## The Impact of Foreign Direct Investment on Human Development Index in Commonwealth of Independent States

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**ABSTRACT** 

Countries accepting foreign investments (FDI) from abroad, are cooperating with

foreign partners, to have access to financial resources, better ideas, more skills,

technology. Recipient countries are expecting these powerful partners to help them to

develop or improve the local economic system. In return, foreign investors receive easily

accessible cheap natural resources, cheap labor force and the possibility to create and

expand new markets. Nevertheless, there is always a question, whether such

collaboration with foreign investors has a good or bad influence on recipient country's

population. In this research the FDI's impact on people's quality of life and on

education, health, income and life expectancy is analyzed. It is found out that, FDI

inflows into the CIS countries improve the education, health, income and life expectancy

in all CIS countries, except Azerbaijan.

The present thesis reveals whether FDI inflows into 12 CIS countries are having any

effect on the four Human Development Indicators (HDI) which are school enrollment,

health expenditures, GNI and life expectancy. Regression analysis done by the program

PAWS Statistics 18 of each country on collected statistical data demonstrates a possible

correlation between FDI and HDI indicators in CIS countries. Statistical data for FDI

and HDI indicators for the period 1995-2009 shows a general picture of each CIS

country from the FDI and HDI perspectives, each statistical trend is demonstrated and

interpreted.

**Keywords:** FDI, HDI, CIS

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ÖZ

Yurt dışından yabancı yatırımları (DYY) kabul eden ülkeler, yabancı ortaklarla

işbirliği yaparak olup, finansal kaynaklara erişim, daha iyi fikirlere, daha fazla

becerilere, teknolojiye sahip olmak isterler. Ev sahibi ülkeler, bu güçlü ortaklarla lokal

sistemde büyümeyi ve gelişmeyi ümit etmektedirler. Karşılık olarak, yabancı

yatırımcılar, ucuz doğal kaynaklara, ucuz iş gücüne ve yeni pazarlara erişinler. Ancak,

yabancı yatırımcılarla böyle bir işbirliğinin ev sahıbı ülke üzerinde kötü veya iyi bir

etkisi olup olmadığı, bir soru işareti olarak kalmaktadır. Bu araştırmada, DYY'nın

insanların yaşam kalitesi, eğitim, sağlık, gelir ve hayat beklentisi üzerinde olan etkisi

analiz edilmiştir. Bağımsız Devletler Topluluğu (BDT) ülkelerine olan DYY girişlerinin,

Azerbaycan hariç diğer BDT ülkelerinde eğitim, sağlık, gelir ve hayat beklentisini

gelistirildiği tespit edilmistir.

Bu tez 12 üye-ülkenin aldığı DYY girişlerinden okullaşma, sağlık harcamaları,

GSMH ve yaşam beklentisi olan dört İnsani Gelişme Endeksi (İGE) göstergelerinden

herhangi bir etki olup olmadığını ortaya koyar. Regresyon analizi ile her ülkenin

toplanılan statik bilgisinin PAWS istatistik 18 programı ile BDT ülkelerindeki DYY ve

İGE ile olan korelasyonu gösterilmiştir. 1995-2009 dönemide DYY ve İGE göstergeleri

iliştilendirilmiş ve her BDT ülkesinin DYY ve İGE açılarından genel bir resmi

gösterilmiş ve yorumlanmıştır.

Anahtar Kelimeler: DYY, İGE, BDT

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To

My Family

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I dedicate this study to my family, which inspired me, made me to believe in myself. It is a great feeling to know that there are people waiting for me and expecting to celebrate my achievements. I am the happiest person to have such a great family.

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## LIST OF ABBREVIATIONS

AIOC - Azerbaijan International Operating Company CIS – Commonwealth of Independent States CNPC – China National Petroleum Corporation CU – Customs Union EBRD – European Bank for Reconstruction and Development EU – European Union FDI – Foreign Direct Investment, net inflows (BoP, current US dollar) FTA – Free Trade Area GDP – Gross Domestic Product GNI - Gross National Income HDI – Human Development Index HDR –Human Development Reports HE – Health expenditures HIV – Human Immunodeficiency virus ICT – Information and Communications Technology ILO – International Labor Organization IMF – International Monetary Fund IT – Information Technology

LE – Life expectancy

MDG – Millennium Development Goals

MNE – Multinational Enterprises

OECD - Organization for Economic Cooperation and Development

PPP – Purchasing Power Parity

SE – School enrollment, tertiary

UK – United Kingdom

UNCTAD – United Nations Conference on Trade and Development

UNDP – United Nations Development Program

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF - United Nations International Children's Emergency Fund

USA – United States of America

WB – World Bank

WTO – World Trade Organization

## Chapter 1

## **INTRODUCTION**

### 1.1 Background

This study analyzes the effects of Foreign Direct Investment (FDI) and Human Development Index (HDI) in Commonwealth of Independent States (CIS). CIS is the regional international agreement that has been established among 12 ex-Soviet Union countries, with the main purpose of regulating and designing relations between previous countries of the former Soviet Union. CIS has been founded by the Republic of Belarus, Ukraine and Russian Federation on 8 December, 1991. Three post-Soviet republics (which are the Baltic states of Estonia, Latvia and Lithuania) refused to join CIS, later they joined the European Union in 2004. Today CIS includes 12 countries of the former Soviet Union, namely Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. CIS agreement was aimed at implementation of close collaboration between CIS member countries in political, economic, ecological, humanitarian, cultural and other spheres. Having common efforts visibly contributes to the development of the economic and social environment for the achievement of common interests, closer cooperation and successful economic integration. Idea of CIS also covered the creation of a free trade zone, implementation of human rights, the cooperation for security and many other objectives for the purpose making union more powerful.<sup>1</sup>

Since the formation of the CIS in 1991, the level of the FDI inflows have changed considerably. Economy in most of the CIS countries has experienced negative trends in the 1990s. Many countries in CIS observed real decrease in foreign investment inflows and worsened investment climate. Such a situation is normally followed by the contracting of the economies as a whole.

As a result of the economic downturn in 1990s most of the CIS countries did not have enough financial resources to invest in their economies.

While most of the countries were suffering from lack of investments during the period of transition, four CIS countries have been the main receivers of FDI. These countries are Russia, Kazakhstan, Ukraine and Azerbaijan. The main reason for inflows of such great volumes of FDI in the mentioned four countries is the wealth of natural sources found in them, basically petroleum reserves.<sup>2</sup>

Russia started investing in the number of CIS countries. Referring to the annual statistical reports<sup>3</sup>, although the CIS region attracts just a minor share of Russian FDI, yearly Russian investments outflow increased by more than 4.7 times during the period 1999 – 2004. According to 2005 statistics, Russian investments in the CIS region took

<sup>&</sup>lt;sup>1</sup> "Содружество независимых государств: история создания и цели. Справка" (accessed September 10, 2011); available from http://ria.ru/osetia\_sprayki/20080813/150339058.html

<sup>&</sup>lt;sup>2</sup> Alina Kudina and Malgorzata Jakubiak (2011) "The motives and impediments to FDI in the CIS", EU Eastern Neighborhood Economic Potential and Future Development

<sup>&</sup>lt;sup>3</sup> Libman (2007) "Regionalisation and regionalism in the post-soviet space: current status and implications for institutional development", Europe-Asia Studies Volume 59, Issue 3

place in the following percentage order: Ukraine – 48%, Moldova – 16%, Armenia – 13%, Uzbekistan – 12%, Belarus – 9%.

#### 1.1.1 Reasons for FDI

Foreign investors set up new businesses enter in developing countries mainly for the following reasons: they are attracted by the opportunity to reach new markets, get access to required natural resources, to acquire profit from expanding businesses, favorable market conditions and to lower production costs. Success of the foreign investors that are planning to enter new markets usually depends on being familiar with peoples' cultures, beliefs and values in the chosen for entrance region. Foreign investors should be able to work within the system and adapt to possible changes in it. One of the major investment strategies is to select the right country to direct investments in the potential profitable field. Important aspect here is the ability to see whether planned investment will be attractive for the host-country. According to the Vivek College Commerce paper<sup>4</sup>, FDI's impact on the recipient country is usually very progressive, because of the inflow of foreign investments:

- Provides financial resources to the developing countries that have limited capital resources;
- Introduce and use new technology, which helps to strengthen efficiency of production, to reduce human working hours and to increase quality of products;

<sup>4</sup> VIVEK COLLEGE OF COMMERCE paper, pp. 18-22 (accessed September 10, 2011); available from <a href="http://www.scribd.com/doc/49939514/4/CHAPTER-4-ADVANTAGES-AND-DISADVANTAGES-OF-FDI-FOR-THE-HOST-COUNTRY">http://www.scribd.com/doc/49939514/4/CHAPTER-4-ADVANTAGES-AND-DISADVANTAGES-OF-FDI-FOR-THE-HOST-COUNTRY</a>

- Increases employment as more new business projects start and more job opportunities for the local population become available. New jobs increase the incomes of the local population;
- Brings the necessary know-hows from overseas specialists, which gives potential to develop new industries in developing recipient-countries, trains and educates local employees. Thus, the level of education and intellectual level may be positively affected;
- Stimulates the achievement of better positions in the highly competitive global market;
- Consumers of the host-country are offered better choice, higher quality of the products, etc.

At the same time, some disadvantages of FDI to host countries may also take place.

Expected possible disadvantages of FDI for the recipient country can be:

- Domestic businesses lose their positions when competing with fresh innovative foreign investments;
  - Income inequalities within the population may increase;
  - New products and services may be expensive for the local consumption;
- As foreign investors monopolize the domestic market in the host country, products prices may rise and quality may fall;
  - Foreign production may substitute the domestic production;
- Foreign investors may influence political or economic decisions of the host countries;
- Sometimes peoples' accustomed life is negatively affected by the environmental changes, which may happen in case of modified or even disappeared territories as a result of new developments, such as building of new plants, exploitation of territory and industrial pollution;

- People are frequently unsatisfied when they feel foreign investors are changing their style of life, change their traditions, religion and introduce new way life, to which people may become skeptical.

#### 1.1.2 FDI and HDI in CIS

One way of determining the effect of FDI on the host country is to compare the country's position in the HDI rank before and after the foreign investments.

HDI is one of the most authoritative rating tools and since 1990s, it is published in the independent reports of human development (HDR), that are usually prepared by the group of the most recognized scientists in the world. Such reports are usually prepared under the United Nations Development Programme (UNDP) auspices. Refer to the official website of Human Development Reports<sup>5</sup>, HDI index has been initially developed by Pakistani economist Mahbub ul Haq.

HDI may be considered as a determinant of a people's living standards and people's potential to have longer and healthier life, to be educated, to achieve everything required, to work and to fully participate in the social processes.

HDI may be defined as a tool for comparative estimation of poverty, literacy, education, average life expectancy and other indicators of the country. Reports on HDI allows to estimate population life expectancy of 177 countries of the world. These reports are usually prepared on the regional, national and transnational levels. Resulting reports contain all the main life expectancy indicators, such as level of literacy and education, life expectancy, birth rates, death rates, GDP per capita, index of selling prices, number of people using mobile phones and internet, quality of drinking water,

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<sup>&</sup>lt;sup>5</sup> About Human Development (accessed September 10, 2011); available from <a href="http://hdr.undp.org/en/humandev/">http://hdr.undp.org/en/humandev/</a>

number of people who are HIV-infected, developments in health care, various types of energy consumption, forests area, inequality level between men and women, situation with human rights protection, environment condition, level of crime, level of unemployment, etc.

#### 1.2 Statement of the Problem

Various studies took place in the past regarding the FDI policies in different regions and their impact on the recipient countries, such as: J.Henisz (2009); S.Sun (2009); M.Tsai (2006); L.Colen, M.Maertens, J.Swinnen (2008); C.Perugini, F.Pompei, M.Signorelli (2005) and many others studied FDI to find out whether FDI has a positive or a negative impact on the economic growth, on the population's life expectancy and other factors important for the country's wellbeing in general. Nevertheless, there is no research that investigates and analyzes the CIS region from this perspective.

All the above mentioned possible advantages and disadvantages are affecting the living standards of population of the host-country. The FDI may improve the HDI in the region. In this research, FDI's impact on four HDI criteria is analyzed.

## 1.3 Purpose of the Study

The purpose of this study is to discover whether FDI in the CIS countries have a positive or a negative impact on chosen four human development indicators in the region, namely school enrollment, gross national income (GNI), life expectancy and health expenditure<sup>6</sup>. The present work is the first study focusing on the relationship between FDI inflows and their impact on four of the HDI trends in the CIS countries.

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<sup>&</sup>lt;sup>6</sup> School enrollment, tertiary (percent gross); Gross National Income per capita, PPP (current international percent); Life expectancy at birth, total (years); Health expenditure per capita (current US dollar)

## 1.4 Significance of the Study

By following the developments of HDI in CIS countries, it is possible to assess how FDI affected the life in the region along dimensions measured by the HDI.

It is well known, that countries of the former Soviet Union, members of the present CIS, have all experienced hard transition periods, therefore FDI in this transition could contribute to the countries of the stated region. The main reason for the necessity of attracting FDI is the fact that most of the CIS countries have very good conditions for the incoming investments, such as cheap labor force and cheap resources, but at the same time they have a lack of capital and technology to fuel further economic development. The significance of the present study is to find out whether there is a correlation between FDI and indicators of the HDI and how much foreign investors' activities are affecting HDI indicators, whether these effects are desirable or not. Additionally, this study will give insight to the fellow academicians about the welfare effects of FDI in addition to economic effects of it.

This study will be the first study which attempts to rank and compare indicators between the total amounts of FDI received by the members of CIS and the annual indicators of four human development indicators for the period 1995-2010.

## 1.5 Methodology

In this thesis, regression analysis is the statistical method, revealing whether one independent variable (FDI) affects four dependent variable (SE, GNI, LE, HE). This study is founded on secondary data analyses.

The primary objective of present study is to survey the relationship between the volume of the FDI inflows into CIS countries and the changes in the four of the HDI

indicators: school enrollment (SE), GNI, life expectancy (LE), health expenditure (HE). Another goal of this study is to compare countries that are in the same region in terms of levels of investment conditions and human development indicators.

As noted before, inflows of investments into developing countries from more developed and powerful overseas countries usually bring the wind of huge changes. Whether that wind is positive or negative may be decided only by comparing the amounts of FDI inflows to the developing countries within the particular period of time and the trend of changes in HDI within the same period.

Statistical data for the present research is collected from annual reports of the World Bank (WB)<sup>7</sup> for each country in CIS.

Data evaluation, required for the achievement of the further analysis and conclusions, will contain data collected from articles accessible on the websites in internet, books and publications from the library of Eastern Mediterranean University, Organization for Economic Cooperation and Development (OECD) and other possible sources of information.

Simple regression analysis is used to compare the two data sets for different countries. Data sets are gathered from historical time-series statistics of countries. Regression results and graphs reflecting time-trends on each indicator are achieved through the program PASW Statistics, 18.

## 1.6 Organization of Thesis

The structure of this research is as follows. Chapter 2 summarizes the literature on the topic, explaining factors affecting FDI and HDI levels and critically reviewing the

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<sup>&</sup>lt;sup>7</sup> The World Bank, available from <a href="http://data.worldbank.org/">http://data.worldbank.org/</a>

previous works on the subject. Chapter 3 provides general economic information about the region under investigation CIS countries. Also, FDI, HDI and four HDI indicators are explained in detail. Chapter 4 is devoted to the separate overview of each CIS country according to FDI and HDI in general and discussions of trends of annual data for the period 1995-2009. Chapter 5 presents interpretation of regression results for each CIS member-country.

### Chapter 2

#### LITERATURE REVIEW

## 2.1 FDI's impact on HDI

There is a substantial body of research referring to FDI and HDI separately, focusing on factors affecting each of the indicators in different regions. One of the common research topics is "how does FDI affect HDI?". Sharma and Gani (2004)<sup>8</sup> examined the effect of FDI on human development, by measuring the human development index scores for middle and low-income countries. They observed that FDI has a positive effect on human development through its economic contribution and infrastructure developments in the recipient countries, with consequent increase in human capital.

Other studies also focus on comparing the relationship between FDI and HDI across different regions. Blomström and Kokko (2001)<sup>9</sup>, for example, found that FDI creates a favorable atmosphere for the development of human capital in East Asia and in Latin America. In both regions local employees' training have improved and their education level increased as a result of FDI and they could utilize more advanced technology in the production process. Thus in parallel with human development, FDI is observed to support technological progress in the recipient country.

<sup>&</sup>lt;sup>8</sup> Basu Sharma, Azmat Gani (2004) "The effects of foreign direct investment on human development", Global Economy Journal, Volume 4, Issue 2, Article 9

<sup>&</sup>lt;sup>9</sup> Magnus Blomstrom, Ari Kokko (2001) "FDI and Human Capital: a research agenda", OECD Development Center publication of FDI, Human Capital and Education in developing countries technical meeting 13-14 December, Paris

At the same time, there are many studies that observe contradicting results about the benefits and costs of FDI in the host country.

Multinational enterprises (MNEs) have been often criticized due to discriminative and exploitative practices toward local employees and other resources of the host country, as been mentioned in the background document to the OECD-ILO Conference on Corporate Social Responsibility (2008)<sup>10</sup>. At the same time, some direct and indirect advantages of the FDI inflows to the host country, such as better pay or improved working conditions, are part of the findings. The study also acknowledges that average salaries in foreign-owned companies are usually higher than in domestic companies. Probably the MNEs try to attract more skilled labor from the host country. Since the financial welfare of the citizens is one of the necessary aspects of human development, it may be considered as a positive factor affecting human development in the host country.

There exists plenty of empirical evidences for globalization's effects on changes in people's life in various countries and regions. For instance, Muhammad et al. (2010)<sup>11</sup> conclude that FDI undoubtedly plays a huge role in contributing to the trade, and industrial progress, and economic development in Pakistan.

The multinational firms planning to invest in other countries usually prefer markets with good conditions, developed economies when selecting a location to invest in.

<sup>11</sup> Salaiman D. Muhammad, Sadaf Majeed, Adnan Hussain, Irfan Lal (2010) "Impact of globalization on HDI (Human Development Index): Case Study of Pakistan", European Journal of Social Sciences, Volume 13, Number 1

<sup>&</sup>lt;sup>10</sup> Elena Arnal, Alexander Hijzen (2008) "The impact of Foreign Direct Investment on wages and working conditions", OECD publishing, series of OECD Social, Employment and Migration Working Paper, number 68

Research by Majeed and Ahmad (2008)<sup>12</sup> argue that higher HDI scores may be one more factor attracting FDI. A positive relation between health expenditures and FDI inflows has been detected by the authors, mainly because work quality of the labor force and ability to learn are dependent on health of the employees. It may be implied that inflows of FDI that positively affect HDI will definitely attract further FDI in particular region.

Subbarao (2008)<sup>13</sup> has analyzed the effect of FDI inflows on the host country's Human Development. Subbarao studied FDI inflows from two viewpoints – from the demand perspective and from the supply perspective. Talking about demand, there is a demand and need for better prepared and trained workers who can adopt faster and easier to more innovative technology, which helps to develop employee's efficiency. Supply side means that foreign investors provide jobs and training for employees. Sometimes foreign firms are supporting host country's education system, so the efficiency of the workers can be increased.

Another important aspect concluded by Subbarao is that policies attracting FDI to the host-country should also support further human capital development, it should encourage inventions and educational improvements.

It is important to understand a simple fact in the present topic, that HDI is a cluster of various factors and possibly FDI has a different effect on each of them. Arcelus et al. (2005)<sup>14</sup> analyzed the effect of FDI on life expectancy, educational attainment and

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<sup>&</sup>lt;sup>12</sup> Muhammad Tariq Majeed, Eatzaz Ahmad (2008) "Human Capital Development and FDI in developing Countries", Journal of Economic Cooperation, 29, 3, 79-104

<sup>&</sup>lt;sup>13</sup> P. Srinivas Subbarao (2008) "FDI and Human Capital Development", Indian Institute of Management, Ahmedabad, India, W.P. No. 2008-02-01

<sup>&</sup>lt;sup>14</sup> Francisco J. Arcelus, Basu Sharma, Gopalan Srinivasan (2005) "Foreign Capital Flows and the Efficiency of the HDI Dimensitons", Global Economy Journal, Volume 5, Issue 2, Article 4

wealth and it was found that FDI's impact on different countries vary significantly. Different host countries have different conditions, different situations, thus inflows of foreign investments may show different results, per se it highly depends on the country whether it can convert all the incoming foreign influences into positive changes in human development or not.

Fisher (2003)<sup>15</sup> argues that the big challenge today is poverty reduction and the weapon in the war against poverty is economic growth, which requires correct economic policies supporting integration with the global world. Fisher (2003) states possible implications of the globalization in his work and devotes a substantial part of his work to the discussions of the HDI trends in the post-war period in the developing countries (countries of sub-Saharan Africa, Post-Soviet region, Latin America) where past HDI indicators demonstrated favorable results after the FDI inflows, for instance education level has increased, infant death rates have fallen significantly and democracy improved after liberalizing the economies. Inequality changed significantly as people get more opportunities and choices. In the research, evidence been revealed by the author that in today's globalized world there is a linkage between more transparent borders of the countries and active international cooperation leading to economic development, affecting the welfare of the population in a positive way.

It is clear that countries have policies to achieve economic targets. Policies may be chosen to pursue economic growth and human development. Depending on that, various results may be achieved with foreign investments or foreign aid. As Kosack and Tobin

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<sup>&</sup>lt;sup>15</sup> Stanley Fisher (2003) "Globalization and its challenges", The American Economic Review, Vol. 93, No. 2, pp. 1-30

(2006)<sup>16</sup> point out there is an apparent difference between various policies and if country has chosen a policy focused on achievement of economic growth only (not a human development) by means of attracting more foreign investments or foreign aid, in a small country with poor resources it will only get benefits for few top-level people (elite) and most of the people in the host-country cannot benefit from FDI. Oppositely, when country focus on human development, research shows that FDI and foreign aid leads to economic development.

Naturally, countries needing economic growth may have complex problems, like many barriers against foreign investments. One of the most common problems of all developing countries or countries in transition is corruption and its consequences. Corruption level is considered as a factor playing a key role in human development indicators. When the system is corrupt usually inequalities, injustice, inefficiencies and risks increase, quality of industrial production and education goes down. Thus, corruption undeniably affects human development index. Foreign investors that are ready to solve host-country's problems related to corruption are usually trying to eliminate it at least in the businesses they are working in. Kwok and Tadesse (2006)<sup>17</sup> propose:

"Three avenues through which the MNCs may have an impact on its host institutions: regulatory pressure effect, demonstration effect and professionalization effect."

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<sup>&</sup>lt;sup>16</sup> Stephen Kosack, Jennifer Tobin (2006) "Funding self-sustaining development: the role of aid, FDI and government in economic success", International Organization, Vol. 60, No. 1, pp. 205-243

<sup>&</sup>lt;sup>17</sup> Chuck C. Y. Kwok, Solomon Tadesse (2006) "The MNC as an agent of change for host-country institutions: FDI and corruption", Journal of International Business Studies, Vol. 37, No. 6, pp. 767-785

Host-countries have no choice, but they have to adapt to the new regulations required by the foreign firms, which is framed by the strict terms and conditions of an agreement. Foreign experts, while introducing an innovative product in the developing country, can demonstrate professionalism and transparent uncorrupted system. Study shows that this definitely reduces corruption and it hugely contributes to the human capital development in the host country.

