyzstan. The economy cannot absorb the increasing number of graduates in jobs that match their academic backgrounds. Poor conditions and quality of tertiary education have compelled the best and the brightest to seek their education abroad. This is connected to both lack of

7 Global Education Digest 2007.Comparing Education Statistics Across the World. UNESCO, Montreal 2007

8 At the same source

vacancies, and low quality of professional training of graduates, which, in turn, causes poverty growth. All these facts show that there is serious mismatch between educational institutions and labor market.

Unemployment rates in transition economies are particularly high for less educated people. It would be expected that poverty rates among those with tertiary education will decline more rapidly than with other educational level. For example, in 2000-2003 the poverty rate declined by 15 percentage points, from 56% to 41%, while only by 6 percentage points for those with general secondary level only – from 80% to 74%.[9] Rapidly growing service sector of the Kyrgyz economy partly connected with involvement of new generation graduated from universities after 2000. The demand for high-educated specialists is especially strong in tourism, information technologies, consulting services, dental treatment, marketing and professional training.

Strategic vision of higher education for 2017

For achievement of MDGs the first place takes primary education, as in a market economy the better educated are better protected from poverty. Countries, such as Singapore and Taiwan, succeeded to transform their economies from low-income agricultural economies to middle-income industrializing economies through expanding education at higher levels.

In comparison with other sectors, development of the higher education in Kyrgyzstan is more dynamic, step-by-step integrating the country into the global educational market. Last debates in Kyrgyz society and the Conceptual Framework for Higher Education Development till 2017 concentrate on an education system responsive to the needs of a modern market-oriented economy and human development needs. All purposes must be based on basic principles - democratization, accessibility of high-quality education, decentralization, international quality standards, openness and mobility, and trust. This higher education policy involves three strategic objectives.

The first is the privatization of state HEIs, expansion of private financing in order to increase the relevance to the labor market needs. The second is the international integration of tertiary education by the adoption of the Bologna process to improve the quality. Last but not least, the selective state involvement and concentration of budgetary resources in the most priority directions for support national or regional programs (assistance for the poorest groups).

The government has undertaken several initiatives last decade. Experts mark a number of achievements of these initiatives: improved capacity of local governments to manage schools, introduction of user fees, establishment of external General National Examination as the basis for university admissions, strengthened student assessment to monitor results and improve accountability, implantation of performance incentives for teachers, improvement of textbook content, and development of the private education institutions.

In June, 2007 the European Credit Transfer System National Bureau (Resource Center) was opened, which will disseminate the principles of the Bologna Process throughout the country's universities. Experts hope that the Bologna Process will not only help Kyrgyzstan shift to international academic standards, but also make university education within the country more homogenous. While some universities have partially shifted to European or American systems where it takes four years to complete an undergraduate degree, others have kept the Soviet model, which takes five years.

Analysis of aims and main directions of the Conceptual Framework for Higher Education Development till 2017 shows that educational policy are based on stakeholder-oriented approach than human-oriented. It's expected that the National Strategy of Higher Education Development till 2017 and relevant national

9 Brunner J.J. - Tillett A. 2007. "Higher Education in Central Asia. The Challenge of Modernization", World Bank

programs will be designed on its basis. Top-priority areas include: improvement of curriculum and quality assessment, science and research, support of local-community universities, export of educational services. As tertiary education expands, governments' role will increasingly be to monitor and regulate it, rather than to provide it.

The above Conceptual Framework are product of historical and contextual analysis and it inadequately highlights future challenges of educational policy in terms of preparing Kyrgyzstan for the knowledge society, where emphasis on Science, Technology and Innovation must be key issue in such documents. This situation reflects transitional stage of national priorities identification which mostly depends on weak economic performance and high poverty level.

Findings of different researches suggest that investment in tertiary education focusing on technical subject (sciences, and technology) tends to increase the rate of technological and income convergence. Capital and labor markets have the largest effect. Investment in human capital is a necessary ingredient to economic growth and development, but it is not sufficient. Factors such as macro-economic stability and economic policies, as well as adequate legal systems and institutions also have impact.

ICT, as core factor for sustainable development in CCA economies

Tamás Borkó

The investigation of development of Information Society (IS) in the Caucasian and Central Asian (CCA) countries has of extreme value. The performance, measured by main indicators varies country by country. The analysis tries to collect and assess the main input factors that influence the output ones in order to have picture about the IS, and its economic, employment and other relevant impacts. Also the relevant policy implications are reviewed.