However, foreign investors may adapt to the local conditions of the host country, adopt the local policies, rules, customs and circumstances.

### 2.2 FDI and HDI in CIS region

The main subject of the present research is the region of CIS and analysis of the effects of FDI inflows on HDI indictors in the CIS region.

There is not too much research on the mentioned topic in the literature, which means that this research is going to be the first examining how FDI affects HDI in CIS region. Before the collapse of Soviet Union there was an organized trade between Soviet countries, which has disappeared after 1991 and lots of problems occurred. To solve economic problems that aroused after the collapse, a Free Trade Area (FTA) and Customs Union (CU) has been created by the countries in the CIS region. Michalopoulos and Tarr (1997)<sup>18</sup> question the idea and ask whether the customs union undesirably creates a closed economy preventing the further development and adaptation of the technological innovations and other economic improvements in the region. Normally, when customs barriers of the unions are too high and any relations with nonmembers are strictly banned, it may happen that union country-members are stuck in the

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<sup>&</sup>lt;sup>18</sup> Constantine Michalopoulos, David Tarr (1997) "The economics of customs unions in the commonwealth of independent states", World Bank Policy Research Working Paper No. 1786

level of development, without achieving new fresh inputs that may come from abroad. Authors of this research have detected two after-effects of CU, which are static and dynamic. Static effect is linked to the extent to which CU impacts on country welfare. Dynamic effect defines degree of CU impact on output growth rate. The study implies that human development indicators in the CIS region will definitely depend on country's openness to foreign investor's access (Michalopoulos and Tarr, 1997).

Rodionova and Gordeeva (2010)<sup>19</sup> while talking about HDI in CIS draw attention to the fact that, there are young individuals who grow up in the period of transition, so that globalization definitely has an effect on their life styles, their needs, that are very different from the older generations. Rodionova and Gordeeva (2010) argue that Information and Communications Technology (ICT) advancements contribute to the better informatisation of the population, which allows them to develop their skills, knowledge, life expectations according to the more developed countries. Young people in CIS want a better life, better possibilities and people of CIS strive for achievement of higher life standards, which means that people's needs and requirements from life has changed. Foreign investors are able to satisfy people's needs by supplying advanced technology, better education, development of know-hows, etc. According to Rodionova and Gordeeva (2010):

"ICT usage increased labour productivity, for enhancing economical growth and development, maintaining low level of inflation and unemployment; and changes in financial environment (web money, Internet-banking and Internet-trading) among others."

<sup>&</sup>lt;sup>19</sup> Irina Rodionova, Anastasia Gordeeva (2010) "Human Development Index and informatisation of society in CIS", Bulletin of Geography, Socio-economic Series, No. 13/2010

One more study done by Родионова and Гордеева (2011)<sup>20</sup> on the role of information technologies in social-economic development of countries, points out that almost all former social countries (especially CIS region) today are not showing absolutely best positions in international ratings. It has been stated that HDI is modernizing annually. In 2010, on the basis of HDI, in "Knowledge economy index" in which 134 country have been examined, leading positions in the rating have been occupied by western countries, such as Denmark, Sweden, Finland, Netherlands, Norway, but also, in the list of first 10 countries Canada and USA (6<sup>th</sup> and 9<sup>th</sup> positions) included. CIS countries are standing on very low positions, especially on economic rights and freedom ratings, and calculated index of using information and communication technologies (ICT). However, CIS position in ICT rating is improving annually, which says that it positively affects development of human capital in the region. The explanation for such an increase may be globalization, role of demonstration effect and promotion of better life quality depending on technological progress in the host countries.

Table 2.1: Knowledge Economy Index for Post-soviet region, year 2010

| 2 3  |                    |
|------|--------------------|
| Rank | Country            |
| 51   | Ukraine            |
| 56   | Armenia            |
| 60   | Russian Federation |
| 69   | Georgia            |
| 71   | Moldova            |
| 72   | Kazakhstan         |
| 73   | Belarus            |
| 84   | Kyrgyz Republic    |
| 97   | Azerbaijan         |

<sup>&</sup>lt;sup>20</sup> Родионова Ирина, Гордеева Анастасия (2011) "Роль информационных технологий в социальноэкономическом развитии стран мира.", Вопросы инновационной экономики, No. 7

| 104 | Uzbekistan |
|-----|------------|
| 106 | Tajikistan |

Brainerd (2010)<sup>21</sup> brings up a citation that human development may be defined as "the process of enlarging people's choices", which means that HDI is a great instrument to make the world a better place, to analyze what affects people's quality of life, how various economic and political processes are influencing common people's life satisfaction and their expectancies (Brainerd, 2010, p. 5). Brainerd (2010) mentions an important point that during the communist regime in the CIS region, numerous limitations on citizens restricted their freedom of choice, of opinions and means. Nevertheless, transition period has been a very painful process for many years and evidently people from all over the region had to go through and survive mass unemployment, income inequality and poverty.

Sinitsina et al. (2008)<sup>22</sup> discussed the consequences of the transition process and essential changes it caused in CIS region. For instance, income inequality was absent in the socialism. In Soviet times earnings between different social groups and the government was controlling each single element of economy. Since 1991, government stopped the total control of the economy and poverty increased sharply due to the striking changes in the income of people. This study also points out that migration flows has changed drastically since the collapse of Soviet Union affecting peoples' abilities to choose and change environment, to search for a new job or personal development

<sup>&</sup>lt;sup>21</sup> Elizabeth Brainerd (2010) "Human Development in Eastern Europe and the CIS Since 1990", Human development Research Paper 2010/16

<sup>&</sup>lt;sup>22</sup> Irina Sinitsina, Aziz Atamanov, Alexander Chubrik, Irina Denisova, Vladimir Dubrovskiy, Marina Kartseva, Irina Lukashova, Irina Makenbaeva, Magdalena Rokicka, Michael Tokmazishvili (2008) "The development gap between the CIS and EU", CASE Network Reports, No. 81, pp. 66-115

opportunities abroad. Already mentioned increase in poverty and inequalities are related to the changes in the social environment since 1991, like not receiving public health services, non-availability of medicines, problems in getting enough food and clean water, sanity environment and etc. Thus, it may be easily understood that transition period had some negative effects on health sector too.

Sinitsina et al. (2008) also say that life expectancy, infant mortality and death rates due to pregnancy also had changed for the worse in CIS region in comparison to European Union countries.

Another study from Kudina and Jakubiak (2008)<sup>23</sup> focuses attention on the three groups of investors: those who are market-seekers, resource/labour-seekers and efficiency seekers. Market-seekers are looking for the countries as new markets of required size. Labor-seekers are usually MNEs mostly involved in trade, production or services that are attracted by the cheap labor of the host country. Efficiency-seekers are interested in the availability of required factors of production, cultures, governance structure and economy. It has been found that, first of all, foreign investors are mostly attracted by the wealth of natural sources in CIS, especially by the possibilities to extract natural resources, building pipelines, etc. So, in the CIS region resource-seeking investors play the most active role. At the same time, market-seekers are attracted to the market potential of CIS countries but in a lesser degree than the seekers of natural sources. Another interesting fact stressed by Kudina and Jakubiak (2008) is that CIS have not been successful in attracting efficiency-seekers, as opposed to the new EU members and Western Balkan countries.

<sup>&</sup>lt;sup>23</sup> Alina Kudina, Malgorzata Jakubiak (2008) "The motives and impediments to FDI in the CIS", OECD, Global Forum on International Investments VII

The general picture of how FDI may positively affect economic growth and consequently improve human development is analyzed by the Rodrik and Subramanian (2003)<sup>24</sup>. Article is devoted to three main premises for the further economic development of the country, which are the following: geographical position of the country, which also includes the richness of natural sources and lots of possibilities that it enhances; existence or conditions for the MNCs, reliability of the property rights and other rules of law. Authors found that the quality of institutions is the other condition attracting FDI.

The literature shows much evidence related to the idea that economic progress has a huge impact on human development index. For example, Kaufmann et al. (2005)<sup>25</sup> mentioned that economic development is reflected in the better governance and for the effectiveness of development assistance. The assistance effectiveness means the development of skills and effective deployment of the achieved knowledge by the workers. It implies that opportunities in education, to be trained and skilled, and higher wages and salaries increase the quality of life and will positively affect HDI indicators.

Пылин (2008)<sup>26</sup>, studies competitiveness of CIS region in comparison to the rest of the world and states that labor market is highly effective in labor productivity, education level of the staff responsible for technical assistance, expenditures of employers at the moment of discharging employees and others are taken into account. CIS region has a

<sup>&</sup>lt;sup>24</sup> Dani Rodrik, Arvind Subramanian (2003) "The primacy of institutions", Finance and Development

<sup>&</sup>lt;sup>25</sup> Daniel Kaufman, Aart Kraay, Massimo Mastruzzi (2005) "Measuring Governance Using Cross-country Perceptions Data", The World Bank

 $<sup>^{26}</sup>$  Пылин А.Г. (2008) "Конкурентоспособность экономик стран СНГ на мировом фоне", Вестник научной информации. Отделение международных экономических и политических исследований ИЭ РАН. No. 2, p. 142

good level of higher education and professional training. However, CIS stays behind the developed countries in such measures as financial market development, competitiveness of the companies, technological level, quality of institutions, and effectiveness of products and services market. Within last years, countries of CIS stand on high positions, but according to only certain indicators. For instance, competitiveness by the market size in years 2007-2008, Russia and Ukraine are standing on 9<sup>th</sup> and 26<sup>th</sup> positions respectively; by the macroeconomic stability Azerbaijan, Kazakhstan and Russia are standing on 23<sup>rd</sup>, 25<sup>th</sup> and 37<sup>th</sup> positions accordingly; by the quality of higher education and manpower development, Russia, Uzbekistan and Ukraine are on 45<sup>th</sup>, 49<sup>th</sup> and 53<sup>rd</sup> places; by the effectiveness of the labor market Kazakhstan and Georgia on 15<sup>th</sup> and 28<sup>th</sup> positions.

By taking into account all above mentioned information and by looking through contemporary data regarding inflows of foreign investments, UNCTAD press release (2011)<sup>27</sup> states that recently observed facts evidently show that there is improving investment collaboration between developing countries and countries in transitional economies. The argument is supported by the fact that investments into different regions demonstrated that investments in Southeast Europe in 2010 sharply decreased, but they are increasing in CIS region.

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<sup>&</sup>lt;sup>27</sup> United Nations Conference on Trade and Development (UNCTAD), press release, UNCTAD/PRESS/PR/2011/029

# **Chapter 3**

## FDI and HDI

## 3.1 Foreign Direct Investment

Economic theory generally defines FDI as the capital invested in another country to achieve long-run economic profit from that investment. FDI is also an engine of international trade and integration process in today's globalized world. Very often, FDI is discussed as a factor contributing to the economic welfare and progress of the recipient country and this aspect is stronger in cases when foreign investments are directed to those fields, in which host countries have strong advantages.

In todays' globalized world FDI and its consequences can be positive or negative. History shows that since World War 1 till 1990s FDI's share increased three times in international business. The notable factor is that while goods are moving between countries, production facilities are also migrating between them. Direct investors are usually powerful multinational corporations, which are large enough to expand abroad as home country market saturates. Thus, such companies are transforming the significant part of production to different countries, in which market conditions are favorable and advantageous. They create powerful representative offices in foreign countries, that are integrated in the huge global market chain. In other words, investors are moving to other countries to take advantage of foreign resources and global markets abroad.

Today, foreign investors try to enter new markets with a strong demand for their products and/or with valuable resources to be exploited. Countries sign international investment agreements, which contribute to secure the investments and coordinate relations, satisfying to the interests of both investing and receiving countries. Different international pacts set strict rules for companies and host countries, play a serious role in protecting the interests of investors from various undesired consequences. Agreements may be realized between two or more countries or regions. World Trade Organization (WTO), United Nations Conference on Trade and Development (UNCTAD) and Organization for Economic Cooperation and Development (OECD)<sup>28</sup> are the most important organizations encouraging FDI.

It is assumed that the distinctive feature of FDI from other types of investments is that it is supported by international organizations. It has been observed that an intensive growth in the popularity of FDI mainly depends on the heightened competition in today's global world over markets resources. Moosa (2002)<sup>29</sup> observed that even at times when world commerce slowed down because of restrictions and barriers for free trade, FDI was still increasing because companies usually found ways to avoid restrictions. Contradicting arguments are taking place regarding consequences of FDI, especially for the host country. From one side, FDI is considered as a factor that contributes to developing country's economy success during recessions. On the other side, some authors argue that FDI may be considered as a form of colonialism and they

<sup>&</sup>lt;sup>28</sup> "Международное регулирование прямых иностранных инвестиций", available from http://works.tarefer.ru/99/100890/index.html

<sup>&</sup>lt;sup>29</sup> Imad A. Moosa (2002) "Foreign Direct Investment", Palgrave Macmillan

see incoming FDI reducing employment opportunities for local people, exploitation of local resources, lose of independence and national security.

Recipient countries are interested in attracting FDI because they want to increase exports. Host countries also see FDI as a possibility to finally produce goods, that have previously been imported from other countries, what leads to the reduction of costly imports.

Charles W.L. Hill (2007)<sup>30</sup> discusses the FDI types and its features. Generally, FDI may be categorized as: Horizontal FDI – when multi-plant companies have similar businesses and activities in several countries. The purpose of this type of FDI is to expand production of the domestic goods overseas. In this case, investors usually differentiation achieve desired market under different market Vertical FDI – when companies localize distinct phases of production process in different countries. Vertical FDI is more popular than horizontal FDI. Vertical FDI is attractive for firms searching for the better (often cheaper) inputs to utilize and take advantage of the host country's natural sources, labor, which is usually called "backward vertical FDI". Also, investors of the vertical type may want to be closer to the potential customers, which is called "forward vertical FDI".

Moosa (2002)<sup>31</sup> also mentioned the conglomerate type of FDI, which comprises above mentioned horizontal and vertical FDI.

<sup>&</sup>lt;sup>30</sup> Charles W.L. Hill (2007) "International Business. Competing in the Global Marketplace.", McGraw – Hill Irwin, 6<sup>th</sup> edition

<sup>&</sup>lt;sup>31</sup> Moosa, loc.cit

#### 3.1.1 Foreign Direct Investment in CIS region

CIS region is generally considered as a region which could have higher levels of FDI inflows. As Clinton R. Shiells (2003)<sup>32</sup> mentions in his work, relatively low FDI levels in CIS can be explained by difficult investment climate, where these countries have barriers against and restrictions for foreign investors. In spite of the fact that many CIS countries have rich natural resources, they fail to attract FDI at required levels.

Crisis in Russian Federation negatively affected investments into some of the CIS countries within the last decades. Even though macroeconomic performance been improved since 1999s, according to the statistics, no significant progress has taken place in investment inflows. However, CIS countries successfully attracted FDI in such fields as resources extraction, energy transportations, etc. It should be noted that usually FDIs positive outcome becomes visible only in the long-run when foreign investors fully adapt to the conditions in the recipient country, to its cultural expectations, internal rules and manners of doing business. But it should be clear that FDI's positive effects still depend on recipient country's domestic policies. There are problems for foreign investors such as host country's market is not fully analyzed, supply and demand are not matching, prices are too high, there is lack of competent employees, corruption is widespread, which is reflected in low business security, country's economy is not stable and other related problems. Surely, more than other factors, FDI is attracted by CIS countries' rich energy resources. In that case, FDI projects are planned under special rules, restrictions, taxes and policies that are related to energy resources, the characteristics of energy reserves, such as its type, quantity, various conditions and the

<sup>&</sup>lt;sup>32</sup> Clinton R. Shiells (2003) "FDI and the Investment Climate in the CIS Countries", IMF Policy Discussion Paper

area they would be extracted. When foreign investing companies are getting involved in the energy industry, they are usually closely collaborating with recipient country's weak sides, such as the corruption, political instability, quality of rules, lack of management and etc. Examples of CIS region countries, having wealthy energy sources are Azerbaijan, Kazakhstan, Russia and Turkmenistan.

As Clinton R. Shiells (2003)<sup>33</sup> points out, some foreign investors are not after countries' rich with energy resources, but they look for growing markets to expand. These investors are interested in market-oriented economic reforms – like the ones happening in Armenia, Georgia, Kyrgyzstan, Moldova, Tajikistan, Ukraine. Third category of countries are those that didn't get involved into market-oriented economic reforms, but they are energy-importers, such as Belarus and Uzbekistan.

World Bank (2011) defines FDI as:

"The net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows, less disinvestment) in the reporting economy from foreign investors." (World Bank official website)<sup>34</sup>.

# 3.2 Human Development Index

The Human Development Index is a cluster of environmental conditions, situations and a state of affairs in the country, helping to improve and to create a better world we are living in, where peoples' needs and requirements are fulfilled within their possibilities. Improvement in HDI demonstrates increases in the quality of peoples'

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<sup>33</sup> ibid

<sup>&</sup>lt;sup>34</sup> The World Bank official website (accessed November 14, 2011); available from <a href="http://data.worldbank.org/indicator/BM.KLT.DINV.GD.ZS">http://data.worldbank.org/indicator/BM.KLT.DINV.GD.ZS</a>

lives; their opportunities in achieving better income, health condition, education opportunities, etc.

People are the wealth of a nation and they contribute to the further development in the economy as a whole. Thus, improvement of HDI is closely related to the economic progress of a country. Usually HDI improving policies consist of the expansion of human competences, which are what individuals can do or be in their life. Conditions that make people live long and healthy lives, to be educated, to have the possibilities to achieve higher living standards, to live in secure society – are part of Human Development improvement policies.

Mahbub ul Haq, founder of the Human Development Report says:

"The basic purpose of development is to enlarge people's choices. In principle, these choices can be infinite and can change over time. People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence satisfying leisure hours, cultural freedoms and sense of participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives." (Falzon, 2005)<sup>35</sup>

Today, human development policy is frequently associated with freedom as people must be unrestricted in their choices and in finding ways to fulfill their requirements. The HDI been initially developed because of the appeared doubts regarding the development policies in 1980s. An understanding of the relation between economic growth and human development possibilities motivated economists on the research and creation of that index and policies maintaining the progress in these indicators.

<sup>&</sup>lt;sup>35</sup> Pierre Falzon (2005) "Developing ergonomics, developing people", Proceedings of the 8<sup>th</sup> South East Asian Ergonomics Society Conference SEAES-IPS, p. 5-6

A vision that economic growth may not necessarily improve the citizens' life quality; that somehow in parallel with economic growth, countries experienced increases in the social problems, which are crimes, HIV/AIDS, environmental pollutions, unequal income distribution etc.

The deteriorating living standards in some developed countries necessitated a more humanistic yardstick to measure the quality of life for citizens of a country and the new criteria are included in the HDI.

#### 3.2.1 School enrollment, tertiary (percent gross)

World Bank Organization (2011) describes the tertiary school enrollment as the total data of the population registered in the college or university education. It accounts cases of an admittance and completion of university or schooling at the level of high education.

Tertiary education is an education by institutions of higher education, which provides an academic degree diploma or qualification certification. Acceptance to the tertiary level of education takes place after the upper-secondary, post-secondary or other lycée level of education.

From the perspective of evaluation the country's potential for the further economic development, this indicator plays a very important role. Since that indicator is responsible for the quality of labor performance, individuals' ability to implement new projects, to lead and manage the business successfully and consequently, to stimulate development of new industries, what in common goes along with economic progress. Therefore, evaluation and analysis of tertiary school enrollment is important in assessing the country's economic prosperity. Tertiary education is undoubtedly related to the

improvement of human capital, which is of crucial importance in pursuing economic progress.

Barro and Lee (2010)<sup>36</sup> argues that there are various evidences that education has social consequences such as on child death, on how parents raise and educate their children, on fertility rates and on income distribution etc.

Пылин (2008)<sup>37</sup> shows that effectiveness in labor market is high in CIS countries. Effectiveness in labor market is measured as the ratio of payment and productivity of labor, the level of personnel's education etc. Tertiary education and professional training are high in the region.

Referring to Полякова (2011)<sup>38</sup>, there are evidences that for the period 1970-1990, completed by Fisher and Isterly, demonstrated that in such countries as Russia, Belarus and Caucasus republics, human capital played much greater role than in the countries of Central Asia. Полякова (2011) also states that, especially, CIS governmental average investments in education in 2000s have been close to 4% of GDP, the highest in Belarus (6,2%) and the smallest part took place in Tajikistan (2,3%).

Today, a very strong tendency to achieve tertiary level of education is observed in CIS region, interesting fact is that both high-level and low-level families are considering higher education as mandatory for their children.

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<sup>&</sup>lt;sup>36</sup> Robert J. Barro, Jong-Wha Lee (2010) "A new data set of educational attainment in the world, 1950-2010", NBER Working paper series, No. 15902

<sup>&</sup>lt;sup>37</sup> Пылин, loc. cit.

<sup>&</sup>lt;sup>38</sup> Полякова Е.М. (2011) "Структура компонентов человеческого капитала: теоретико-методические аспекты статистического исследования", Учет и статистика, No. 22, p. 105

## 3.2.2 GNI per capita, PPP (current international \$)

Another Human Development indicator involved in this research is GNI per capita measurement in purchasing power parity measurements in current international dollars.

According to the World Bank Organization (2011), gross national income is calculated in purchasing power parity (PPP), which is actually gross national income (GNI) adapted to the current US dollars. International dollar has similar buying power over GNI as a US dollar has in the United States. GNI is the total value added by the local producers (minus taxes) and net income from other countries.

GNI per capita is an important indicator to focus on, as it is one of the three main dimensions in measuring human development.

Frequently, GNI per capita is considered as an instrument in grouping countries by the level of poverty or wealth. As Lerman (2009)<sup>39</sup> states, CIS countries been classified as low, lower middle and middle income countries. The highest income countries in CIS according to the author are Russia, Belarus, Ukraine and Kazakhstan. The country of lowest GNI per capita is Tajikistan.

Пылин (2008)<sup>40</sup> in his work states that country's competitiveness may be characterized by the country's success in international trade of high technology products. Economic development and competitiveness of the country depend on country's ability to sustain high growth rates in GNI per capita.

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<sup>&</sup>lt;sup>39</sup> Zvi Lerman (2009) "Land reform, farm structure, and agricultural performance in CIS countries", China Economic Review 20, pp. 316-326

<sup>&</sup>lt;sup>40</sup> Пылин, loc. cit.

According to Γypoba (2009)<sup>41</sup>, CIS has overcome the deep transformation crisis of 1990s. Socio-economic indicators, such as unemployment level, GNI per capita have been improved almost in all CIS countries. However, after the deep economic crisis not all CIS countries yet could achieve indicators comparable with income level at times of Soviet Union regime. According to the World Bank (2011), most of the CIS countries are lower than the middle income countries' level, like Armenia, Azerbaijan, Belarus, Georgia, Moldova, Turkmenistan, Ukraine. Kyrgyzstan, Tajikistan and Uzbekistan are the three countries with lowest incomes in the region. Russia, Belarus and Kazakhstan, on the other hand belong to the group of countries of high income level.

## 3.2.3 Life expectancy at birth, total (years)

According to the data from World Bank (2011), life expectancy at birth demonstrates:

"The number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same through its life". (World Bank official website)<sup>42</sup>

As Abbott et al. (2010)<sup>43</sup> point out conditions in CIS, weak health is one of the main factors affecting life expectancy. In 1990s, after the collapse of Soviet Union, countries like Russia, Ukraine, Belarus and Kazakhstan experienced a fall in health conditions (observed through mortality rates) specially for the population of men at middle ages. Thus there is a difference between the life expectancy of males and females in the population. In some CIS countries, like Russia, Ukraine and Kazakhstan life expectancy

 $<sup>^{41}</sup>$  Гурова И.П. (2009) "Региональная торговля и торговая интеграция СНГ", Евразийская экономическая интеграция, No. 2(3), p. 89

<sup>&</sup>lt;sup>42</sup> The World Bank official website (accessed November 14, 2011); available from http://data.worldbank.org/indicator/SP.DYN.LE00.IN

<sup>&</sup>lt;sup>43</sup> Pamela Abbott, Claire Wallace, Christian Haerpfer, Svitlana Babenko (2010) "Socio-economic influences on health in the Commonwealth of Independent States"; available from <a href="http://www.nbuv.gov.ua/">http://www.nbuv.gov.ua/</a>

stayed below the level of 1990s. In other CIS Belarus, Moldova, Armenia, Azerbaijan, Georgia, countries life expectancy has been improved. According to the average life expectancy years for the period analyzed, the highest life expectancy rates are for the 71 years in Armenia, 69 years in Belarus, 68 years in Azerbaijan, Kyrgyzstan and Ukraine.

## 3.2.4 Health expenditure per capita (current US \$)

According to the World Bank (2011) data, health expenditure per capita in current US dollars is the:

"Total health expenditure is the sum of public and private health expenditures as a ratio of total population. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation. Data are in current U.S. dollars." (World Bank official website)<sup>44</sup>

Suhrcke et al. (2008)<sup>45</sup> discusses significance of health condition for the country's economic prosperity. Economic progress usually contributes to an improvement in health and it increases economic profits. Higher income improves the chances to have a healthy life. At least, each individual can have healthy food, live in healthier environment, do sports and to get all required medical assistance in time.

Relying on the data published by the World Bank Organization (2011), three countries of CIS region, namely Russia, Belarus and Kazakhstan, can be marked as having the highest health expenditure per capita (in current US\$) in the period 1995-2009. Countries with lowest health expenditure are Tajikistan, Kyrgyzstan and Uzbekistan.

<sup>&</sup>lt;sup>44</sup> The World Bank official website (accessed November 14, 2011); available from <a href="http://data.worldbank.org/indicator/SH.XPD.PCAP">http://data.worldbank.org/indicator/SH.XPD.PCAP</a>

<sup>&</sup>lt;sup>45</sup> Marc Suhrcke, Regina Sauto Arce, Martin McKeed, Lorenzo Rocco (2008) "Экономический ущерб от плохого здоровья: ситуация в Европейском регионе", Европейская министерская конференция ВОЗ по системам здравоохранения: "Системы здравоохранения – здоровье - благосостояние"

# Chapter 4

# REVIEW OF CIS COUNTRIES ACCORDING TO FDI AND HDI INDICATORS

## 4.1 Azerbaijan

## 4.1.1 FDI in Azerbaijan

Azerbaijan is viewed as the energy-abundant country of the CIS region and foreign investors are attracted to its energy sector.

Referring to the information officially provided by the Azerbaijani Ministry of Economic Development, country tries to improve investment climate and seeks to maintain an attractive economic environment, which will attract FDI not only in to sector but to other sectors, too.

Legal system in Azerbaijan has been established with the aim to support foreign business activities in the country. In 1992 Azerbaijan adopted the Law on Protection of Foreign Investments and in 1995 the Law on Investment Activity, providing a very secure atmosphere for the foreign investors' activities. Foreigners are able to take part in privatization process under the Privatization Law, signed in 1993. Thus, Azeri government encouraged the foreign investors to participate in the sales/auctions of government owned enterprises and the establishment of joint-stock or joint venture companies.

Legal system also protects foreign investors in cases of deprivation or confiscation; in the worst cases investors are financially compensated; investors' earnings are protected. Such a reliable economic and legal atmosphere and presence of energy resources attract many investors to Azerbaijan.

There are some limitations of doing business in energy and telecommunication fields, such as instead of full ownership of foreign nationals, partnership type of business is more encouraged.

FDI flows are accumulated in: oil and gas, energy, agriculture, food and beverage, telecom and IT, construction, textile and cotton, transport and logistics, tourism and hotel management, financial sectors (banks, insurance and leasing) and in the capital market in Azerbaijan.

Foreign activities in Azerbaijan are attracted by the availability of energy sources, cheap labor force and abilities to adapt to the innovative technology by the workforce.

The major international oil company operating in Azerbaijan is Azerbaijan International Operating Company (AIOC) consortium, including British Petroleum (United Kingdom), Chevron (United States), Devon Energy (United States), Statoil (Norway), Turkiye Petrolleri Anonim Ortakligi (Turkey), Amerada Hess (USA), ExxonMobil (USA), Inpex (Japan), Itochu (Japan), State Oil Company of Azerbaijan<sup>46</sup>.

Due to favorable economic and legal conditions, in 2011 the amount of foreign capital inflow into Azerbaijan is increased at 25.6% in comparison to the previous year. As a result, 89.8% of finances to Azerbaijani's budget comes from the abroad (51.3% - from UK, 14.5% - from US, 9% - Japan, 5% - Norway, 4.2% - Turkey, 3% - Czech

<sup>&</sup>lt;sup>46</sup> Wikipedia, the free encyclopedia, (accessed October 20, 2011); available from <a href="http://en.wikipedia.org/">http://en.wikipedia.org/</a>

Republic, 1.9% - France and 0.9% - Korea, 10.2% - Switzerland). The rest of the foreign investments are inflowing from Saudi Arabia, Italy, Luxemburg, World Bank (7.7%), from Asian Development Bank (1.8%), Islamic Development Bank (0.1%) and Kuwaiti Fund for Arab Economic Development (0.01%).<sup>47</sup>.

The yearly data of FDI inflows to Azerbaijan shows that during the period 1995-2010 FDI had significantly fluctuated. Average value of FDI inflows during the period 1995-2010 is around \$ 600 billion. During the period 1995-2004 FDI inflows had an upward trend, which starts at \$330,050,000 in 1991 and reaches \$3,556,099,000 in 2004. Afterwards, FDI inflows into Azerbaijan declined to \$563,132,000 as shown in Figure 4.1.

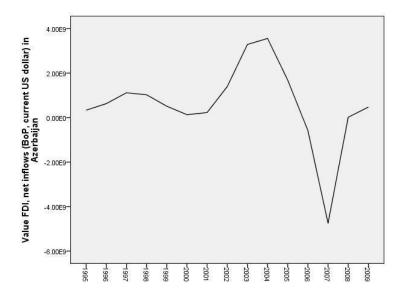


Figure 4.1: FDI trend in Azerbaijan, 1995-2009

## 4.1.2 HDI in Azerbaijan

The HDI trends in the corresponding period in Azerbaijan also showed fluctuating trend. Azerbaijani UNDP controls accuracy and reliability of HDI estimations in

<sup>&</sup>lt;sup>47</sup> "UK accounts half of foreign investments in Azerbaijan", (accessed October 29, 2011); available from <a href="http://www.news.az/articles/47554">http://www.news.az/articles/47554</a>

Azerbaijan. According to the most recent report of the UNDP Azerbaijan's position in HDI rank went down from 67 in 2010 to 91 in 2011. One of the reasons for this drop in the list is that there are more countries in the list of 2011 compared to 2010. For example, in 2011 Azerbaijan's rank is 91 in the list of 187 countries, but in 2010 Azerbaijan stands on 67<sup>th</sup> place in the HDI ranking of 169 countries. Thus, such changes may not be interpreted as worsening in HDI ranking for Azerbaijan.

UNDP report states that since 1980s, life expectancy in Azerbaijan been raised to 5.8 years and expected years of schooling been increased by 0.5 years. Since 1995 Gross National Income per person increased by 366.0 percent.

Azerbaijan's rank is 0.700 in HDI where the average score is 0.741. It can be noticed, that Azerbaijan doesn't reach "high HDI" class, neither it reaches an average in HDI among European and Central Asian countries. Nonetheless, according to the most recent researches, Bulgaria (HDI rank 55) and Belarus (65) are countries that are close to Azerbaijan in HDI rank when considering the size of population.

# 4.1.3 Azerbaijan in HDI rank

HDI in Azerbaijan has an upward trend in 1990's, it reaches the worst score which is 110 in 1998, declines till 2001, in 2002 it starts to increase again till the position of 101 in 2005. Since 2006 HDIs position goes down.

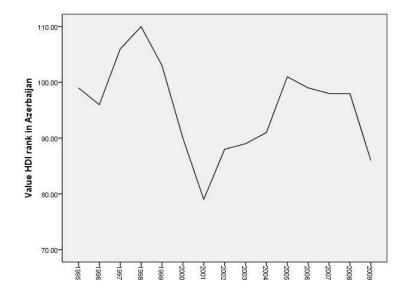


Figure 4.2: Azerbaijan in HDI rank, 1995-2009

## 4.1.4 School enrollment in Azerbaijan

The value of tertiary School enrollment for Azerbaijan demonstrates a declining trend from 18 to 14 during the period 1995-2007, afterward it increases to 19 in the 2009.

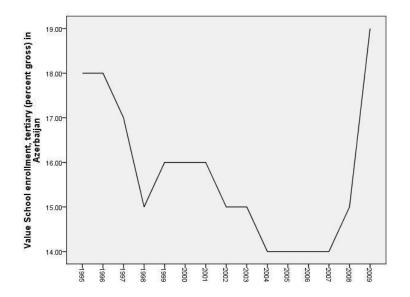


Figure 4.3: School enrollment in Azerbaijan, 1995-2009

# 4.1.5 GNI in Azerbaijan

Gross National Income in Azerbaijan has smooth upward trend during 1995-2009.

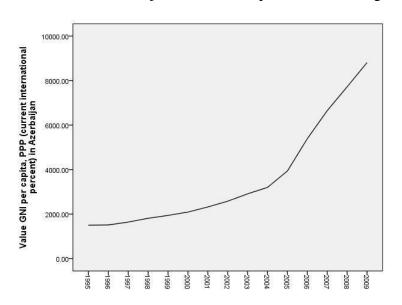


Figure 4.4: GNI in Azerbaijan, 1995-2009

## 4.1.6 Life expectancy in Azerbaijan

Life expectancy in Azerbaijan has an upward trend as observed in Figure 4.5.

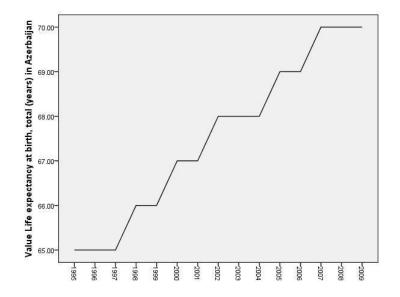


Figure 4.5: Life expectancy in Azerbaijan, 1995-2009

# 4.1.7 Health expenditure in Azerbaijan

Data for health expenditures per capita in Azerbaijan demonstrates a very smooth upward trend as Figure 4.6 shows.

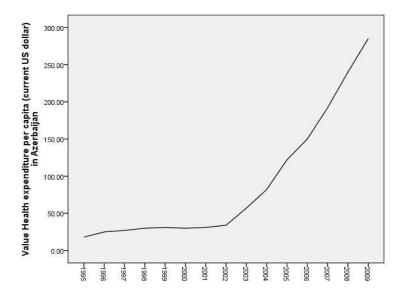


Figure 4.6: Health expenditure in Azerbaijan, 1995-2009

## 4.2 Armenia

## 4.2.1 FDI in Armenia

Clinton R. Shiells (2003)<sup>48</sup> categorizes Armenia as an energy importer. FDI inflows into Armenia for the privatization energy sector and construction of the oil pipelines, FDI inflows in such sectors as energy, telecommunications and food is coming from Russia, Greece, the United States and France.

According to the Ministry of Economy of the Republic of Armenia<sup>49</sup>, economic growth of the country is closely related to the improvements in investment climate and developments in the legislative system. Armenia is following the "open doors" policy, supporting the "foreign investment" law declared in 1994. Instruments in attracting foreign investments are the maintenance of liberal economic environment, stability, elimination of discrimination between foreign investors and local investors as investors, security etc.

Armenia's population was around 3.092 million in 2010, but its diaspora worldwide is a bit more than 10 million, which is seen as the main competitive instrument in attracting foreign investments into country through the permanent contacts, support and promotion an international level. As Hergnyan and Makaryan (2006)<sup>50</sup> point out, Armenia had a deep crisis in 1993, which resulted in high inflation rates, like 11,000 % annually, lack of electricity, low incomes and economic slump. International

<sup>&</sup>lt;sup>48</sup> Clinton R. Shiells, loc. cit

<sup>&</sup>lt;sup>49</sup> Ministry of Economy of the Republic of Armenia (accessed October 29, 2011); available from <a href="http://www.mineconomy.am/">http://www.mineconomy.am/</a>

<sup>&</sup>lt;sup>50</sup> Manuk Hergnyan, Anna Makaryan (2006) "The role of the diaspora in Generating Foreign Direct Investments in Armenia", Economy and Values Research Center and Caucasus Research Resource Centers

communities, organizations, aid and humanitarian transfers of Armenian Diaspora all contributed to the Armenians economic recovery. Diaspora played a huge role in attracting FDI into country. In comparison to other CIS countries, Armenia did not attract foreign investment in the period analyzed, but the data of FDI inflow still shows an upward trend and demonstrates huge improvements more recently. Nowadays, Armenian economic policy encourages developments in technology and business processes, which may be achieved by attracting foreign investments into these areas. Armenia's economy strongly depends on imports of natural gas and petroleum products. Today, economic crisis in Armenia still continue and it negatively affect Armenians' life and investment climate. They need to attract more and more foreign investments from overseas. In 2011 foreign investments in Armenia increased 24.2% compared to the previous year. The substantial part of investments are coming from abroad for the production of base metal (27%), developments of telecommunications (17,4%), developments of energy sector (12%)<sup>51</sup>.

Half of investments into Armenia are coming from Russia. France is the second largest investor in Armenia, especially in the telecommunications field. The third foreign investor in Armenia is USA. Also, Switzerland, Canada and UK are attracted to invest in Armenia.

Barriers for effective foreign investments inflows into Armenia are the corruption, absence of energy and other natural resources, and small internal market. According to the World Bank Organization FDI net inflows into Armenia demonstrates an upward path. FDI inflows was \$25,320,000 in 1995, in 1996 it insignificantly declined to

<sup>&</sup>lt;sup>51</sup> "Foreign investments to Armenia increase by close to 25 percent" (accessed October 29,2011); available from <a href="http://news.am/eng/news/83919.html">http://news.am/eng/news/83919.html</a>

\$17,570,000 and afterward (during the period of 1996-1998) FDI increased to \$220,830,000, then again declined till 2001 when FDI inflow is \$69,868,500. Since 2002 till 2008 FDI increases and reaches the top amount, \$935,434,360. Subsequently, in the recent two years, FDI inflows declined to \$570,060,000.

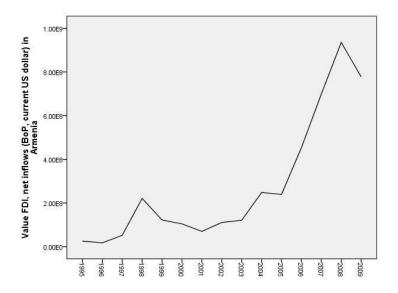


Figure 4.7: FDI trend in Armenia, 1995-2009

## 4.2.2 HDI in Armenia

In 2011, Armenia had 86<sup>th</sup> rank in HDI, joined the list of countries with high rates of human development.

Ms. Dafina Gercheva<sup>52</sup> argues that Armenia succeeded in reducing poverty within the last years. Poverty has been reduced from 34.6% in 2004, to 23.5% in 2008. Education for children is on a progressive speed path. Several changes in education system been implemented within the last years. Nowadays, access to education is expanded and more possibilities are created.

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<sup>&</sup>lt;sup>52</sup> Latest news and press releases (accessed October 30, 2011); available from <a href="http://www.undp.am/?page=LatestNews&id=587">http://www.undp.am/?page=LatestNews&id=587</a>

Today United Nations contributes to the Armenia pursuit in reaching Millennium Development Goals by 2015 (MDGs)<sup>53</sup> which targets economic development, poverty reduction and increase in human development.

Another problem for Armenia is that since 1991 big number of people have emigrated from the country and the number is 700,000-1,300,000 of emigrants. Reasons for such huge emigration are unemployment problems, resulting from low incomes, poor quality of life, dissatisfaction with opportunities in Armenia. Human development in the country shows poor results due to the fact that lots of highly educated population preferred other countries to live and work in. One positive effect of emigration is that Armenians living in foreign countries contribute to the education and health care industry development via financial transfers to their families.<sup>54</sup>

<sup>&</sup>lt;sup>53</sup> "The Millenium Development Goals (MDGs) are eight international development goals that all 193 United Nations member states and at least 23 international organizations have agreed to achieve by the year 2015. They include eradicating extreme poverty, reducing child mortality rates, fighting disease epidemics such as AIDS, and developing a global partnership for development." – definition by Wikipedia, the Free Encyclopedia; available from <a href="http://en.wikipedia.org/wiki/Millennium\_Development\_Goals">http://en.wikipedia.org/wiki/Millennium\_Development\_Goals</a>

<sup>&</sup>lt;sup>54</sup> United Nations in Armenia official website (accessed November 16, 2011); available from <a href="http://www.un.am/">http://www.un.am/</a>

## 4.2.3 Armenia in HDI rank

Armenia demonstrates a volatile trend in HDI during 1995-2009. It starts at 90, reaches position of 103 and afterward decreases with fluctuations and hits the lowest rank 72 in 2001. Trend recovers since 2002 and stabilizes around 84.

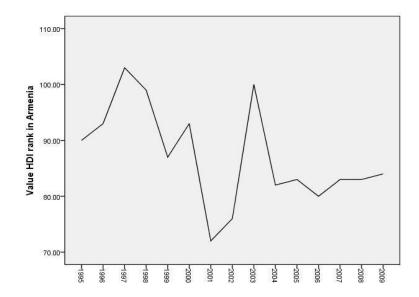


Figure 4.8: Armenia in HDI rank, 1995-2009

## 4.2.4 School enrollment in Armenia

School enrollment demonstrates an upward trend in Armenia, starts at 21 and decreases to 15 in 1997. The period ends at 50.

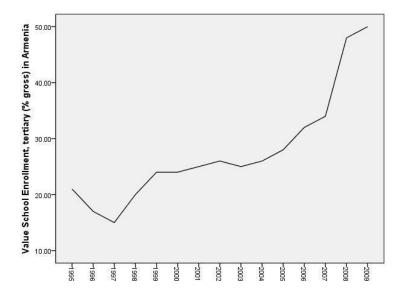


Figure 4.9: School enrollment in Armenia, 1995-2009

## 4.2.5 GNI in Armenia

GNI per capita in Armenia has an increasing trend during almost the whole period, that starts at \$1,380 in 1995 and smoothly reaches its peak at \$6,340 in 2008. Period ends at decreasing path, with \$5,370 in 2009.

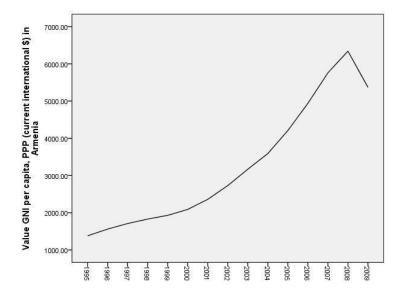


Figure 4.10: GNI in Armenia, 1995-2009

# 4.2.6 Life expectancy in Armenia

Life expectancy increases and has an upward trend during the period, which starts at age of 69 in 1995 and finishes at age of 74 in 2009.

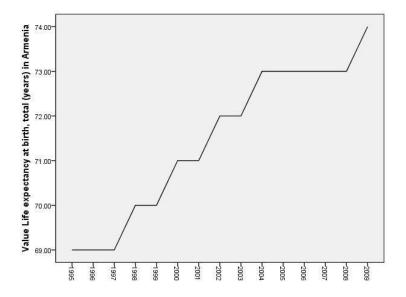


Figure 4.11: Life expectancy in Armenia, 1995-2009

## 4.2.7 Health expenditure in Armenia

Health expenditures in Armenia graph demonstrates an upward trend in the period and only by the end of the period in 2009 it decreases by \$129.

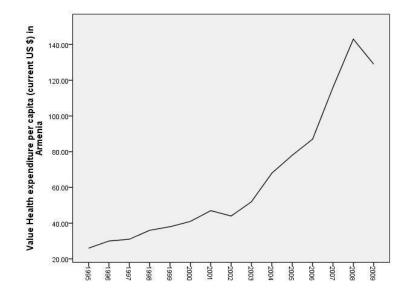


Figure 4.12: Health expenditure in Armenia, 1995-2009

## 4.3 Belarus

#### 4.3.1 FDI in Belarus

According to official governmental websites of Belarus<sup>55</sup>, country attracts foreign investors due to the number of factors. Some of the stated advantages are that the country is situated along the boundary of European Union, so that European countries connect with highly potential CIS markets through Belarus gives lots opportunities to investors.

Belarus has a common customs agreement with Russia, which means that investors may easily access the Russian market through Belarus.

<sup>55</sup> Ministry of Economy of the Republic of Belarus <a href="http://www.economy.gov.by/en">http://www.economy.gov.by/en</a>; National Investment Agency <a href="http://www.invest.belarus.by/">http://www.invest.belarus.by/</a>

Stable legal system also protects investors' activities and their incomes. Such as the Foreign Investment Advisory Council under the Prime Minister of Belarus established to help the foreign investors.

GDP growth is another important factor for investors, also labor performance, production effectiveness and other indicators encourage FDI.

Belarus is politically and economically stable and corruption is low, it doesn't have any unresolved conflicts with other states, which makes Belarus a low risk country for investments.

Today Belarus has well-developed industries, like chemical fertilization, automobile, metallurgy, agriculture, etc. Belarusian products in the mentioned industries are well recognized in the world. Country is emphasizing technological progress and it encourages foreign investments into technological sector by offering profitable conditions to foreign partners.

Labor force usually attracts foreign investors into countries, Belarus National Investment website<sup>56</sup> reports that 4.5 % of the workers have higher and secondary education. Good level of labor qualification is one of the factors that significantly attract foreign investors.

Головач et al. (2010)<sup>57</sup> admit that economy of Belarus nowadays experiences lack of financial resources, which is limiting the modernization processes. Government of Belarus understands the limitations and undertakes actions in order to eliminate these

<sup>&</sup>lt;sup>56</sup> National Investment Site of the Republic of Belarus (accessed December 2, 2011); available from http://www.invest.belarus.by/

<sup>&</sup>lt;sup>57</sup> Анастасия Головач, Томас Манди, Алексей Моисеев (2010) "Республика Беларусь. Новая реальность – новые возможности", Ренессанс Капитал, Стратегия, Республика Беларусь

problems and to achieve additional sources for funds. Creation of favorable investment climate is part of the process. The model of transition economy has positively affected the investment climate in the country, which comprises changes in the laws important to foreign investors and reducing tax rates. As a result of these measures more investors are attracted to Belarus today.