The role of information and communication technologies (ICT) has gained importance in economic and social developments of the world. The supply and use of information and communication technologies play an increasingly important role in economic growth and competitiveness. As the *Information and Communications for Development 2006* report of the World Bank[10] emphasizes:

„In recent years the world's policy makers have recognized that ICT provides key inputs for economic development, contributes to global integration, and enhances public sector effectiveness, efficiency, and transparency. There is also growing consensus that countries seeking to strengthen their investment climates (for foreign as well as domestic investors) should make it a priority to improve ICT access and quality. Moreover, country conditions that bolster ICT investment - including sound economic policies, strong property rights, liberalized markets, limited restrictions on entry and ownership, and predictable regulation - contribute to a healthy overall business environment and so to growth throughout the economy."

Table 7. Positions of CIS countries by IS readiness indicators

Countries	Networked Readiness Index 2006/2007*		Digital Opportunity Index 2005/2006**	
	Score	Rank	Score	Rank
Armenia	3.07	96	0.33	117
Azerbaijan	3.53	71	0.38	101
Georgia	3.12	93	0.41	88
Kazakhstan	3.52	73	0.40	94
Kyrgyz Republic	2.90	105	0.25	135
Tajikistan	-	-	0.21	143
Turkmenistan	-	-	0.22	139
Uzbekistan	-	-	0.31	123
Belarus	-	-	*0.45*	*78*
Moldova	*3.13*	*92*	*0.35*	*111*
Russian Federation	*3.54*	*70*	*0.52*	*51*
Ukraine	*3.46*	*75*	*0.41*	*90*

**out of 122 countries, **out of 181 countries*

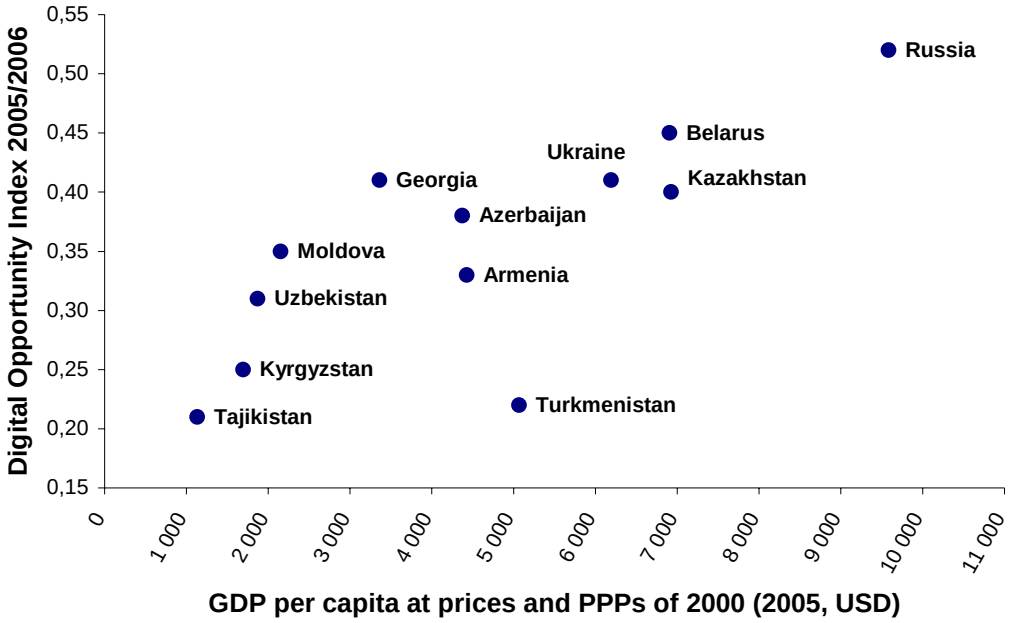
Source: World Economic Forum, World Information Society Report 2007

10 World Bank: Information and Communications for Development 2006. Washington, 2006

The developed and successfully converging countries are getting better at adapting to new ways of living and working, influenced by ICT. Countries of Caucasus and Central Asia (CCA) lag behind in this respect, while in recent years considerable progress happened. By the *World Economic Forum's Networked Readiness Index (NRI)*[11], but also by the *Digital Opportunity Index (DOI)*[12] of *World Information Society Report 2007* these states have relatively unfavorable positions. (*Table 7*) The data imply that these countries are in a very initial stage of taking advantage of new network and communication technologies, however some progress is happened.

One could easily think that the level of economic development can be the main reason of current position. Data of *Chart 1* shows that this conception is right. Nevertheless, some country's IS performance cannot be explained exclusively by its economic performance. For instance, in Caucasus, Georgia has better DOI than Azerbaijan and Armenia, while the Georgian GDP per capita is significantly lower. Turkmenistan is also a case with relatively high GDP per capita, but very low DOI. Belarus and Kazakhstan have quite similar development level, while their difference in DOI is remarkable.