Петрушкевич (2010)<sup>58</sup> states that according to the National Statistical Committee of Republic Belarus, the volume of FDI inflows into the country is affected by the economic progress and also by the world economic and financial crisis in 2008-2009. FDI inflow had an increasing tendency for 65-75% each year from 2006 to 2008. In 2009 there was a huge increase by 111%. Author also mentions that significant part of investments is coming from outside of CIS region. The main investments into country are coming from Germany, Russia, Netherlands, USA, UK, Lithuania, Poland, Cyprus, Latvia and Ukraine.

<sup>&</sup>lt;sup>58</sup> Елена Петрушкевич (2010) "Структура и характер прямых иностранных инвестиций в Республике Беларусь"

By looking at the trend of the present research data, it may be seen that its volatility continues during the period 1995-2006 and afterward significant increase is observed till 2008 when the trend reaches its peak at \$ 2,180,600,000.

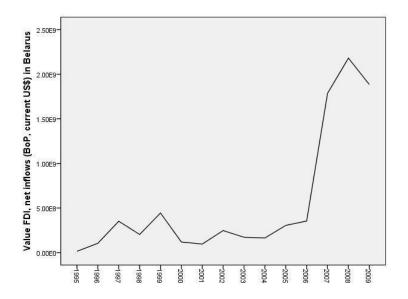


Figure 4.13: FDI in Belarus, 1995-2009

#### 4.3.2 HDI in Belarus

According to Корнейко (2011)<sup>59</sup> Belarus position is high in human development indicators. It is also stated that according to the level of education, which is one of the key aspects in measuring human development in a society, Belarus rank has the same level of education as Latvia and outpaces some European countries, such as Switzerland, Czech, Germany, Poland, Bulgaria, Russia, etc. Education rate includes adults' literacy and those who are involved in the primary, secondary and higher education. The level of education in Belarus increases all the time. Population census in 2009 demonstrated that 90% of citizens had achieved a degree in higher education. Корнейко (2010) says that

<sup>59</sup> Н. Корнейко (2011) "Место республики Буларусь в системе рейтингов оценки уровня и качества жизни населения", Тезисы докладов Межвузовской научной конференции студентов и аспирантов, р. 16

the HDI rank is low due to low life expectancy level. The possible reason for that is the pollution in the country, which negatively affects the health of the local population.

Головач et al. (2010)<sup>60</sup> also state that the level of life satisfaction within the population is quite high in Belarus. Головач also mentions that according to European Bank for Reconstruction and Development, 66% of country's citizens are satisfied with their level of life, only 13% responded that they are not satisfied with life level in 2006. Such good results in life satisfaction are directly related to significant social transfers and governmental subsidies. Country has low prices on house expenditures, such as electricity and water in comparison to the neighbors, like Russia, Ukraine or Kazakhstan, and such payments are only the 4% of the populations' income. The governmental expenditures for the healthcare are about 5.8% of GDP and for the education are 4.5%, which are higher than Russia, Ukraine and Kazakhstan.

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<sup>&</sup>lt;sup>60</sup> Головач, loc.cit.

## 4.3.3 Belarus in HDI rank

The trend in HDI rank during 1995-1998 significantly increases, then declines and reaches the position of 53 in the years 2001-2003. Since 2004 it recovers again and shows positive upward trend. The period ends at the position 68 in 2009.

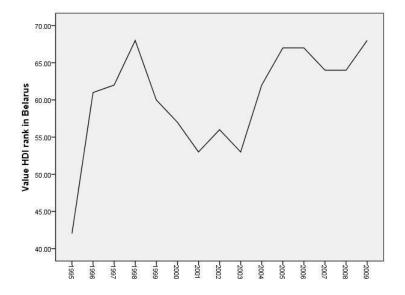


Figure 4.14: Belarus in HDI rank, 1995-2009

## 4.3.4 School enrollment in Belarus

The tertiary school enrollment in Belarus has a very positive upward trend, reflecting significant improvements in higher education.

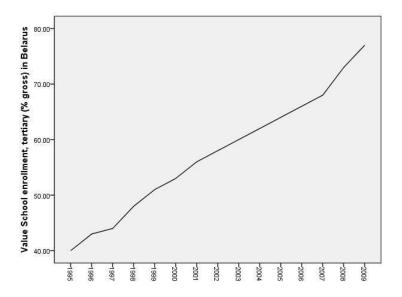


Figure 4.15: School enrollment in Belarus, 1995-2009

## **4.3.5 GNI in Belarus**

GNI per capita in Belarus also demonstrates very positive upward trend, without any fluctuations. Period starts at \$3,450 in 1995 and ends at \$13,090.

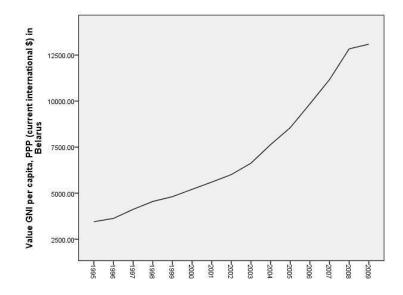


Figure 4.16: GNI in Belarus, 1995-2009

# 4.3.6 Life expectancy in Belarus

Life expectancy in Belarus demonstrates fluctuating trend in the period. Years of life expectancy in the country stays within 68-70, improved recently.

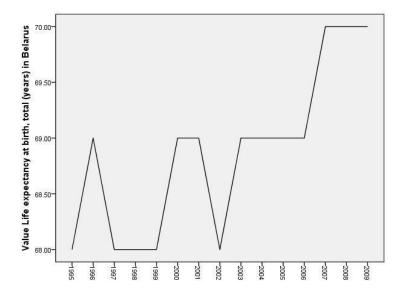


Figure 4.17: Life expectancy in Belarus, 1995-2009

#### 4.3.7 Health expenditure in Belarus

Health expenditures in Belarus also demonstrates positive upward trend that starts at \$71 in 1995 and continues increasing, reaching the peak in 2008.

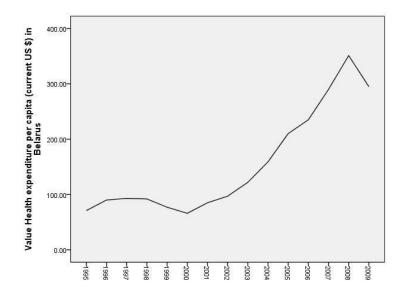


Figure 4.18: Health expenditure in Belarus, 1995-2009

# 4.4 Georgia

### 4.4.1 FDI in Georgia

Georgia has a favorable location. It is situated between Europe and Asia, which provides a lot of opportunities for investors as they reach to various regions in CIS. Georgia supplies attracting conditions for the foreign investors, such as low tariffs, low taxes, etc. Georgia has well-organized alliances with its major foreign partners according to terms comfortable for both parties, like EU, U.S., Turkey, members of CIS region.

Georgia currently develops its infrastructure, such as roads, railroads, sea ports and airports by easing customs regulations. Georgia is recognized by its comfortable tax system.

Labor code of Georgia allows employers and employees to have better conditions and lower expenditures what significantly attracts foreign investors.

FDI inflows into Georgia are mainly coming from such countries as US, Turkey, Netherlands, United Kingdom, Azerbaijan, United Arab Emirates and others. In 2010 the biggest part of investments have been attracted into extractive and processing industries, transport and telecommunication, real estate, construction, financial sector. The share of FDI in GDP is 7% in 2010, which increased to 1% in comparison with the previous year <sup>61</sup>.

FDI starts at \$242,500,000 in 1997, during the period 1997-2005 it demonstrates a weak increase, but more volatility. Since 2005 till 2007 it significantly increases, reaches its peak at \$1,750,242,588, but afterward it declines till the end of the period by \$658,400,606.

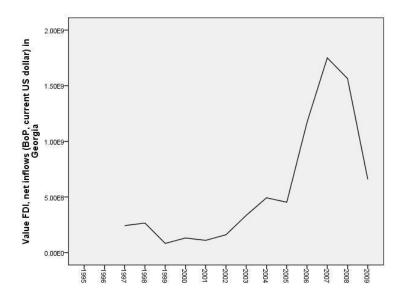


Figure 4.19: FDI in Georgia, 1995-2009

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<sup>&</sup>lt;sup>61</sup> "Прямые иностранные инвестиции в Грузию в 2010 году составили 814 млн. долларов" (accessed December 2, 2011); available from <a href="http://www.apsny.ge/2011/eco/1314237644.php">http://www.apsny.ge/2011/eco/1314237644.php</a>

#### 4.4.2 HDI in Georgia

Georgia Human Development Report 2008<sup>62</sup> shows that within the last few years, Georgia had implemented numerous internal reforms and changes and as a result, lots of improvements in the population's quality of life observed, corruption has been reduced, which significantly affected the level of education and healthcare. Individuals became more equal and their possibilities to choose expanded.

In 2004, financial crisis in the country was about to ruin the country. Government could not even pay the minimal governmental pensions of \$6.50 per month. Many regions of the country experienced problems in accessing electricity and water, many industries were not able to continue their activities effectively. People did not have finances to pay taxes, government could not support healthcare system, education and security of the population. As a result, life quality of the population have been reduced significantly.

In 1990s, education sector in the country had critical problems due to the lack of finance. Georgian Human Development Report (2008) states that government's financing of education reduced from 7% of GDP in 1991 to 1% in 1994. Reform and overall changes in education system intended raising educational level and increasing salaries and qualifications of the teaching stuff, controlling corruption.

After the collapse of Soviet Union, the Government of Georgia could not financially support its healthcare system. Country faced outmoded equipment, reduced qualification of medical staff and other problems.

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<sup>&</sup>lt;sup>62</sup> Georgia Human Development Report, "The reforms and beyond", UNDP, 2008

During the period 2003-2007 financing of healthcare increased by 130%. Extensive reforms have taken place, which positively affected human development indicators.

### 4.4.3 Georgia in HDI rank

Georgia's rank in HDI shows upward trend reaching the peak during the period 1995-1998. Then it declines to the 70<sup>th</sup> position in 2000, which is the best position of Georgia in HDI rank during the period. Since 2000 trend increases again and reaches 100 in 2005, but it is declining towards the end of the period.

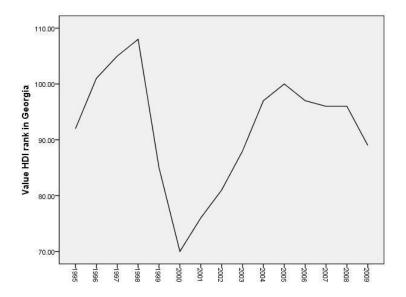


Figure 4.20: Georgia in HDI rank, 1995-2009

## 4.4.4 School enrollment in Georgia

School enrollment in Georgia demonstrates a volatile trend during 1995-2006, afterwards it significantly decreases and period ends at 26% of tertiary school enrollment.

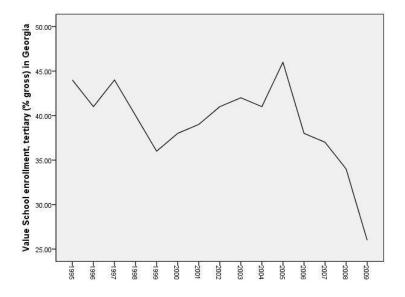


Figure 4.21: School enrollment in Georgia, 1995-2009

# 4.4.5 GNI in Georgia

GNI per capita in Georgia shows positive upward trend during the period, which declines a little at the end of the period.

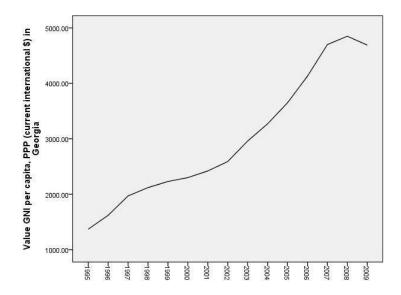


Figure 4.22: GNI in Georgia, 1995-2009

# 4.4.6 Life expectancy in Georgia

Life expectancy at birth increased in Georgia during 1995-2010 and changed from 70 to 73 years, which is the highest average result out of CIS countries in the present study.

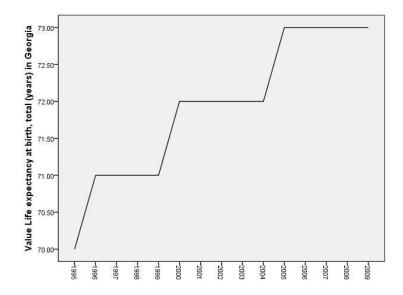


Figure 4.23: Life expectancy in Georgia, 1995-2009

### 4.4.7 Health expenditure in Georgia

Health expenditures in Georgia shows positively increasing trend. Period starts at \$29 in 1995 and ends at \$256 in 2009.

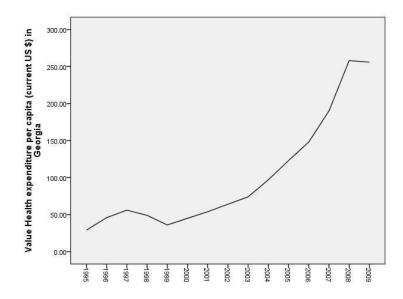


Figure 4.24: Health expenditures in Georgia, 1995-2009

### 4.5 Kazakhstan

#### 4.5.1 FDI in Kazakhstan

Kazakhstan is focused on attracting foreign investments into the country and designs policies to create favorable conditions and climate to stimulate FDI activities in the country.

Among CIS region, Kazakhstan is one of the most successful FDI recipients. Investments are mainly inflowing from such countries as Netherlands, United States, United Kingdom, France and Canada.

The major part of investments flow into energy sector, especially into the industry of oil extracting industries. According to IMF report (2011)<sup>63</sup>, Kazakhstan has one of the

<sup>63</sup> Ana Lucia Coronel, Dmitriy Rozhkov, Ali Al-Eyd, Narayanan Raman (2011) "Republic of Kazakhstan: Selected Issues", IMF Country Report No. 11/151

world's largest proven reserves, which is accounted as three percent of the world reserves and Kazakhstan is in the list of 20 largest oil producers. Therefore, FDI inflows into the oil extracting industry are the most popular. Kazakhstan has about 160 fields of oil and gas, 100 coal deposits. Kazakhstan is one of the world's huge metal producers. Nevertheless, nowadays government of Kazakhstan is aimed at stimulating more international collaboration in the non-extractive economic sectors. In 2003, "Innovative Industrial Development Strategy till 2015" has been adopted with the focus on stimulating investments into areas that are not so much attractive for the foreign investors.

Another attractive aspect of the Kazakhstan is that it is located at the center of Eurasian continent, consequently access into the country allows closer relation with other countries in the region.

There is excellent business climate for investors in Kazakhstan, such as lowered trade barriers, simplified business processes, favorable customs and tax regulations.

Kazakhstan guarantees security of foreign investors and foreign and local investors have the same conditions in doing investment activities in the country. Legislation comprises various guarantees of minimization investment risks in the country.

By looking at the trend we may conclude that Kazakhstan has a positive upward trend in the analyzed period. FDI trend is volatile during 1995-2005 and increases significantly afterward, reaches its peak in 2008 at \$ 14,321,757,110.

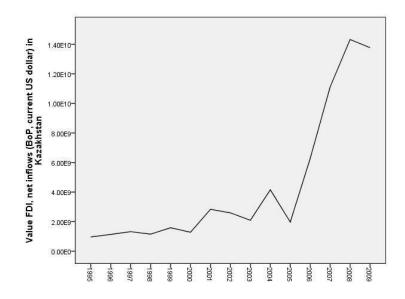


Figure 4.25: FDI in Kazakhstan, 1995-2009

#### 4.5.2 HDI in Kazakhstan

According to the UNDP official website<sup>64</sup>, Kazakhstan is a good example of a big country where human development indicators vary across the country, which means that in different parts of Kazakhstan, there are much different scores on Human Development, like the differences between urban and rural areas.

Life expectancy in Kazakhstan is considered as low especially in comparison to OECD countries.

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<sup>&</sup>lt;sup>64</sup> Индикаторы развития, "Интегральные показатели человеческого развития" (accessed December 2, 2011); available from <a href="http://www.undp.kz/pages/31.jsp">http://www.undp.kz/pages/31.jsp</a>

Ursulenko (2010)<sup>65</sup> points out that the level of poverty in a country been reduced during the period 1998-2005, but this problem still remains actual for the majority of regions. The lowest poverty is accounted in Astana and Karaganda.

According to World Bank data, unemployment in Kazakhstan has been reduced within last years. It is noted by Ursulenko that regions with oil-production related activities do not demonstrate improvements in employment or poverty rates.

The literacy level in the country is significantly high, since primary education in Kazakstan is obligatory and available for low-income citizens as it is free of charge. However, the education system is corrupted and results in numerous neglected aspects and significantly reduces the overall quality of education.

After the collapse of the Soviet Union and during the transition period government has been financing health care system insignificantly, which resulted in insufficient medical supplies, employees' salaries, lack of equipment renovation. More stable economic conditions in the country allowed serious continuous improvements later created better financing and more opportunities for the populations' healthcare.

By looking at the general picture of human development in Kazakhstan it may be concluded that country has improved its position in HDI rank, but within last years of the period, it does not show much changes.

#### 4.5.3 Kazakhstan in HDI rank

In HDI rank, Kazakhstan demonstrates an increase at the beginning of period 1995-1998 and the highest position was held in 1998. Afterwards' Kazakhstan's position

<sup>65</sup> Kseniia Ursulenko (2010) "Regional development in Kazakhstan", OSTEUROPA-INSTITUT EGENSBURG, 2010

improves by fell to 73<sup>rd</sup> in 2000 and shows volatile but stable trend till the end of the period.

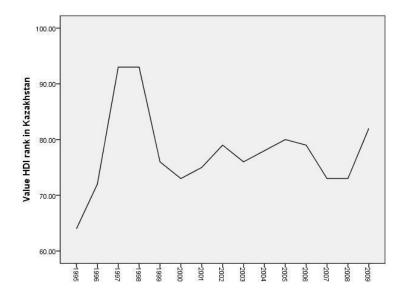


Figure 4.26: Kazakhstan in HDI rank, 1995-2009

## 4.5.4 School enrollment in Kazakhstan

Tertiary School enrollment shows upward trend during the period, which starts at 35 percent in 1995 and ends at 41 percent in 2009.

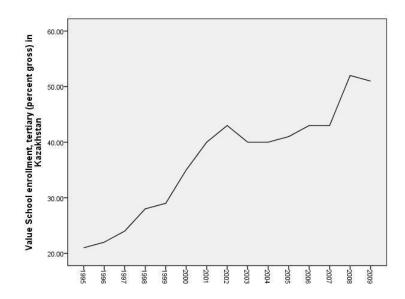


Figure 4.27: School enrollment in Kazakhstan, 1995-2009

### 4.5.5 GNI in Kazakhstan

GNI per capita in Kazakhstan has visibly increasing trend during the period.

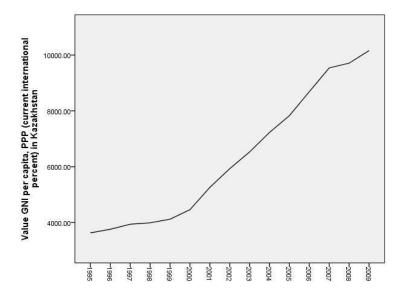


Figure 4.28: GNI in Kazakhstan, 1995-2009

# 4.5.6 Life expectancy in Kazakhstan

Life expectancy in Kazakhstan was 65 and 64 years at the beginning of the period, but increased to 68 years by the end of period.

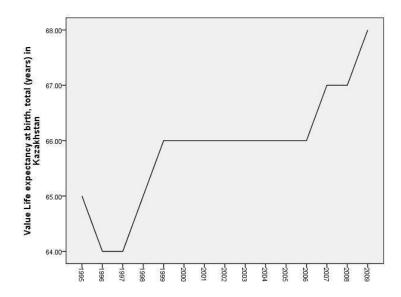


Figure 4.29: Life expectancy in Kazakhstan, 1995-2009

#### 4.5.7 Health expenditure in Kazakhstan

Health expenditures per capita shows an upward trend, it starts at \$48 and ends at \$330.

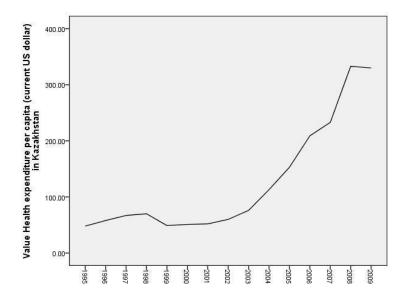


Figure 4.30: Health expenditure in Kazakhstan, 1995-2009

## 4.6 Kyrgyzstan

### 4.6.1 FDI in Kyrgyzstan

According to Kyrgyz Ministry of Economy<sup>66</sup>, FDI is considered as one of the key elements in achieving economic prosperity and developing good partnership relations with other countries. Today, one of the main economic policy in the country is arranging appropriate investment atmosphere, which includes improvements in the tax system, adequate economic regulations in the country, simplification of customs procedures, legal security, provision of overall stability in the country, etc. Foreign investors in Kyrgyzstan obtain an opportunity to freely invest in any economic sector of the country, to privatize property, to operate in the stock market.

<sup>66</sup> Ministry of Economy and Antimonopoly Policy (accessed December 2, 2011); available from <a href="http://mert.kg/">http://mert.kg/</a>

Абдурашитов (2011)<sup>67</sup> argues that investment climate in Kyrgyzstan is still weak which may be related to reasons such as presence of corruption, threats of unstable political situation and unreliable legal system.

The level of competitiveness in Kyrgyzstan is very low according to ranking of the World Economic Forum and this indicator depends on reasons mentioned above, such as political instability, corruption, undesirable tax regulations. Абдурашитов (2011) also points out how corruption destroys the system, prevents effectiveness of any approach to change. Additionally, it is mentioned that country does not have much natural resources and therefore it should focus on manufacturing, which will be highly profitable as labor force is very cheap in Kyrgyzstan.

Медетбекова (2010)<sup>68</sup> names active foreign investors in Kyrgyzstan as Germany, Great Britain, Canada, China, Cyprus, United States, Turkey, Kazakhstan, Hungary and Russia, which accounted around 90% of FDI inflows into Kyrgyzstan in 2007. Fields obtaining the major part of FDI in Kyrgyzstan are: manufacturing industry, financial activities, activities related to real asset, mineral resources industry and trade. Медетбекова (2010) underlines that since those industries are still not much developed, the need of attracting more foreign investments is evident.

Kyrgyz Ministry of Economy<sup>69</sup> outlines government medium-term plan of attracting and supporting FDI. Country's strategy of economic development dictates that attracting

<sup>&</sup>lt;sup>67</sup> А. Абдурашитов (2011) "Ситуационный анализ инвестиционного климата в Кыргызской Республике", Вестник КРСУ, No. 5

 $<sup>^{68}</sup>$  А.Э. Медетбекова (2010) "Иностранные инвестиции в экономику Кыргызской Республики", Вестник КРСУ, No. 7

<sup>&</sup>lt;sup>69</sup> Ministry of Economy and Antimonopoly Policy, loc.cit

FDI is the very first and main aspect for economic development and needs more precise attention.

FDI in Kyrgyzstan during 1995 – 2009 demonstrates a volatile trend that has turned into an upward trend since 2003 till 2008 by reaching its peak, and noticeable decrease by \$189,377,400 in 2009. In the year of 2000 FDI inflows in Kyrgyzstan is negative, \$-2,360,125. Which demonstrates that disinvestment had taken place – more FDI leaving the country than coming in.

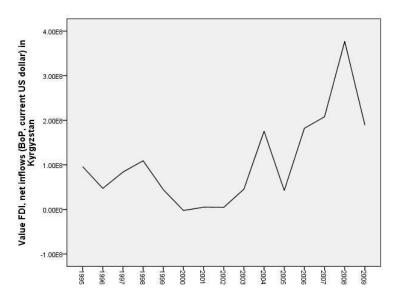


Figure 4.31: FDI in Kyrgyzstan, 1995-2009

#### 4.6.2 HDI in Kyrgyzstan

Kyrgyzstan in Human Development rankings demonstrates a worsening situation (during the period 1995-2009). According to Sharma et al. (2006)<sup>70</sup>, Kyrgyzstan, as other countries in the region, experienced crisis during the transition period and this crisis is related to the slow economic growth in private sector, consequently unemployment dramatically increased. Government faced decline in the national income

<sup>70</sup> Kishor Sharma, Oliver Morrissey (2006) "Trade, Growth and inequality in the era of globalization", Routledge, p.137, 145

and had to implement budget-cutting policy, which obviously touched financing of education and health in the country. All these notably affected the quality of life in the country and country's position in the world HDI rankings. Sharma argues to improve the life quality of individuals in Kyrgyzstan, private sector must be developed through enhancement of the business climate, increasing employment, national income of the country and improve the budget, allowing country to increase financing of the education and healthcare.

IMF Country Report (2007)<sup>71</sup> presents problems related to poverty, reasons and ways of eliminating them.

The paper points out that the problem in Kyrgyz Republic is the weak regulation and control of the education system, lack of financial sources, and regional difference between conditions in the cities and villages (urban vs. rural).

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<sup>&</sup>lt;sup>71</sup> International Monetary Fund, "Kyrgyz Republic: Poverty Reduction Strategy Paper – Country Development Strategy (2007-2010)", IMF Country Report No. 07/193, 2007

## 4.6.3 Kyrgyzstan in HDI rank

HDI in Kyrgyzstan was better at the beginning of the period. Such a shift towards worsening position of HDI of Kyrgyzstan may be related to the changing character of HDI rankings measurement, number of countries added to the rank as explained earlier.

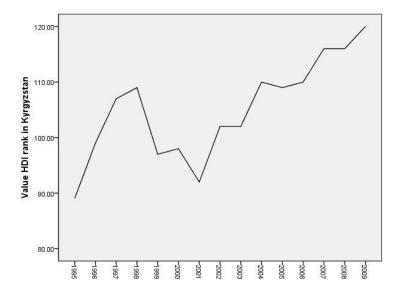


Figure 4.32: Kyrgyzstan in HDI rank, 1995-2009

### 4.6.4 School enrollment in Kyrgyzstan

School enrollment in Kyrgyzstan has an upward trend in the period, which means that there is the progress in educational sector in the country.

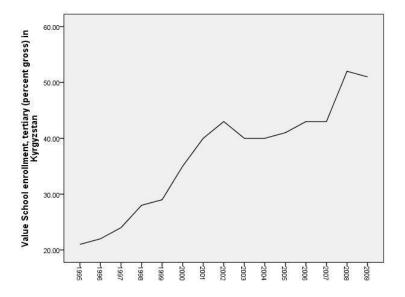


Figure 4.33: School enrollment in Kyrgyzstan, 1995-2009

### 4.6.5 GNI in Kyrgyzstan

GNI in Kyrgyzstan also shows a positive upward trend, which proves that country has continuous yearly improvements.

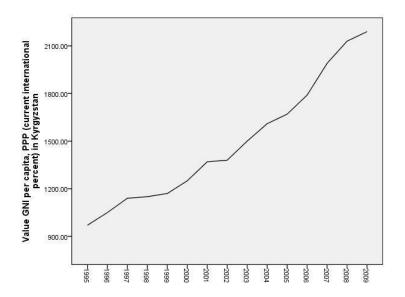


Figure 4.34: GNI in Kyrgyzstan, 1995-2009

## 4.6.6 Life expectancy in Kyrgyzstan

Life expectancy in Kyrgyzstan increased from 66 years to 69 years during the period 1995-2009.

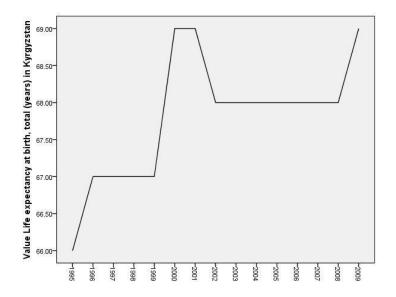


Figure 4.35: Life expectancy in Kyrgyzstan, 1995-2009

## 4.6.7 Health expenditure in Kyrgyzstan

At the beginning of the period, health expenditures in Kyrgyzstan declines from \$22 in 1995 to \$13 in 2000, afterwards trend recovers and reaches \$57 in 2009.

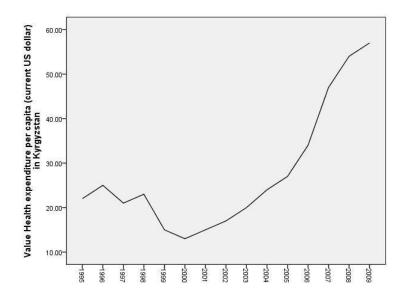


Figure 4.36: Health expenditure in Kyrgyzstan, 1995-2009

#### 4.7 Moldova

#### 4.7.1 FDI in Moldova

Today Moldova may be considered as one of the poorest countries across Europe. Moldova's economy is mainly supported by agriculture and food industries. According to Чентуков (2007)<sup>72</sup>, today Moldova imports the main part of its energy need and labor migration is a serious problem in the country's economy. Political instability and high corruption in the country negatively affect foreign investors' decisions.

By analyzing FDI inflows into Moldova during the period, it becomes clear that country's receipts of foreign investments has increased, which reflects improvements in the investment climate. Nevertheless, FDI inflows in Moldova continued only till 2008, afterwards FDI significantly decreases.

Popa and Timofti (2010)<sup>73</sup> state that during the period 2006-2008 the biggest part of foreign investments comes into energy sector by 33%, manufacturing industry by 25%, trade sector by 17%. Also, Moldova's financial, trade and finally food and agricultural companies receive the largest foreign investments. In financial sector companies like Eximbank Gruppo Veneto Banca, Unibank, Mobiasbanca GSG; in trade are Metro Cash and Carry, Cviza-M, VK M Trade and Vistarcom; in food and agriculture are Bostavan Winery, Acorex Wine Holding, Wine International Project are the major investors.

Success in attracting foreign investments is linked by attempts of Moldova to accommodate to the European regulations. Today Moldova implements number of

<sup>&</sup>lt;sup>72</sup> Чентуков Ю.А. (2007) "Потенциал для прямых иностранных инвестиций в страны ГУАМ"

<sup>&</sup>lt;sup>73</sup> Daniela Popa, Elena Timofti, "Strategies and necessary actions for favorable creation of an investment climate in republic of Moldova", Scientific papers, series "Management, economic engineering in agriculture and rural development", Volume 10 (3), 2010, p.269

policies to create a more suitable country for foreign investors' activities through stabilizing political and economic situation, revising tax obligations, foreign investors' rights protection, business security and profitability guarantee.

According to Сухович (2007)<sup>74</sup> Moldova adopted "Investment strategies 2000-2005", "Strategy of economic development and decreasing poverty level", "Strategy of supporting and developing small and medium enterprises for the period 2006-2008", "Strategy of financial sector development for 2006-2010" to attract FDI.

Moldova's advantages for attracting FDI are mainly in its geographical location, its natural resources, especially fertile lands; plus labor force is cheap, educated and qualified, but unfortunately emigrates to other countries and that is a problem.

The following constraints are existing in the country for the SMEs: access to finance by 19.5%, inadequately educated workforce by 15.67%, access to land by 10.41%, corruption by 10.11%, tax rates by 9.02%, practices informal sector by 7.14, political instability by 5.9%, electricity by 4.55%, licenses and permits by 4.49%, tax administration by 4.48%.

Moldova has major part of FDI inflows from Russia, United States, Spain, Holland, Switzerland, Germany, Romania, France, Great Britain.<sup>75</sup>

в свете Европейской интеграции"

<sup>&</sup>lt;sup>74</sup> Анна Сухович (2007) "Роль прямых иностранных инвестиций в экономике республики Молдова в свете Европейской интеграции"

<sup>&</sup>lt;sup>75</sup> OECD Publishing, "Competitiveness and private sector development: Republic of Moldova 2011. Fostering SME Development", 2011, p. 7, 25, 37, 38

FDI had an increasing but volatile trend during the period 1995-2004, then FDI inflows significantly increased by the year 2008 and suddenly fell by the end of the period.

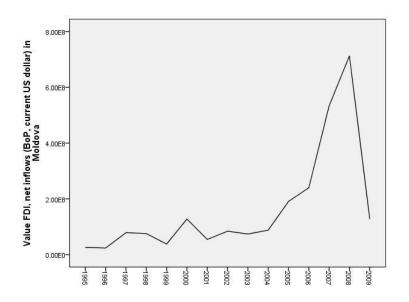


Figure 4.37: FDI in Moldova, 1995-2009

#### 4.7.2 HDI in Moldova

Moldova experienced weak economic developments during the period which paralleled the HDI indicators. Moldova places higher and higher positions in HDI during the period, which reflects worsening situation with human development index in the country. There are number of reasons. For example, as Дикусар (2005)<sup>76</sup> mentions in his paper the reasons may be political instability, poverty and others. There are also significant developments in science and education in the society for further improvements of human development scores of the country. Burbiene (2003)<sup>77</sup> states

<sup>76</sup> А. И. Дикусар (1998) "Место Молдовы в современном мире", Мысль, No.4

<sup>77</sup> Burbiene (2003) "Economic development of Moldova: challenges and prospects", Working papers, Council of Europe: Parliamentary Assembly

that high unemployment rate and low productivity in Moldova are significantly affecting human development. Also it is stated, that in 2003 "about 90% of the population live on less than \$1 per day." At the same time prices for goods were rising, "public spending on education, health and social security dropped from 26.9% in 1997 to 17.6% in 2000, while public spending on health fell from 15.8% to 11%."

Before the transition period, Moldova had a good educational system, allowing everyone to have an access to education. During the transition period, different groups of people in the society lost their chance to have public education. Thus, today's policies are directed on eliminating obstacles in achieving education in the country. Nevertheless, as mentioned in the "The second millennium development goals report. Republic of Moldova (2010)"<sup>78</sup>, the rate of literacy in Moldova is very high and country is ranked 17<sup>th</sup> out of 177 countries."

Moldova has lower than average score in health expenditures across the CIS region and is in the list of countries having the lowest health expenditures in the South-East Europe<sup>79</sup>.

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<sup>&</sup>lt;sup>78</sup> United Nations Moldova, "The second Millennium development goals report republic of Moldova", 2010

<sup>&</sup>lt;sup>79</sup> World Health Organization. Regional Office for Europe, Council of Europe Development Bank,

<sup>&</sup>quot;Health and economic development in south-eastern Europe", p.92, 2006

## 4.7.3 Moldova in HDI rank

HDI rank of Moldova during the period 1995-2009 evidently shows increasing path, which means that position of country worsened in the world ranking. Country's position increased from 81 to 117.

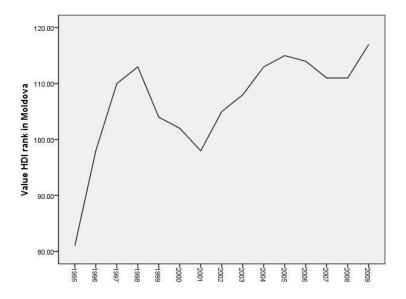


Figure 4.38: Moldova in HDI rank, 1995-2009

### 4.7.4 School enrollment in Moldova

School enrollment of the country demonstrates increasing trend it started at 30 percent in 1995 and after reach the peak of 41% in 2007, ends at 38% in 2009.

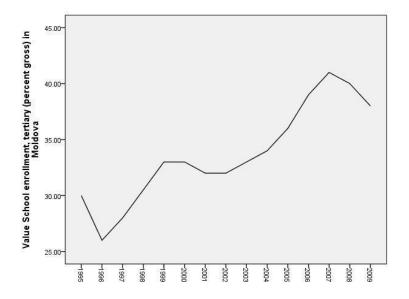


Figure 4.39: School enrollment in Moldova, 1995-2009

#### 4.7.5 GNI in Moldova

GNI per capita in Moldova has an increasing trend, which has a volatile pattern. Period starts at \$1,480 and finishes at \$3,020 in 2009.

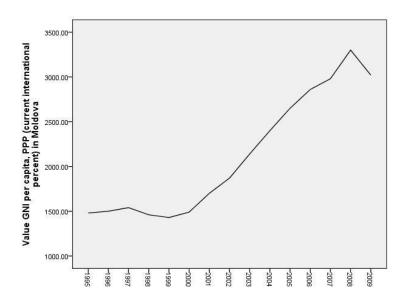


Figure 4.40: GNI in Moldova, 1995-2009

## 4.7.6 Life expectancy in Moldova

Life expectancy increased from 67 years to 69 years during the period.

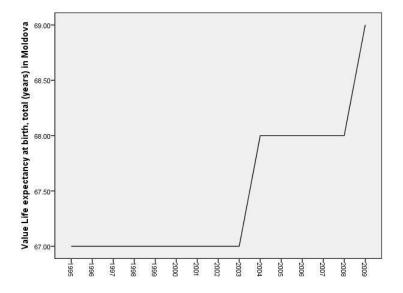


Figure 4.41: Life expectancy in Moldova, 1995-2009

## 4.7.7 Health expenditure in Moldova

Health expenditure generally portrays an increasing trend in the period and only at the beginning of the period a decline took place. Health expenditures of the period increased from \$28 in 1995 to \$181 per capita in 2009.

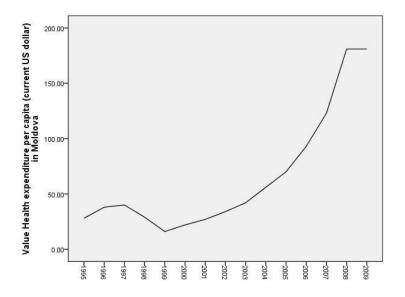


Figure 4.42: Health expenditure in Moldova, 1995-2009

#### 4.8 Russia

#### 4.8.1 FDI in Russia

There has been huge FDI inflows into Russia. Иванов et al. (2009)<sup>80</sup> shows that in the period 1995-1997 the volume of FDI into the country increased by 14 times. During the period 1995-1997 finance, credits, insurance, market trade business areas were attracting FDI. In the following years, investments increased into such industries as agriculture, mining, food, textile, trade, energy production, construction. By the year 2007 foreign investments into country were focused more on manufacturing activities, wholesale and retail commerce, auto equipment production and service, mining operations, energy complex, metal manufacture, fish industry and others.

Russian government is following several investment policies, which are generally directed on elimination of discrimination between local and foreign investors; easy transfer of financial resources; protection of foreign investor's financial investments and businesses. Policies were stimulating investors to continue investments: more legal rights, weakening controls, guaranteeing risk minimization for investors.

Кузнецов<sup>81</sup> states that according to Russian and European statistics, Russia significantly attracts investments from European Union members like: Cyprus, Netherlands, Germany, Great Britain and France. United States is one of the major investors especially in fuel-energy complex. Other active investors into Russia are China and Japan in commerce, automobile industry and others. Russia is one of the countries with favorable investment climate for foreign transnational companies and is very

<sup>&</sup>lt;sup>80</sup> В.А. Иванов, Т.И. Головастова, А.М. Дыбов (2009) "Иностранные инвестиции", Курс лекций

<sup>81</sup> Алексей Кузнецов (200) "Капиталовложения из ЕС в России: значимые перемены"

attractive for foreign investors. Nevertheless, Russia, which is the huge country, owning many natural resources, its potential in FDI attraction is not fully exploited. Even though country is having the biggest amount of foreign investments across the region, these inflows are not sufficient for the needs of country's economy<sup>82</sup>.

Investments in the country are not equally distributed among regions and more investments are done in developed urban areas. As a result, less developed regions of Russia do not get required portion of investments. The reason for such unequal situation is that foreign investors are mainly interested in directing their financial resources into areas that are profitable and secure. In spite of rich natural resources in less developed areas of the country, their poor investment climate is scaring foreign investors.

The main constraints for FDI in Russia, are the following: high taxes, inappropriate tax control, not enough educated labor force, corruption, criminality, weak functioning of judicial system, no availability of land, difficulties in license and various allowances, poor transport facilities, restricting customs and foreign trade regulations and labor regulations. Russian Government's goals today are to improve regulation procedures and taxes regulations, reduce industry barriers, improve migration procedures, revise privatization conditions, ease access to infrastructure, improve law enforcement, legal and security systems<sup>83</sup>.

According to the World Bank, Russia has the highest FDI inflows across the CIS region and its trend demonstrates that during 1995-2002 FDI inflows into Russia were

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<sup>&</sup>lt;sup>82</sup> Wikipedia – the free encyclopedia (accessed December 5, 2011), available from http://www.wikipedia.org/

<sup>&</sup>lt;sup>83</sup> Ministry of economic development of the Russian Federation (accessed December 5, 2011); available from <a href="http://www.economy.gov.ru">http://www.economy.gov.ru</a>

stable and since 2003 till 2008 there was a huge increase in FDI inflows. Surprisingly, period ends with a fall to \$36,499,625,000 in 2009.

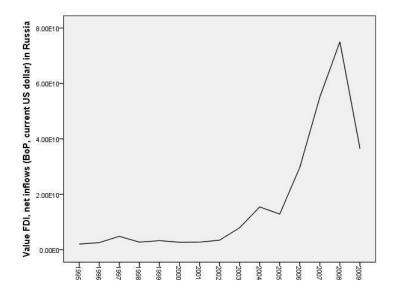


Figure 4.43: FDI in Russia, 1995-2009

#### 4.8.2 HDI in Russia

The most actual problem in all Post-Soviet Republics is regional inequality and especially in Russia it is a very deep problem. The highest HDI is expected to be seen in regions possessing rich energy sources and in financial centers. According to HypeeB (2009)<sup>84</sup>, only 26% of population in Russia live in districts having HDI level higher than average, 68% of the population live in regions having HDI lower than the average and 6% have results significantly different of average results of HDI in Russia. HypeeB states that Russia stands in the list of countries having the lowest average life expectancy years across the CIS and the lowest when comparing to the world highly developed countries, such as United States, United Kingdom, Germany, Sweden, Japan. Author also mentions that the problem of low life expectancy is a very serious one and cannot

<sup>84</sup> Р.М. Нуреев (2009) "Человеческий капитал и проблемы его развития в современной России", Obshestvennye nauki I sovremennost'

be solved quickly. During the 1995-2009 Russia had the highest average health expenditures per capita in comparison to other CIS countries, it is still low when compared with highly developed countries of the world.

Similar situation is observed with tertiary education. Russia has the highest average percentage of tertiary school enrollment in CIS region, but its results are much lower when compared with highly developed countries in the world. Although education in Russia is highest in CIS, today the country has many private universities (during the Soviet times, universities were state-run). Private universities offer cheaper education and easy admission and education requirements, which increases the demand for this type of education, but decreases the academic quality in Russia.

GNI per capita in Russia is the highest in CIS region, but it should be clear that since regional inequality of the country is high, there is also an inequality in the distribution of income is unequal throughout the region. Today, there are differences in payments in various fields, sectors and regions of the country. Apparently, highest incomes are earned in urban heavy industry sectors, finance etc. Lowest salary rates are in rural areas, with population mainly involved in light industry.

### 4.8.3 Russia in HDI rank

HDI rank of Russia in the period 1995-2009 is quite low, which means that according to HDI, Russia is successful. Nevertheless, country's position increased/worsened during the period as period started from 52 in 1995<sup>th</sup> year and finishes at position of 71 in 2009.

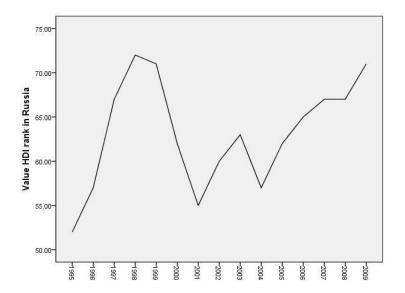


Figure 4.44: Russia in HDI rank, 1995-2009

### 4.8.4 School enrollment in Russia

Tertiary School enrollment in Russia has an accurate upward path, starting at 43% in 1995 and period finishes at 77%.

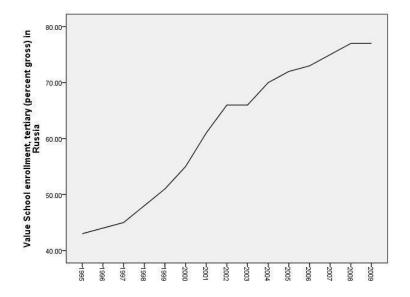


Figure 4.45: School enrollment in Russia, 1995-2009

### 4.8.5 GNI in Russia

GNI per capita demonstrates a stable increase during the period reflected in upward trend, with small decrease towards the end.

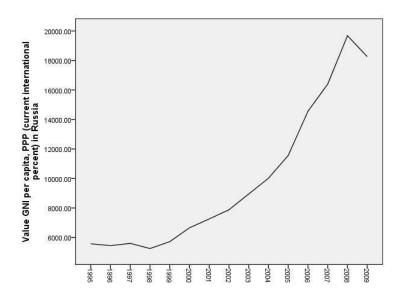


Figure 4.46: GNI in Russia, 1995-2009

### 4.8.6 Life expectancy in Russia

Life expectancy increased during the period, which started at 65 years in 1995, reached 67 in 1997-1998, then decreased to 65 years, then increased again and period ends at 69 years in 2009.

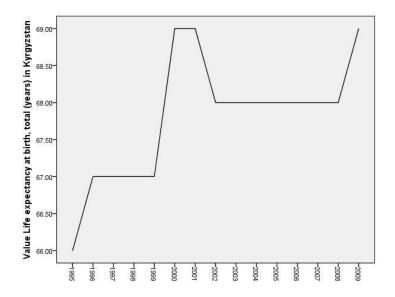


Figure 4.47: Life expectancy in Russia, 1995-2009

### 4.8.7 Health expenditure in Russia

Health expenditure at the beginning of the period shows an unclear trend, that starts at increase up to \$147 in 1996, then decreases up to \$77 in 1999. In the following years trend is upward till the end of the period. Period finishes at \$568 in 2008 and \$475 in 2009.

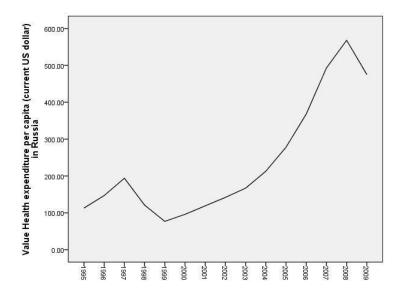


Figure 4.48: Health expenditure in Russia, 1995-2009

## 4.9 Tajikistan

### 4.9.1 FDI in Tajikistan

Tajikistan has the lowest FDI in the region. Across all countries in Central Asia, Tajikistan experienced the hardest transition period, civil war, isolation in the world trade, lack of resources – all resulted in bad business and investment climate in the country (UN publications, 2003)<sup>85</sup>.

Today Tajikistan does not attract foreign investors and there are many reasons for that. In general, investment climate is very poor, because of weakly developed

<sup>85</sup> United Nations. Economic and Social Commission for Asia and the Pacific, "Foreign direct investment in Central Asian and Caucasian economies", pp. 178-180, 2003

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infrastructure, non-supportive government, centralized control of economies, high corruption, poorly developed human capital, lots of constraints in getting allowances for the business, high taxes, customs barriers, insufficient legal system etc.