Chart 1. Relation between DOI and GDP per capita



Source: UNECE, World Information Society Report 2007

On the whole, the correlation of two above investigated datasets shows that the economic development matters concerning Information Society development, while there might be considerable differences. This means that there is still room for improvement for most CCA countries.

11 Networked Readiness Index (NRI) is composed of three component indices which assess: environment for ICT offered by a country or community, readiness of the community's key stakeholders (individuals, business and governments). usage of ICT among these stakeholders.

12 Digital Opportunity Index (DOI) is a composite index comprising eleven separate indicators, grouped in three clusters of opportunity, infrastructure and utilization.

Infrastructural determination and availability of ICT

The input side of the IS consists of two equally important areas: the production of information and communication technologies (ICT) and the use of information society technologies (IST). Dealing with the latter one, the precondition of wide use of IST depends particularly on available physical and human infrastructure. Computer, mobile phone and fixed line telephone access, as well as internet connectivity have increasing importance, since without access to information and communication networks, advantages of globalized world of economy cannot be absorbed.

Despite problems of data availability, one can have general picture about the basic infrastructure of IST according to the *Table 8*. It is clear that by 2004 data, the availability of personal computers is still very low in CCA states. Countries of Caucasus have better position from this point of view. The number of cellular subscribers is extremely low in most Central Asian economies, and relatively low in the Caucasian ones if comparing with Russia, Ukraine and for controlling, with Hungary. The fixed line telephone access also shows similar logic as that of the mobile phones, while the variance is smaller. Finally, regarding the freshest data on internet users, within the CCA group, especially four Central Asian countries are in very unfavorable position, while Kazakhstan and the Caucasian ones are in better situation. However, relative to other CIS countries, these indicators show lagging, particularly if comparing with Hungary.

Table 8. Basic ICT penetration indicators (per 100 people)

Country	Internet users 2006	Cellular subscribers 2005	Telephone lines 2005	Personal computer 2005
Armenia	5.75	10.54	19.20	6.60
Azerbaijan	9.79	26.66	13.00	2.30
Georgia	7.49	26.25	15.10	4.20
Kazakhstan	8.42	36.41	16.70	-
Kyrgyzstan	5.60	10.29	8.50	1.90
Tajikistan	0.30*	4.07	3.90	-
Turkmenistan	1.32	2.17	8.00	-
Uzbekistan	6.30	2.71	6.70	-
Belarus	*56.47*	*42.02*	*33.60*	-
Moldova	*17.35*	*25.92*	*22.10*	*2.70*
Russia	*18.02*	*83.62*	*28.00*	*12.20*
Ukraine	*12.06*	*64.54*	*25.60*	*3.80*
Hungary	*34.75*	*92.30*	*33.30*	*14.62*

**data for 2005*

Source: UNSD MDG 2007, World Bank

The factors behind this poor performance of course interrelated with the position of these countries in the indicators targeted by Millennium Development Goals (MDGs). It is hard to expect outstanding results in IS developments, particularly concerning the population, if there are still serious challenges in poverty, literacy, mortality and employment. In most cases governments are failed to target these problems, particularly because of objective (insufficient fiscal resources) and subjective (lack of democratic institutions, corruption) reasons. Without successful education reforms, poverty eradication, and integrating people into the labor market, it is difficult to reach spectacular achievements in building IS.

Policy implications and possible directions of interaction

While the situation is not rosy, the good general economic performance (i.e. high real GDP growth rates) gives opportunity improve the information and telecommunication environment, especially regarding access and penetration indicators.

In its own providing balanced and sustainable economic growth is a sine qua non for the spread of IS. The causality between growth and IS developments is two-sided, as high and sustained GDP growth rates create the demand and supply side factors for higher investments and resources spent on ICT. It increases income of the population, improves the affordability of ICT for a wider segments of users.

Governments need to channel more resources to certain areas in order to achieve breakthrough. Supporting basic information and telecommunication infrastructures and PC availability of the population by tax credits, building public access points, improving price and technical affordability of internet, reducing access costs through better regulations, as well as attracting foreign investors into the ICT sector are among the most important tasks of the state. Integration of ICT into the education and development of online based public services are also of high importance. Primarily, human and infrastructural conditions are essential for exploiting the advantages of the IS. However, parallel, increase of public and business online service supply is essential for moving towards IS. Comprehensive IS strategies must comprise targets and tasks regarding infrastructural and online service developments as well as ICT literacy developments.