As in most corrupted countries, Tajikistan has the problem of normative-legal documents that are generally not clearly stated and each sentence may be differently interpreted. Frequently, legal documents do not go through the officially required procedures and registrations. Avoiding rules is possible in highly corrupted country and which creates injustice and discrimination. Foreign investors face the problem of getting necessary information, because internet sources are not functioning.

Tajikistan's external debt is very high and been mainly shaped during the 1990s<sup>86</sup>.

According to Jonson (2006)<sup>87</sup> Tajikistan's largest foreign investors in 2000s are Russia, United Kingdom, United States, Cyprus, Canada, South Korea, Germany, Switzerland, Italy and Hungary. Natural sources attract foreign investors and there are water resources with the potential to develop hydro-energy industry, export electricity, aluminum and cotton production.

FDI inflows into Tajikistan during the period 1995-2009 demonstrates that the situation with foreign investments into country improved by the end of the period. Period starts with \$10,000,000 in 1995, then slowly increases and after reaching \$29,940,400 in 1998, decreases again by \$6,702,900 in 1999. In the manner of ups and downs FDI inflow trend reaches its peak of \$375,787,400 in 2008 and period ends with sharp decrease to \$15,819,400 in 2009.

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<sup>&</sup>lt;sup>86</sup> United Nations, ibid

<sup>&</sup>lt;sup>87</sup> Lena Jonson (2006) "Tajikistan in the new Central Asia", p.71

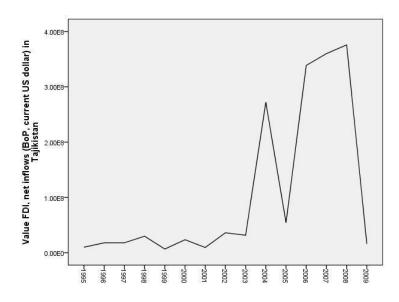


Figure 4.49: FDI in Tajikistan, 1995-2009

### 4.9.2 HDI in Tajikistan

In 2009 Tajikistan's HDI position was 127, which is the worst in CIS region in that year. Tajikistan has good scores in Life expectancy and School enrollment. Nevertheless, unfortunately, scores on incomes and especially GNI demonstrates a bad position. Health expenditures in Tajikistan are also the lowest ones in CIS according to the average numbers though the period. Thus, today, most challenging goals of the country is to improve educational condition, achieve better quality of education and increase amount of population involved in school enrollment. "In terms of national income and the HDI, Tajikistan was one of the poorest countries in the world." Country's major problem is the big external debt. Because of debt payments government was not able to improve the economy of the country and especially to increase living standards of the population.

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<sup>&</sup>lt;sup>88</sup> United Nations. Committee on Contributions, "Report of the Committee on Contributions", p. 24, 2008

## 4.9.3 Tajikistan in HDI rank

Position of Tajikistan in the World Rank has an upward trend, which means that country's overall human development status worsened during the period. Country's position at the beginning of the period been 103, country's position finishes at 127 in 2009.

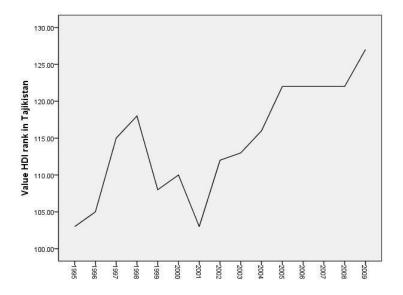


Figure 4.50: Tajikistan in HDI rank, 1995-2009

### 4.9.4 School enrollment in Tajikistan

Tertiary School enrollment in the country is showing trend in two directions, the first one is downward trend during 1995-2001 when the tertiary school enrollment of the population decreased from 21% to 13% in 2001. Starting from 2002, trend recovers and period ends at indicator of 20% of the population involved in tertiary education.

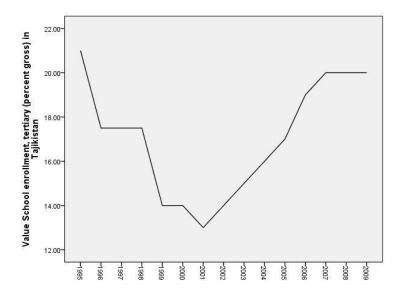


Figure 4.51: School enrollment in Tajikistan, 1995-2009

### 4.9.5 GNI in Tajikistan

GNI in Tajikistan in general has an upward trend during the period 1995-2010, income per capita increased from \$810 to \$2,050 in 2009. Nevertheless, Tajikistan has the lowest GNI in the region.

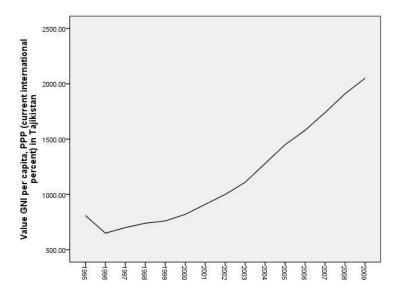


Figure 4.52: GNI in Tajikistan, 1995-2009

### 4.9.6 Life expectancy in Tajikistan

Life expectancy in Tajikistan increased from 63 years in 1995 to 67 years in 2009.

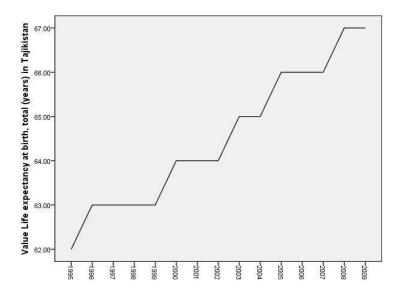


Figure 4.53: Life expectancy in Tajikistan, 1995-2009

### 4.9.7 Health expenditure in Tajikistan

Health expenditure per capita in Tajikistan is the lowest, but has an upward trend and it was only \$3 in 1995 and finishes at \$38 in 2009.

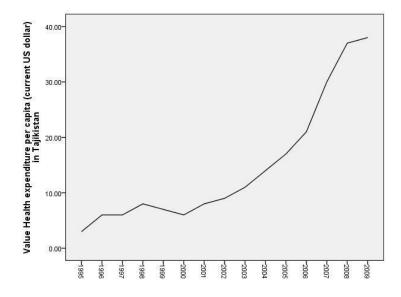


Figure 4.54: Health expenditure in Tajikistan, 1995-2009

### 4.10 Turkmenistan

#### 4.10.1 FDI in Turkmenistan

Turkmenistan during the period 1995-2009 according to FDI inflows may join the list of countries having medium level of FDI. The country is rich with natural sources, such as oil and gas resources, which means that foreign investors can be easily attracted to the country. During the Soviet period Turkmenistan has been one of the main suppliers of cotton and energy. In 1990s Turkmenistan developed light and manufacturing industries in collaboration with overseas partners. Country's Government aims at attracting more foreign investments into the country. However, there are still lots of constraints and risks for foreign investors. First of all, country is closed for access from abroad, which includes problematic acquisition of visa and business activity allowances, high taxes and high corruption. Such a situation creates many bans for foreigners. Within last decade,

Turkmenistan mainly attracted investments into oil and gas sectors. Today, Turkmenistan Government is concerned with creation of more opportunities in other sectors too. Several forums took place within last years and these forums are mainly directed on creation of better relations with foreign investors and procedures to open the country's economy for foreign partners<sup>89</sup>.

U.S. Embassy in Turkmenistan official website states that in several laws for the foreign investment and investment climate improvements has taken place, but there are still problems, such as poor regulations and lack of human and physical capital to fulfill foreign standards.

Turkmenistan is the largest gas producer in the CIS region and most of the big businesses in the country are under government control. Privatization is not taking place. "All lands are government-owned. Neither domestic nor foreign businesses can receive long-term land-use rights for "non-agricultural" purposes." 90

Turkmenistan has fixed exchange rate regime, which is 2.85 manat per 1 U.S. dollar and this rate is agreed to stay fixed until the January 1, 2010. According to the information of U.S. Embassy:

"Foreign bankers considered the unified exchange rate and expansion of currency exchange points modest steps towards overall liberalization of the foreign exchange market. An unofficial exchange market still operates on a very small scale, and provides exchanges at rates that are very close to official rates. The current unofficial exchange rate is 2.86 DTM per \$1." <sup>91</sup>

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<sup>&</sup>lt;sup>89</sup> Туркменистан, золотой век (accessed December 5, 2011); available from <a href="http://www.turkmenistan.gov.tm/">http://www.turkmenistan.gov.tm/</a>

<sup>&</sup>lt;sup>90</sup> Embassy of the United States, Ashgabat, Turkmenistan (accessed December 5, 2011); available from <a href="http://turkmenistan.usembassy.gov/ics.html">http://turkmenistan.usembassy.gov/ics.html</a>

<sup>91</sup> ibid

Since the very limited information is available about the economic indicators in Turkmenistan, there is no exact data about countries fields and amounts investing into Turkmenistan. Turkmenistan is a country with highest corruption indexes, but because of the lack of available information, it is not included in the world corruption index. Nevertheless, in oil and gas sector, companies from the following countries were actively involved into the business process of Turkmenistan: Austria, Great Britain, Germany, Italy, India, Malaysia, United Arab Emirates, Denmark, Canada and China. Also, Turkmenistan Government cooperates with Iran and Turkey to transfer oil and gas to the world markets. 92

Since 2004 FDI inflows into Turkmenistan demonstrates a strong upward trend and amount of FDI inflow reaches \$3,867,000,000 in 2009.

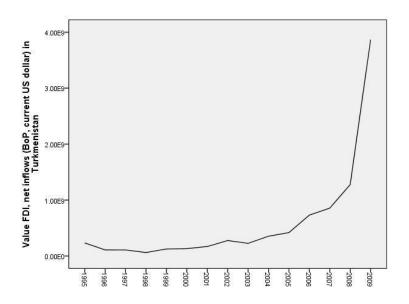


Figure 4.55: FDI in Turkmenistan, 1995-2009

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<sup>&</sup>lt;sup>92</sup> "Туркменистан: иностранный бизнес развивается, несмотря на существующие трудности" (accessed December 5, 2011); available from <a href="http://ictsd.org/i/news/bridgesrussian/82849/">http://ictsd.org/i/news/bridgesrussian/82849/</a>

#### 4.10.2 HDI in Turkmenistan

As mentioned above, most of the official state statistical data is not published by Turkmenistan Government. Due to this reason Turkmenistan School enrollment data for the period 1995-2009 is not available.

Turkmenistan is rich with natural sources and it is one of the most active gas exporters in the world, but at the same time according to HDI, Turkmenistan may be included in the list of countries with average level of human development. Turkmenistan's GNI is in the medium level when compared to other CIS countries. According to this indicator, Turkmenistan is ahead of several countries in CIS, such as Tajikistan, Moldova, Kyrgyzstan, Georgia and Armenia.

Life expectancy in Turkmenistan is the lowest in region, it is only 64 years in the average and 65 years in the last years of the researched period.

Health expenditure per capita (current US dollar) is also medium when compared to the other CIS countries. Turkmenistan is ahead of Armenia, Kyrgyzstan, Moldova, Tajikistan and Uzbekistan in health expenditures.

## 4.10.3 Turkmenistan in HDI rank

Turkmenistan in HDI rank during has been moving up and down from 1995 till 2004. Country's position during the whole period increased from 86<sup>th</sup> to 109<sup>th</sup> place.

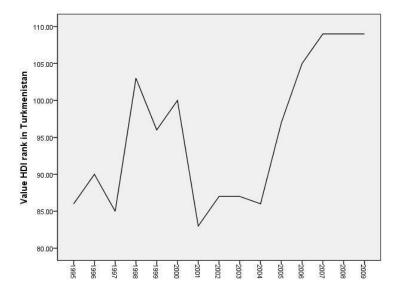


Figure 4.56: Turkmenistan in HDI rank, 1995-2009

### 4.10.4 GNI in Turkmenistan

Gross National Income in Turkmenistan has an absolutely upward trend, which starts from \$1,680 in 1995 and reaches \$6,780 in 2010.

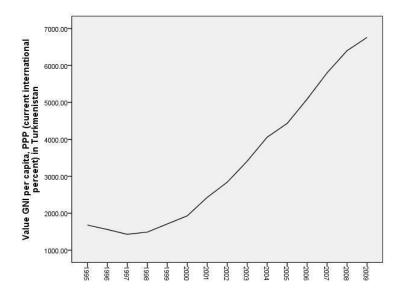


Figure 4.57: GNI in Turkmenistan, 1995-2009

## 4.10.5 Life expectancy in Turkmenistan

Estimated years in life expectancy for Turkmenistan increased only from 63 to 65 during 1995-2009, which is a small progress.

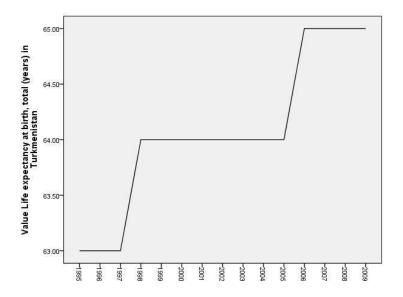


Figure 4.58: Life expectancy in Turkmenistan, 1995-2009

### 4.10.6 Health expenditure in Turkmenistan

Health expenditure trend is upward during the period 1999 - 2007 as it increases from \$30 to \$130, afterward it is decreasing till \$77 in 2009.

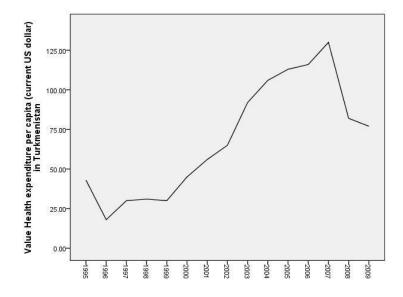


Figure 4.59: Health expenditure in Turkmenistan, 1995-2009

### 4.11 Ukraine

### 4.11.1 FDI in Ukraine

Ukraine is one of the most successful FDI recipients in CIS region. Country has favorable investment climate since Ukraine's geographical location and available natural resources are highly attractive for foreign investors. Country has valuable hydrocarbon resources. Legislation is protecting foreign investors' rights, numerous laws have been implemented to provide foreign investors with more secure and appropriate conditions for business. Laws on protection foreign investors' rights in Ukraine started since 1992, which was Law on Foreign Investment. Many corrections, amendments and new laws been added to the legislation system of the country afterwards, contributing to the development of investment climate. Another aspect attracting foreign investors is a labor

force, which is cheap, well-educated and qualified. Also, Ukraine has many undeveloped markets with a good market growth potential.

As stated by Ishaq (1998)<sup>93</sup>, Ukraine mainly received investments from United States, Russia and Western Europe. In 1990s the half of all FDI inflows into Ukraine was from Russia, Great Britain and Germany.

Sectors receiving foreign investments till 1996 are energy fields, financial, public health, machine-building, transport, metallurgy, food industry, internal trade, chemical industry.

According to Забарная (2003)<sup>94</sup>, constraints that foreign investors face in the country are high rate of corruption, many local companies' reluctant to cooperate with foreign investments. Corrupted system lowers the quality of legislation system in the country and as a result, foreign investors are less protected.

Chow and Elkind (2009)<sup>95</sup> mention that nowadays, Ukraine is stuck between being a Post-Soviet Republic and a European country. It is also noted that:

"While Ukraine plays a critical role as the key transit connection between gas producers in Russia and Central Asia and gas consumers in the EU, its incomplete market structure and culture of corruption weaken its own energy security, destabilizes its economy, destroy public trust in its politics, and undermine the interests of its European neighbors as well."

Ukrainian FDI policy today is more directed on reducing investment risks, legal system improvements, balancing the tax system, simplification of the tax rules.

<sup>&</sup>lt;sup>93</sup> Mohammed Ishaq (1999) "Foreign direct investment in Ukraine since transition", Communist and postcommunist studies 32

<sup>&</sup>lt;sup>94</sup> Э.Н. Забарная (2003) "Проблемы привлечения иностранных инвестиций в условиях реформируемой украинской экономики"

<sup>&</sup>lt;sup>95</sup> Edward Chow, Jonathan Elkind (2009) "Where East Meets West: European Gas and Ukrainian Reality", The Washington Quarterly, 77-92

FDI inflows into Ukraine during the 1995-2009 have increased. Between 1999 and 2003 there are short-term decreases and increases. In 2003 there is a strong upward increase in FDI inflows and trend reaches its peak in 2008 with \$10,913,000,000, then in 2009 period ends with a decrease to \$4,816,000,000.

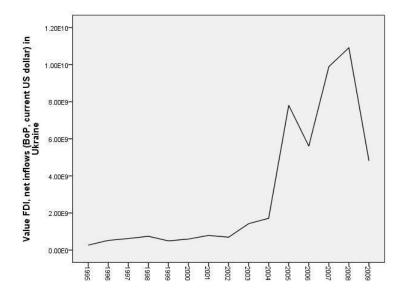


Figure 4.60: FDI in Ukraine, 1995-2009

#### 4.11.2 HDI in Ukraine

Ukraine has the best position in HDI rank among CIS countries. According to the average of CIS countries in HDI rank, Ukraine goes after Belarus, Russia and Kazakhstan.

When looking at tertiary School enrollment indicators, Ukraine is the second champion in the region (after Russia). A very high percent of its population acquired tertiary education.

Life expectancy in Ukraine is high when compared to CIS region, but low in comparison to developed European countries.

According to Surai and Taylor-Pickard (2008)<sup>96</sup> life expectancy in the region is higher for women and lower for men. The main reason for that can be the actual problem of alcoholism in three countries of region that are Russia, Ukraine and Belarus. Since life expectancy is straightly related to the health condition of the population, it has been also noted that Chernobyl disaster which resulted in the radiation significantly affected the health conditions of the people. Also, it has been noted that worsened ecology, badly affected the country's number of cancer diseases and mortality rates.

According to Evans and Duca (2010)<sup>97</sup>:

"In 2009, a decent, livable salary in Kiev would be around €350-800 a month, whereas in the rest of the country, most people are earning around €200 a month and can still afford their own accommodation, food, clothing, transport and save enough surplus to pay for annual holidays. This emerging middle class tends to be urban and connected to business of some sort, while Ukraine's rural areas continue to suffer from lack of cash but also tend to be more self-sufficient."

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<sup>&</sup>lt;sup>96</sup> Peter F. Surai, Jules A. Taylor-Pickard (2008) "Current advances in selenium research and applications", Wageningen Academic Publication, p.57-58

<sup>&</sup>lt;sup>97</sup> Andrew Evans, Marc Di Duca (2010) "Ukraine", Bradt Travel Guides Publication, p.30

### 4.11.3 Ukraine in HDI rank

During the period 1995-1998 Ukraine's position in HDI rank been replaced from 54 to 102. Starting from 1999 country's position started to reduce with short fluctuations and reached 70<sup>th</sup> position in 2004. Afterward, it again increases and period ends with Ukraine on 85<sup>th</sup> position in 2009.

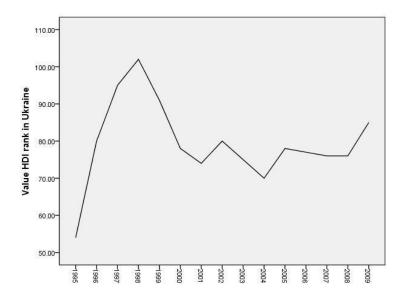


Figure 4.61: Ukraine in HDI rank, 1995-2009

### 4.11.4 School enrollment in Ukraine

Tertiary School enrollment during the period shows positively increasing trend with 43% in 1995 and coming to 81% in 2009.

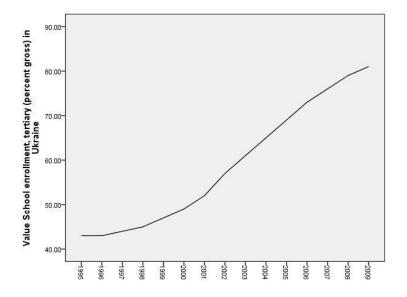


Figure 4.62: School enrollment in Ukraine, 1995-2009

### 4.11.5 GNI in Ukraine

GNI in Ukraine recovers and smoothly increases until it achieves \$7,240 in 2008 and period ends with \$6,170 in 2009.

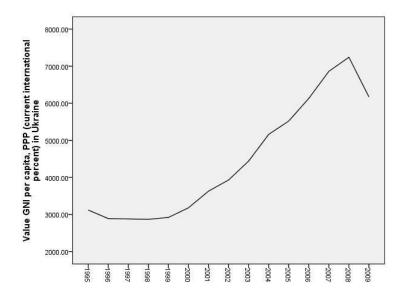


Figure 4.63: GNI in Ukraine, 1995-2009

## 4.11.6 Life expectancy in Ukraine

Life expectancy did not change much during the period and it increased only from 67 years in 1995 to 69 years in 2009.

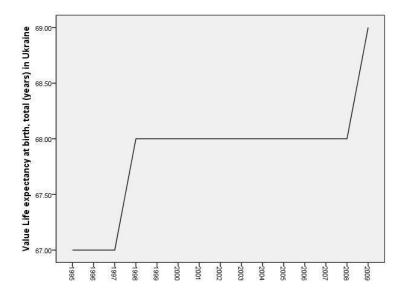


Figure 4.64: Life expectancy in Ukraine, 1995-2009

### 4.11.7 Health expenditure in Ukraine

Health expenditures in Ukraine during 1995 and 2000 were slightly fluctuating and since 2001 it increased from \$44 to \$268 in 2008. Period ends with small decrease to \$180 in 2009.

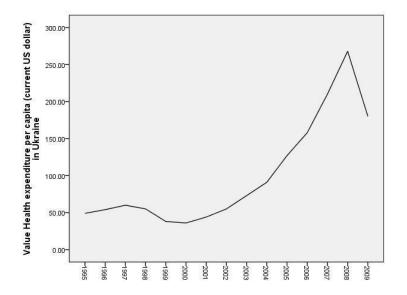


Figure 4.65: Health expenditure in Ukraine, 1995-2009

### 4.12 Uzbekistan

### 4.12.1 FDI in Uzbekistan

Uzbekistan is characterized as a country with closed and unpredictable economy in the region. To some extent, it increases the risks for foreign investors.

Жмарев (2011)<sup>98</sup> discusses Uzbekistan's economic condition and country's situation from the positive and negative aspects. From the positive side, Uzbekistan is the country with stable economic indicators and dynamic growth.

After the collapse of the Soviet Union, Uzbekistan had lots of available natural resources, but could not develop a proper system to utilize these resources. During the

<sup>98</sup> Геннадий Жмарев (2011) "В каком состоянии находится экономика Узбекистана?" (accessed December 8, 2011); available from <a href="http://fincake.ru/blogs/hercy/posts/3537.html">http://fincake.ru/blogs/hercy/posts/3537.html</a>

Soviet Union, Uzbekistan been considered as the poorest country in the region after Tajikistan. Uzbekistan has been a huge raw materials supplier in the region during the Soviet period.

Also Uzbekistan has been a successful cotton producer. Most of Uzbek population has been employed in agriculture and service sectors, also in such industries as production, construction, public utilities and manufacturing. Since 1995 Uzbekistan government directed investments:

"in priority sectors with foreign financing (oil refineries) or joint ventures with foreign investors (electronics, gold mining and telecommunications). The Government also invested heavily in hotel construction and the restoration of tourism sites." (Жмарев, 2011)<sup>99</sup>

According to Uzbekistan Business Opportunity Yearbook (1999) Uzbekistan focuses more on "import-substitution, export-oriented industrialization". To attract FDI, Government attempts to arrange a favorable business climate, but nevertheless the system itself is not-well regulated, thus foreign investors are not eager to do business in Uzbekistan, since they don't know what to expect. Additionally, the Government regulates most of the industries in the country, thus in some cases, there is discrimination against foreign competitors.

In 1990s foreign investments come into production industries, food industries, also into energy, metallurgy and mechanical engineering, into transport development.

Uzbekistan Business Opportunity Yearbook<sup>100</sup> also reports that Government of Uzbekistan, first of all, tries to attract investments into energy industries. In 2008,

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<sup>&</sup>lt;sup>99</sup> ibid

<sup>&</sup>lt;sup>100</sup> Uzbekistan Business Opportunity Yearbook: Export-Import, Investment and Business Opportunities, Ibp Usa, Interational Business Publication Staff, Global Investment and Business Center, Inc. Staff, 1999

investments into hydrocarbon accounted for \$1.3 billion out of \$1.9 billion of annual FDI inflows. In 2009, investments in hydrocarbon were more than a half of total investments from abroad. Investors into Uzbekistan were Russia, Malaysia and Korea. "China National Petroleum Corporation (CNPC) was the largest foreign investor in 2009.

Uzbekistan, in comparison to other countries in the region, was not successful in receiving FDI. The period starts at negative FDI flows in 1995, which are disinvestments. Then, trend recovers and since 2007 increases reaching the peak in 2008 with \$711,300,000. Period finishes with only small decrease in FDI to \$711,000,000 in 2009.

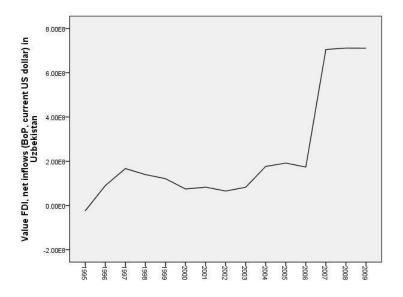


Figure 4.66: FDI in Uzbekistan, 1995-2009

#### 4.12.2 HDI in Uzbekistan

Uzbekistan has one of the lowest HDI in CIS region. According to the average HDI rank during the period 1995-2009, Uzbekistan surpasses only Tajikistan, Moldova and Kyrgyzstan in CIS region. Generally, Uzbekistan's position in HDI rank during the period is very close to Tajikistan, Kyrgyzstan and Moldova.

By looking at general HDI, it is seen that there is a progress in almost all of the indicators during the period. National Report by UNESCO and UNICEF (2007)<sup>101</sup> focused on reaching goals in education enhancement in the country specifies governments' policy and step-by-step strategy for improving the situation in the country from such aspects as social, economic and educational. It should be noted that, according to the available information on tertiary School enrollment, Uzbekistan has gaps in the data, for example between 1995-1998. For the rest of the period, Uzbekistan has the smallest percent of the population involved into the tertiary School enrollment. Obviously, improvement of educational conditions is the matter of utmost importance for the general welfare of the country's population. Other indicators, such as GNI per capita, life expectancy and health expenditures per capita portray a picture of improvement by the end of the period. Average scores for the GNI per capita and health expenditures per capita during 1995-2009 demonstrate that Uzbekistan has the lowest score in CIS region after Tajikistan and Kyrgyzstan.

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<sup>&</sup>lt;sup>101</sup> Министерство народного образования Республики Узбекистан, Представительства ЮНЕСКО и ЮНИСЕФ в Узбекистане, "Национальный отчет по среднесрочной оценке достижений целей по образованию для всех", 2007

### 4.12.3 Uzbekistan in HDI rank

Uzbekistan's HDI rank demonstrates that country was sharply increasing and decreasing at the first part of the period, but strongly increasing at the end. That means that country's situation worsened when coming closer to the end of the period.

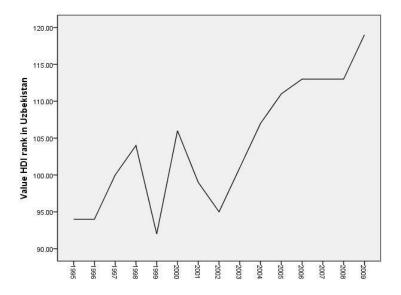


Figure 4.67: HDI in Uzbekistan, 1995-2009

### 4.12.4 GNI in Uzbekistan

GNI per capita in Uzbekistan shows an upward trend. In 1995 it was \$1,190 per capita, by the end of the period it is \$2,850 per capita.

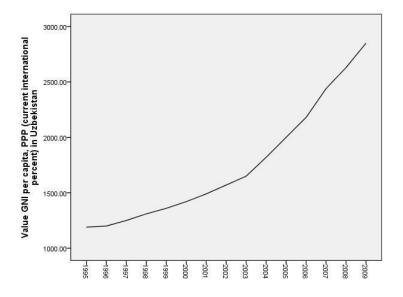


Figure 4.68: GNI in Uzbekistan, 1995-2009

## 4.12.5 Life expectancy in Uzbekistan

Life expectancy in Uzbekistan has increased for two years only from 1995 to 2009.

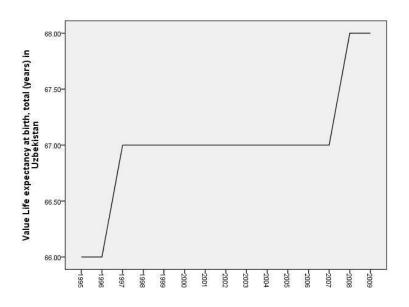


Figure 4.69: Life expectancy in Uzbekistan, 1995-2009

### 4.12.6 Health expenditure in Uzbekistan

Since 1995 to 1999 health expenditure per capita increased from \$23 to \$42. After the decrease to \$21 in 2002, trend recovered and finished with \$62 in 2009.

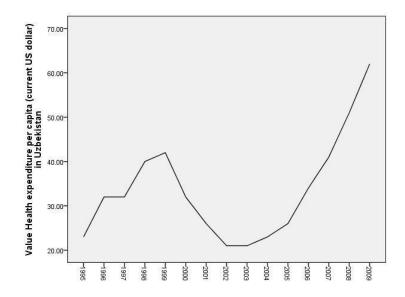


Figure 4.70: Health expenditure in Uzbekistan, 1995-2009

# Chapter 5

THE EFFECTS OF FDI INFLOW ON HDI IN THE CIS

**REGION: REGRESSION ANALYSIS** 

**5.1 Regression analysis** 

To estimate the effects of FDI on HDI we take the correlation between FDI and the

four HDI indicators. These HDI indicators are tertiary School enrollment (SE), Gross

National Income per capita (GNI), life expectancy (LE) and health expenditures (HE).

The correlations are measured using the simple regression equation. The dependent

variables are the four HDI indicators, namely SE, GNI, LE and HE. The independent

variable is the FDI. The assumption is that the general information that Regression

Analysis provides may be accomplished through the estimations of coefficient

determination  $\mathbb{R}^2$ .

"Coefficient of determination (R<sup>2</sup>) – is defined as the proportion of the total variation

or dispersion in the dependent variable (about its mean) that is explained by the variation

in the independent or explanatory variable(s) in the regression." (Salvatore, 2001)<sup>102</sup>

SE=f(FDI) SE is a function of FDI

GNI=f(FDI) GNI is a function of FDI

LE=f(FDI) LE is a function of FDI

<sup>102</sup> Dominick Salvatore (2004) "Managerial Economics in a Global Economy", 5<sup>th</sup> edition, THOMSON

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### HE=f(FDI) HE is a function of FDI

Following formulas are tested in the simple regression analysis that will be done through the program PASW Statistics 18:

$$SE_i = \alpha_{1i} + \beta_{1i} FDI_i$$
 (1)

$$GNI_i = \alpha_{2i} + \beta_{2i} FDI_i$$
 (2)

$$LE_i = \alpha_{3i} + \beta_{3i} FDI_i$$
 (3)

$$HE_i = \alpha_{4i} + \beta_{4i} FDI_i \tag{4}$$

Where:

FDI – is Foreign Direct Investment, it demonstrates the yearly flow of foreign investment in and out of country, FDI is defined as investment in foreign country to gain profit from the invested business, where the foreign owners have 10% or more of voting stock from the receipts of business activities. FDI is measured according to the summary of business assets, including both long-term and short-term capital. The FDI data analyzed in the present study is the net financial flows in the CIS members from foreign investors, which is presented in the US dollars.

SE – Tertiary school enrollment, (as percentage of the gross) is an indicator of the share of the country's population, that achieved the higher degree of education like college and university education. School enrollment, tertiary (% gross) accounts only the population that been officially admitted and accomplished the tertiary education, that is confirmed by a valid diploma or certification.

GNI – Gross National Income per capita is measured in purchasing power parity (PPP) in current US dollars, summarized. This indicator demonstrates a decent standard of life, it is the total value added by all the local manufacturers, including all taxes on

goods, subsidies deducted and net income, which is payments to employees and yield of the property, received from overseas.

LE – Life expectancy at birth, total (years) is the expected years that a newly-born child would live in case if mortality rates and conditions in the particular year will not change during the child's life time.

HE – Health expenditure per capita (in current US dollars), presents the overall health disbursements share in the country. That indicator comprises supply of required health services in both prophylactic and healing cases, expenses related to birth control, to healthy nourishment, provision of support in cases of emergency, not accounting water and sanitation supply.

í – Azerbaijan (Az), Armenia (Ar), Belarus (B), Georgia (G), Kazakhstan (Kaz),
 Kyrgyz (Kyr), Moldova (M), Russia (R), Tajikistan (Taj), Turkmenistan (Turk), Ukraine
 (Ukr), Uzbekistan (Uzb).

 $\alpha_{1i}$  – constant for FDI and SE in a country.

 $\beta_{1i}$  – is a coefficient of the correlation. Slope and relationship between FDI and SE in a country.

 $\alpha_{2i}$  – constant for FDI and GNI in a country.

 $\beta_{2i}$  – is a coefficient of the correlation. Slope and relationship between FDI and GNI in a country.

 $\alpha_{3i}$  – constant for FDI and LE in a country.

 $\beta_{3i}$  – is a coefficient of the correlation. Slope and relationship between FDI and LE in a country.

 $\alpha_{4i}$  – constant for FDI and HE in a country.

 $\beta_{4i}$  – is a coefficient of the correlation. Slope and relationship between FDI and HE in a country.

### 5.1.1 Regression analysis of data for Azerbaijan

Table 5.1: The values for the dependent variables in relation with FDI for Azerbaijan (1995-2009)

| Variables         | Sig.  | Beta   | T      | $\mathbb{R}^2$ |
|-------------------|-------|--------|--------|----------------|
| SE <sub>Az</sub>  | 0.912 | 0.31   | 0.113  | 0.001          |
| GNI <sub>Az</sub> | 0.145 | -0.395 | -1.552 | 0.156          |
| LE <sub>Az</sub>  | 0.338 | -0.266 | -0.994 | 0.071          |
| HE <sub>Az</sub>  | 0.182 | -0.364 | -1.411 | 0.133          |

By looking at the results of regression in Table 5.1, we conclude that according to this analysis FDI in Azerbaijan does not correlate with any of four dependent variables for 1%, 5% or 10% levels. The significance levels are high and t values are less than 2 for all of four variables.

The explanatory powers of relationships, R<sup>2</sup> are not high either.

The results in Table 5.1 show that contrary to other CIS states, the FDI has no correlation with the four HDI variables in Azerbaijan. In other words  $FDI_{Az}$  and  $SE_{Az}$ ,  $GNI_{Az}$ ,  $LE_{Az}$ ,  $HE_{Az}$  are not significantly correlating during the observed period, 1995-2009 in Azerbaijan.

### School enrollment, tertiary and FDI in Azerbaijan

The Model 1:

$$SE_{Az} = \alpha_{1Az} + \beta_{1Az} FDI_{Az}$$
 (5)

There is no correlation between  $SE_{Az}$  and  $FDI_{Az}$  in Azerbaijan.

T-value = 0.113 which is low and it shows that there is no correlation between  $SE_{Az}$  and  $FDI_{Az}$ .

#### **GNI** and **FDI** in Azerbaijan

The Model 2:

$$GNI_{Az} = \alpha_{2Az} + \beta_{2Az} FDI_{Az}$$
 (6)

Significance = 0.145. This correlation is in the 15% level, so we can say that there is only a weak correlation between the two variables.

Since  $\beta_{2Az}$  = - 0.395, the two variables have a negative correlation. So as 1% increase in FDI<sub>Az</sub> results in 0.395% fall in GNI<sub>Az</sub>.

 $R^2$  is significantly low and equals 15.6%, which means that the formula poorly explains the relationship between  $FDI_{Az}$  and  $GNI_{Az}$ .

#### Life expectancy and FDI in Azerbaijan

The Model 3:

$$LE_{Az} = \alpha_{3Az} + \beta_{3Az} FDI_{Az}$$
 (7)

 $R^2=0.071$  which means the formula explains very little of the relationship between  $LE_{Az}$  and  $FDI_{Az}$ .

Significance = 0.338 which means that variables do not correlate 33.8% of time, thus the correlation does not exist.

T = -0.994, which shows no correlation between the two variables.

### Health expenditure and FDI in Azerbaijan

The Model 4:

$$HE_{Az} = \alpha_{4Az} + \beta_{4Az} FDI_{Az}$$
 (8)

Significance = 0.182, which is a very low correlation.

Beta = -0.364 says that there is a negative relation between  $HE_{Az}$  and  $FDI_{Az}$ , thus, for example, if there is a 1% increase in  $FDI_{Az}$ , the  $HE_{Az}$  decreases for 0.364 % or viceversa

T=-1.411 shows a weak correlation between variables  $HE_{Az}$  and  $FDI_{Az}$ .

Since  $\beta_{4Az}$ = - 0.364, which means that 1% increase in FDI<sub>Az</sub> correlates with 0.364% fall in HE<sub>Az</sub> in Azerbaijan, 81.8 % of the time.

 $R^2 = 0.133$  which is also very low and indicates that the Model 4 does not explain the relationship between  $HE_{Az}$  and  $FDI_{Az}$ .

### 5.1.2 Regression analysis of data for Armenia

Table 5.2: The values for the dependent variables in relation with FDI for Armenia (1995-2009)

| Variables         | Sig.  | Beta  | Т      | $\mathbb{R}^2$ |
|-------------------|-------|-------|--------|----------------|
| $SE_{Ar}$         | 0.000 | 0.923 | 8.645  | 0.852          |
| GNI <sub>Ar</sub> | 0.000 | 0.927 | 8.933  | 0.860          |
| LE <sub>Ar</sub>  | 0.002 | 0.729 | 3.845  | 0.532          |
| HE <sub>Ar</sub>  | 0.000 | 0.972 | 14.985 | 0.945          |

By looking at the results of regression in Table 5.2, it is concluded that FDI in Armenia correlates with all of the four dependent variables  $SE_{Ar}$ ,  $GNI_{Ar}$ ,  $LE_{Ar}$  and  $HE_{Ar}$  in 1% significance level, which means that 99% of time the variables are correlating.

The *T*–values are very high confirming the strong correlation.

The explanatory power of the relationship for all the variables are very high.

### School enrollment, tertiary and FDI for Armenia

The Model 1:

$$SE_{Ar} = \alpha_{1Ar} + \beta_{1Ar} FDI_{Ar}$$
 (9)

R<sup>2</sup> shows 85.2% which is how formula explains the variations between SE and FDI in Armenia.

Significance = 0.000, which means that two variables strongly correlate.

Since  $\beta_{1Ar} = 0.923$ , 1% increase or decrease in FDI correlates with 0.923% rise in SE of Armenia.

T-value =8.645 which is high and it demonstrates a strong correlation between  $SE_{Ar}$  and  $FDI_{Ar}$ .

$$SE_{Ar} = 18.966 + 0.923 \text{ FDI}$$
 (10)  
(t = 8.645)  
(sign. = 0.000)

### **GNI and FDI in Armenia**

The Model 2:

$$GNI_{Ar} = \alpha_{2Ar} + \beta_{2Ar} FDI_{Ar}$$
 (11)

 $R^2=0.860$ , which means that there is 86% of the variance is explained by equation (11) between  $FDI_{Ar}$  and  $GNI_{Ar}$ .

Significance = 0.000, which means that variables strongly correlate.

Since  $\beta_{2Ar}$  = 0.927, 1% increase or decrease in FDI correlates with 0.927% increase or decrease in GNI of Armenia.

$$GNI_{Ar} = 1800.764 + 0.927 \text{ FDI}_{Ar}$$
 (12)  
(t = 8.933)  
(sign. = 0.000)

### Life expectancy and FDI in Armenia

The model 3:

$$LE_{Ar} = \alpha_{3Ar} + \beta_{3Ar} FDI_{Ar}$$
 (13)

 $R^2 = 0.532$  which means that there is 53,2% of the variance is explained by equation (13). Significance = 0.002 which demonstrates that a correlation with FDI<sub>Ar</sub> is strong enough.

T = 3.845, which shows the significant correlation between the two variables.

Since  $\beta_{3Ar}$  = 0.729, means that 1% increase or decrease in FDI correlates with 0.729% rise or fall in LE in Armenia

$$LE_{Ar} = 70.277 + 0.729 \, FDI_{Ar}$$
 (14)  
(t = 3.845)  
(sign. = 0.002)

#### Health expenditure and FDI in Armenia

The Model 4:

$$HE_{Ar} = \alpha_{4Ar} + \beta_{4Ar} FDI_{Ar}$$
 (15)

 $R^2 = 0.945$  which means that 94,5% of the variance is explained by equation (15). Significance = 0.000, the variables are highly correlated.

Beta = 0.972 indicates that 1% increase or decrease in FDI correlates with 0.972% rise or fall in HE in Armenia

T=14.985 shows an extremely strong correlation between variables  $HE_{Ar}$  and  $FDI_{Ar}$ . Since  $\beta_{4Ar}=0.972$ , which means that 1% increase or decrease in FDI correlates with 0.972% rise or fall in HE in Armenia

$$HE_{Ar} = 29.339 + 0.972 \,\text{FDI}_{Ar}$$
 (16)  
(t = 14.985)

$$(sign. = 0.000)$$

## 5.1.3 Regression analysis of data for Belarus

Table 5.3: The values for the dependent variables in relation with FDI for Belarus (1995-2009)

| Variables         | Sig.  | Beta  | Т     | $\mathbb{R}^2$ |
|-------------------|-------|-------|-------|----------------|
| SE <sub>Ar</sub>  | 0.002 | 0.732 | 3.877 | 0.536          |
| GNI <sub>Ar</sub> | 0.000 | 0.854 | 5.914 | 0.729          |
| LE <sub>Ar</sub>  | 0.001 | 0.750 | 4.094 | 0.563          |
| HE <sub>Ar</sub>  | 0.000 | 0.877 | 6.567 | 0.768          |

By looking at the results in Table 5.3, we conclude that according to this analysis FDI in Belarus is correlating with all the four dependent variables in 1% significance level, which means that 99% of the time the variables are correlating.

The explanatory powers of the relations are high.

### School enrollment, tertiary and FDI in Belarus

The Model 1:

$$SE_B = \alpha_{1B} + \beta_{1B} FDI_B$$
 (17)

 $R^2$  is 53.6, so the 53.6% of the variations in the variables are explained by equation (17).

Significance demonstrates that there is 99% correlation between the two variables.

Since  $\beta_{1B} = 0.732$ , 1% increase or decrease in FDI correlates with 0.732% rise or fall in SE in Belarus.

T-value =3.877 which is high and it demonstrates a strong correlation between  $SE_B$  and  $FDI_B$ .

$$SE_B = 51.292 + 0.732 \text{ FDI}$$
 (18)  
 $(t = 3.877)$   
 $(sign. = 0.002)$ 

#### **GNI and FDI in Belarus**

The Model 2:

$$GNI_B = \alpha_{2B} + \beta_{2B} FDI_B$$
 (19)

 $R^2=0.729,$  which means that there is 73 % of the variance is shared between  $FDI_B$  and  $GNI_B$  .

Significance = 0.000 means that variables strongly correlate.

Since  $\beta_{2B} = 0.854$ , 1% increase or decrease in FDI correlates with 0.854% increase or decrease in GNI of Belarus.

$$GNI_B = 5008.792 + 0.854 \text{ FDI}_B$$
 (20)  
 $(t = 5.914)$   
 $(sign. = 0.000)$ 

#### Life expectancy and FDI in Belarus

The Model 3:

$$LE_B = \alpha_{3B} + \beta_{3B} FDI_B$$
 (21)

 $R^2=0.563$  which means that there is 56.3% of the variance is shared between  $FDI_B$  and  $LE_B$ . Significance = 0.001 which demonstrates that  $FDI_B$  and  $LE_B$  correlate 99% of the time.

T = 4.094, which shows the significant correlation between the two variables.

Since  $\beta_{3B} = 0.750$ , means that 1% increase or decrease in FDI correlates with 0.750% rise or fall in LE in Belarus.

$$LE_B = 68.438 + 0.750 \, \text{FDI}_B$$
 (22)  
 $(t = 4.094)$   
 $(\text{sign.} = 0.001)$ 

## Health expenditure and FDI in Belarus

The Model 4:

$$HE_B = \alpha_{4B} + \beta_{4B} FDI_B$$
 (23)

 $R^2 = 0.768$  which means that there is 76,8% of the variance is shared between  $FDI_B$  and  $HE_B$ . Significance = 0.000, the variables are highly correlating.

T = 6.567 shows a strong correlation between variables HE<sub>B</sub> and FDI<sub>B</sub>.

Since  $\beta_{4B}$ = 0.877, 1% increase or decrease in FDI correlates with 0.877% rise or fall in HE in Belarus

$$HE_B = 91.158 + 0.877 \text{ FDI}_B$$
 (24)  
 $(t = 6.567)$   
 $(\text{sign.} = 0.000)$ 

#### 5.1.4 Regression analysis of data for Georgia

The present thesis is based on the annual data for each of CIS country, that is provided from the World Bank official website. Unfortunately some countries do not have fully accurate information for each year. In the case of Georgia, the World Bank reports data on FDI flows start from 1997. Therefore, present study tests data for Georgia for the period 1997-2009.

Also, the School enrollment, tertiary (percent gross) for Georgia indicator is not available for the year 1998, therefore average number of the pervious and a next year is substituted in the year 1998.

Table 5.4: The values for the dependent variables in relation with FDI for Georgia (1995-2009)

| Variables       | Sig.  | Beta   | T      | $\mathbb{R}^2$ |
|-----------------|-------|--------|--------|----------------|
| $SE_G$          | 0.251 | -0.343 | -1.212 | 0.118          |
| $GNI_G$         | 0.001 | 0.808  | 4.556  | 0.654          |
| LE <sub>G</sub> | 0.006 | 0.712  | 3.359  | 0.506          |
| $HE_G$          | 0.001 | 0.807  | 4.535  | 0.652          |

FDI correlates with GNI, LE and HE in 1% correlation significance level.

FDI is not correlating with SE for 1%, 5% or 10% level.

## School enrollment, tertiary and FDI in Georgia

The model 1:

$$SE_G = \alpha_{1G} + \beta_{1G} FDI_G$$
 (25)

Significance demonstrates that there is a weak correlation between the two variables.

T-value = - 1.212 which is very low and does not show the correlation between SE and FDI.

## **GNI and FDI in Georgia**

The Model 2:

$$GNI_G = \alpha_{2G} + \beta_{2G} FDI_G$$
 (26)

 $R^2 = 0.654$ , which means that there is 65.4 % of the variance is shared between FDI and GNI.

Significance = 0.001, which means that variables correlate strongly.

Since  $\beta_{2G} = 0.808$ , 1% increase or decrease in FDI correlates with 0.808% increase or decrease in GNI of Georgia.

$$GNI_G = 4839.503 + 0.808 \text{ FDI}_G$$
 (27)  
 $(t = 4.556)$   
 $(sign. = 0.001)$ 

### Life expectancy and FDI in Georgia

The Model 3:

$$LE_G = \alpha_{3G} + \beta_{3G} FDI_G$$
 (28)

 $R^2 = 0.506$  which means that there is 50.6% of the variance is shared between FDI and LE. Significance = 0.006 which demonstrates that a strong correlation between FDI and LE.

T = 3.359, which shows the significant correlation between the two variables.

Since  $\beta_{3G}$  = 0.712, means that 1% increase or decrease in FDI correlates with 0.712% rise or fall in LE in Georgia.

$$LE_G = 71.579 + 0.712 \, FDI_G$$
 (29)  
(t = 3.359)  
(sign. = 0.006)

## Health expenditure and FDI in Georgia

The Model 4:

$$HE_G = \alpha_{4G} + \beta_{4G} FDI_G$$
 (30)

 $R^2 = 0.652$  which means that there is 65.2% of the variance is shared between  $FDI_G$  and  $HE_G$ .

Significance = 0.001, the variables are correlating 99% of the time with each other.

T = 6.567 shows a correlation between variables  $HE_G$  and  $FDI_G$ .

Since  $\beta_{4G}$ = 0.807, for every 1% increase or decrease of FDI correlates with 0.807% rise or fall in HE in Georgia

$$HE_G = 47.480 + 0.807 \text{ FDI}_G$$
 (31)  
 $(t = 4.535)$   
 $(\text{sign.} = 0.001)$ 

### 5.1.5 Regression analysis of data for Kazakhstan

Table 5.5: The values for the dependent variables in relation with FDI for Kazakhstan (1995-2009)

| Variables          | Sig.  | Beta  | T      | $\mathbb{R}^2$ |
|--------------------|-------|-------|--------|----------------|
| $SE_{Kaz}$         | 0.36  | 0.544 | 2.338  | 0.296          |
| GNI <sub>Kaz</sub> | 0.000 | 0.875 | 6.532  | 0.766          |
| LE <sub>Kaz</sub>  | 0.001 | 0.783 | 4.531  | 0.612          |
| HE <sub>Kaz</sub>  | 0.000 | 0.957 | 11.828 | 0.915          |

By looking at the achieved results, we may conclude that according to this analysis FDI in Kazakhstan is not correlating with SE for 1%, 5% or 10% levels. FDI correlates with GNI, LE and HE and at 1% significance level, which means that 99% of the time variables are correlating.

The explanatory power of the relationship is strong.

### School enrollment, tertiary and FDI in Kazakhstan

The Model 1:

$$SE_{Kaz} = \alpha_{1Kaz} + \beta_{1Kaz} FDI_{Kaz}$$
 (32)

The formula explains 29.6% variables in SE and FDI in Kazakhstan. Significance demonstrates that there is no correlation between the two variables.

#### **GNI and FDI in Kazakhstan**

The Model 2:

$$GNI_{Kaz} = \alpha_{2Kaz} + \beta_{2Kaz} FDI_{Kaz}$$
 (33)

 $R^2=0.766$ , which means that there is 76.6 % of the variance is shared between  $FDI_{Kaz}$  and  $GNI_{Kaz}$ .

Significance = 0.000, which means that variables have high correlation.

Since  $\beta_{2Kaz}=0.875$ , 1% increase or decrease in  $FDI_{Kaz}$  correlates with 0.875% increase or decrease in  $GNI_{Kaz}$  of Kazakhstan.

$$GNI_{Kaz} = 4353.125 + 0.875 \text{ FDI}_{Kaz}$$
 (34)

(t = 6.532)

(sign. = 0.000)

#### Life expectancy and FDI in Kazakhstan

The Model 3:

$$LE_{Kaz} = \alpha_{3Kaz} + \beta_{3Kaz} FDI_{Kaz}$$
 (35)

 $R^2$  = 0.612 which means that there is 61.2% of the variance is shared between  $FDI_{Kaz}$  and  $LE_{Kaz}$ .

Significance = 0.001 which demonstrates that a strong correlation between  $FDI_{Kaz}$  and  $LE_{Kaz}$  exists.

T = 4.531, which shows the medium correlation between the two variables.

Since  $\beta_{3Kaz}=0.783$ , it means that 1% increase or decrease in FDI correlates with 0.783% rise or fall in  $LE_{Kaz}$  in Kazakhstan.

$$LE_{Kaz} = 65.087 + 0.783 \text{ FDI}_{Kaz}$$
 (36)  
 $(t = 4.531)$   
 $(sign. = 0.001)$ 

## Health expenditure and FDI in Kazakhstan

The model 4:

$$HE_{Kaz} = \alpha_{4Kaz} + \beta_{4Kaz} FDI_{Kaz}$$
 (37)

 $R^2 = 0.915$  which means that there is 91.5% of the variance is shared between  $FDI_{Kaz}$  and  $HE_{Kaz}$ . Significance = 0.001, proves that variables correlate with each other strongly.

T = 11.828 shows a very strong correlation between variables  $HE_{Kaz}$  and  $FDI_{Kaz}$ .

Since  $\beta_{4\text{Kaz}}$ = 0.957, every 1% increase or decrease of FDI correlates with 0.957% rise or fall in HE in Kazakhstan.

$$HE_{Kaz} = 35.307 + 0.957 \, FDI_{Kaz}$$
 (38)  
 $(t = 11.828)$   
 $(sign. = 0.000)$ 

### 5.1.6 Regression analysis of data for Kyrgyzstan

Table 5.6: The values for the dependent variables in relation with FDI for Kyrgyzstan (1995-2009)

| Variables                    | Sig.  | Beta  | Т     | $\mathbb{R}^2$ |
|------------------------------|-------|-------|-------|----------------|
| $SE_{Kyr}$                   | 0.057 | 0.502 | 2.092 | 0.252          |
| GNI <sub>Kyr</sub>           | 0.003 | 0.717 | 3.713 | 0.515          |
| LE <sub>Kyr</sub>            | 0.917 | 0.030 | 0.106 | 0.001          |
| $\mathrm{HE}_{\mathrm{Kyr}}$ | 0.000 | 0.850 | 5.827 | 0.723          |

By looking at the achieved results, we may conclude that according to this analysis,  $FDI_{Kyr}$  correlates with  $SE_{Kyr}$  at 10% significance level.

 $FDI_{Kyr}$  correlates with  $GNI_{Kyr}$  and  $HE_{Kyr}$  at 1% significance level, which means that 99% of the time variables are correlating.

 $FDI_{Kyr}$  does not correlate with  $LE_{Kyr}$  for 1%, 5% or 10% levels.

### School enrollment, tertiary and FDI for Kyrgyzstan

The Model 1:

$$SE_{Kyr} = \alpha_{1Kyr} + \beta_{1Kyr} FDI_{Kyr}$$
 (39)

 $R^2$  = 25.2, which means that there is 25.2% of the variance is shared between FDI and SE.

Significance demonstrates that there is a weak correlation between the two variables.

Since  $\beta_{1\text{Kyr}} = 0.502$ , that means that in case of 1% increase or decrease in FDI correlates with 0.502% rise or fall in SE of Kyrgyzstan.

T-value = 2.092, reflects a weak correlation between  $SE_{Kyr}$  and  $FDI_{Kyr}$ .

$$SE_{Kyr} = 31.642 + 0.502 \text{ FDI}_{Kyr}$$
 (40)  
(t = 2.092)  
(sign. = 0.057)

### **GNI and FDI for Kyrgyzstan**

The Model 2:

$$GNI_{Kyr} = \alpha_{2Kyr} + \beta_{2Kyr} FDI_{Kyr}$$
 (41)

 $R^2=0.515,$  which means that there is 51.5 % of the variance is shared between  $FDI_{Kyr}$  and  $GNI_{Kyr}$ .

Significance = 0.003, which means that variables have significant correlation.

Since  $\beta_{2\text{Kyr}} = 0.717$ , where 1% increase or decrease in FDI correlates with 0.717% increase or decrease in GNI of Kyrgyzstan.

$$GNI_{Kyr} = 1196.942 + 0.717 \text{ FDI}_{Kyr}$$
 (42)  
 $(t = 3.713)$   
 $(sign. = 0.003)$ 

### Life expectancy and FDI for Kyrgyzstan

The Model 3:

$$LE_{Kvr} = \alpha_{3Kvr} + \beta_{3Kvr} FDI_{Kvr}$$
 (43)

There is no correlation between the two variables.

#### Health expenditure and FDI for Kyrgyzstan

The model 4:

$$HE_{Kyr} = \alpha_{4Kyr} + \beta_{4Kyr} FDI_{Kyr}$$
 (44)

 $R^2 = 0.723$  which means that there is 72.3% of the variance is shared between FDI and HE. Significance = 0.000, proves that variables correlate with each other.

T = 5.827 shows a good correlation between variables HE and FDI.

Since  $\beta_{4\text{Kyr}}$ = 0.850, every 1% increase or decrease of FDI correlates with 0.850% rise or fall in HE in Kyrgyzstan.

$$HE_{Kyr} = 15.117 + 0.850 \, FDI_{Kyr}$$
 (45)  
 $(t = 5.827)$   
 $(sign. = 0.000)$ 

## 5.1.7 Regression analysis of data for Moldova

Data collected for Moldova from the official website of World Bank shows the gap in annual data for Tertiary School enrollment for the year1998. Therefore, the gap year is substituted with an average number of the previous and post years.

Table 5.7: The values for the dependent variables in relation with FDI for Moldova (1995-2009)

| Variables       | Sig.  | Beta  | Т     | R <sup>2</sup> |
|-----------------|-------|-------|-------|----------------|
| $SE_{M}$        | 0.001 | 0.767 | 4.307 | 0.588          |
| $GNI_M$         | 0.001 | 0.760 | 4.219 | 0.572          |
| LE <sub>M</sub> | 0.065 | 0.488 | 2.016 | 0.238          |
| HE <sub>M</sub> | 0.001 | 0.751 | 4.099 | 0.564          |

By looking at the achieved results, we may conclude that according to this analysis FDI in Moldova correlating with SE, GNI and HE at 1% significance level. FDI correlates with LE at 10% significance level.

The explanatory power of the relationship is good for three of the variables, except for  $LE_M$ .

### School enrollment, tertiary and FDI in Moldova

The Model 1:

$$SE_{M} = \alpha_{1M} + \beta_{1M} FDI_{M}$$
 (46)

The formula explains 58.8% variations in SE and FDI in Moldova. Significance demonstrates that there is a strong correlation between these two variables.

Since  $\beta_{1M} = 0.767$ , that means that in case of 1% increase or decrease in FDI correlates with 0.767% rise or fall in SE in Moldova.

T-value = 4.307 which reflects the correlation between SE and FDI on a good level.

$$SE_{M} = 30.906 + 0.767 \text{ FDI}_{M}$$
 (47)

(t = 4.219)

(sign. = 0.001)

### **GNI and FDI in Moldova**

The Model 2:

$$GNI_{M} = \alpha_{2M} + \beta_{2M} FDI_{M}$$
 (48)

 $R^2 = 0.572$ , which means that there is 57.2 % of the variance is shared between FDI and GNI.

Significance = 0.001, which means that variables have significant correlation at 99% of the time.

Since  $\beta_{2M} = 0.760$ , where 1% increase or decrease in FDI correlates with 0.760% increase or decrease in GNI of Moldova.

$$GNI_M = 1688.959 + 0.760 \text{ FDI}_M$$
 (49)

(t = 4.219)

(sign. = 0.001)

## Life expectancy and FDI in Moldova

The Model 3:

$$LE_{M} = \alpha_{3M} + \beta_{3M} FDI_{M}$$
 (50)

 $R^2 = 0.238$  which means that there is 23.8 % of the variance is shared between FDI and LE which is low. Significance = 0.065 which demonstrates that a correlation between FDI and LE is at 10% level.

T = 2.016 shows a moderate correlation between the two variables.

Since  $\beta_{3M} = 0.488$ , it means that 1% increase or decrease in FDI correlates with 0.488% rise or fall in LE of Moldova.

$$LE_M = 30.906 + 0.588 \text{ FDI}_M$$
 (51)  
 $(t = 4.307)$   
 $(sign. = 0.001)$ 

#### Health expenditure and FDI in Moldova

The Model 4:

$$HE_{M} = \alpha_{4M} + \beta_{4M} FDI_{M}$$
 (52)

 $R^2 = 0.564$ , means that there is 56.4% of the variance is shared between FDI and HE. Significance = 0.001, proves that variables strongly correlate with each other.

T = 4.099 shows existence of a strong correlation between variables HE and FDI.

Since  $\beta_{4M}$ = 0.751, every 1% increase or decrease of FDI correlates with 0.751% rise or fall in HE in Moldova.

$$HE_M = 30.927 + 0.751 \text{ FDI}_M$$
 (53)  
 $(t = 4.099)$   
 $(\text{sign.} = 0.001)$ 

## 5.1.8 Regression analysis of data for Russia

Data collected for Russia from the official website of World Bank shows the gap in annual data for tertiary school enrollment for the year 2009. Therefore, the gap year is substituted with number of the previous year.

Table 5.8: The values for the dependent variables in relation with FDI for Russia (1995-2009)

| Variables       | Sig.  | Beta  | T      | $\mathbb{R}^2$ |
|-----------------|-------|-------|--------|----------------|
| $SE_R$          | 0.003 | 0.718 | 3.721  | 0.516          |
| $GNI_R$         | 0.000 | 0.927 | 8.906  | 0.859          |
| LE <sub>R</sub> | 0.007 | 0.663 | 3.189  | 0.439          |
| HE <sub>R</sub> | 0.000 | 0.956 | 11.711 | 0.913          |

By looking at the achieved results, we may conclude that according to this analysis FDI in Russia correlates with all four dependent variables at 1% significance level, which demonstrates very strong correlation.

The explanatory power of the relation are high.

### School enrollment, tertiary and FDI in Russia

The Model 1:

$$SE_R = \alpha_{1R} + \beta_{1R} FDI_R$$
 (54)

The explanatory power of equation (54) is good because R<sup>2</sup>=0.516

Significance = 0.003 demonstrates that there is a correlation between the two variables.

Since  $\beta_{1R} = 0.718$ , that means that 1% increase or decrease in FDI correlates with 0.718% rise or fall in SE in Russia.

T-value = 3.721 which reflects the correlation between SE and FDI is strong.

$$SE_R = 54.527 + 0.718 \text{ FDI}_M$$
 (55)

(t = 3.721)

(sign. = 0.003)

#### **GNI and FDI in Russia**

The Model 2:

$$GNI_R = \alpha_{2R} + \beta_{2R} FDI_R$$
 (56)

 $R^2=0.859,$  which means that there is 85.9 % of the variance is shared between FDI and GNI.

Significance = 0.000, which means that variables have highly significant correlation.

Since  $\beta_{2R}=0.927$ , where 1% increase or decrease in FDI correlates with 0.927% increase or decrease in GNI of Russia.

$$GNI_R = 6268.785 + 0.927 \text{ FDI}_R$$
 (57)

(t = 8.906)

(sign. = 0.000)

### Life expectancy and FDI in Russia

The Model 3:

$$LE_{R} = \alpha_{3R} + \beta_{3R} FDI_{R}$$
 (58)

 $R^2 = 0.439$  which means that there is 44 % of the variance is shared between FDI and LE. Significance = 0.007 which demonstrates that a correlation between FDI and LE is at 10%.

T = 3.189 shows that correlation between the two variables exists in a medium level.

Since  $\beta_{3R}=0.663$ , it means that 1% increase or decrease in FDI correlates with 0.663% rise or fall in LE of Russia.

$$LE_R = 65.473 + 0.663 \text{ FDI}_R$$
 (59)  
 $(t = 3.189)$   
 $(sign. = 0.007)$ 

## Health expenditure and FDI in Russia

The Model 4:

$$HE_R = \alpha_{4R} + \beta_{4R} \, FDI_R \tag{60}$$

 $R^2 = 0.913$ , means that there is 91.3% of the variance is shared between FDI and HE. Significance = 0.000, proves that variables strongly correlate with each other.

T = 11.711 shows existence of high correlation between variables HE and FDI.

Since  $\beta_{4R}$ = 0.956, every 1% increase or decrease of FDI correlates with 0.956% rise or fall in HE in Russia.

$$HE_R = 120.204 + 0.956 \, FDI_R$$
 (61)  
 $(t = 11.711)$   
 $(sign. = 0.000)$ 

### 5.1.9 Regression analysis of data for Tajikistan

Data collected for Tajikistan from the official website of World Bank shows gap in annual data for FDI for the years 1996, 1997 and 1998. Therefore, gap years are substituted with average numbers of the previous and post years.

Table 5.9: The values for the dependent variables in relation with FDI for Tajikistan (1995-2009)

| Variables                    | Sig.  | Beta  | T     | $\mathbb{R}^2$ |
|------------------------------|-------|-------|-------|----------------|
| $SE_{Taj}$                   | 0.095 | 0.447 | 1.799 | 0.199          |
| GNI <sub>Taj</sub>           | 0.008 | 0.656 | 3.138 | 0.431          |
| $LE_{Taj}$                   | 0.013 | 0.626 | 2.896 | 0.392          |
| $\mathrm{HE}_{\mathrm{Taj}}$ | 0.011 | 0.635 | 2.966 | 0.404          |

By looking at the achieved results, we may conclude that according to this analysis FDI in Tajikistan correlates with  $GNI_{Taj}$  at 1% significance level; with  $SE_{Taj}$ ,  $LE_{Taj}$  and  $HE_{Taj}$  at 10% significance level.

### School enrollment, tertiary and FDI in Tajikistan

The model 1:

$$SE_{Taj} = \alpha_{1Taj} + \beta_{1Taj} FDI_{Taj}$$
 (62)

Significance = 0.095 demonstrates that there is low correlation between the two variables.

Since  $\beta_{1Taj} = 0.447$ , that means that 1% increase or decrease in FDI correlates with 0.447% rise or fall in SE in Tajikistan.

T-value = 1.799 which reflects poor correlation between SE and FDI.

### **GNI and FDI in Tajikistan**

The Model 2:

$$GNI_{Taj} = \alpha_{2Taj} + \beta_{2Taj} FDI_{Taj}$$
 (63)

 $R^2 = 0.431$ , which means that there is 43.1 % of the variance is shared between  $FDI_{Taj}$  and  $GNI_{Taj}$ .

Significance = 0.008, which means that variables have good correlation.

T = 3.138 shows that there is strong correlation between the two variables.

Since  $\beta_{2\text{Taj}} = 0.656$ , where 1% increase or decrease in FDI correlates with 0.656% increase or decrease in GNI of Tajikistan.

$$GNI_{Taj} = 940.883 + 0.656 \text{ FDI}_{Taj}$$
 (64)  
 $(t = 3.138)$   
 $(sign. = 0.008)$ 

### Life expectancy and FDI in Tajikistan

The Model 3:

$$LE_{Taj} = \alpha_{3Taj} + \beta_{3Taj} FDI_{Taj}$$
 (65)

 $R^2=0.392$  which means that there is 39.2 % of the variance is shared between FDI and LE. Significance = 0.011 which demonstrates 5% correlation between FDI and LE is low.

T = 2.896 shows that correlation between the two variables exists in a medium level.

Since  $\beta_{3Taj} = 0.626$ , it means that 1% increase or decrease in FDI correlates with 0.626% rise or fall in LE of Tajikistan.

$$LE_{Taj} = 63.800 + 0.626 \text{ FDI}_{Taj}$$
 (66)  
(t = 2.896)  
(sign. = 0.013)

#### Health expenditure and FDI for Tajikistan

The model 4:

$$HE_{Taj} = \alpha_{4Taj} + \beta_{4Taj} FDI_{Taj}$$
 (67)

 $R^2 = 0.404$ , means that there is 40.4% of the variance is shared between FDI and HE. Significance = 0.011, proves that variables correlate with each other at 5% level.

T = 2.966 shows existence of correlation between variables HE and FDI.

Since  $\beta_{4Taj}$ = 0.636, every 1% increase or decrease of FDI correlates with 0.636% rise or fall in HE in Tajikistan.

$$\begin{split} HE_{Taj} &= 9.340 + 0.635 \, FDI_{Taj} \\ (t &= 2.966) \\ (sign. = 0.011) \end{split} \label{eq:eq:energy}$$

## 5.1.10 Regression analysis of data for Turkmenistan

Data collected for Turkmenistan from the official website of the World Bank do not present the data for tertiary School enrollment. Therefore, this study does not cover regression analysis revealing relationship between school enrollment and FDI in Turkmenistan.

Table 5.10: The values for the dependent variables in relation with FDI for Turkmenistan (1995-2009)

| arkinemstar.                   | ,     |       |       |                |
|--------------------------------|-------|-------|-------|----------------|
| Variables                      | Sig.  | Beta  | T     | $\mathbb{R}^2$ |
| $\mathrm{GNI}_{\mathrm{Turk}}$ | 0.002 | 0.743 | 4.003 | 0.552          |
| LE <sub>Turk</sub>             | 0.019 | 0.597 | 2.682 | 0.356          |
| HE <sub>Turk</sub>             | 0.298 | 0.288 | 1.085 | 0.083          |

By looking at the achieved results, we may conclude that according to this analysis FDI in Turkmenistan correlates at 1% with GNI and at 5% with LE and does not correlate with HE at any significance level.

#### **GNI and FDI for Turkmenistan**

The Model 2:

$$GNI_{Turk} = \alpha_{2Turk} + \beta_{2Turk} FDI_{Turk}$$
 (69)

 $R^2=0.552$ , which means that there is 55.2 % of the variance is shared between FDI and GNI.

Significance = 0.002, which indicates that variables strongly correlate.

T = 4.003 proves that a strong correlation between the two variables.

Since  $\beta_{2Turk} = 0.743$ , where 1% increase or decrease in FDI correlates with 0.743% increase or decrease in GNI of Turkmenistan.

$$GNI_{Turk} = 2530.937 + 0.743 \text{ FDI}_{Turk}$$
 (70)  
 $(t = 4.003)$   
 $(sign. = 0.002)$ 

#### Life expectancy and FDI for Turkmenistan

The Model 3:

$$LE_{Turk} = \alpha_{3Turk} + \beta_{3Turk} FDI_{Turk}$$
 (71)

 $R^2 = 0.356$  which means that there is 35.6 % of the variance is shared between FDI and LE. Significance = 0.019 which demonstrates that a 5% correlation between FDI and LE.

T = 2.682 shows that correlation between the two variables exists in a medium level.

Since  $\beta_{3Turk} = 0.597$ , it means that 1% increase or decrease in FDI correlates with 0.597% rise or fall in LE of Turkmenistan.

$$LE_{Turk} = 63.808 + 0.597 \text{ FDI}_{Taj}$$
 (72)  
(t = 2.682)  
(sign. = 0.019)

### Health expenditure and FDI for Turkmenistan

The Model 4:

$$HE_{Turk} = \alpha_{4Turk} + \beta_{4Turk} FDI_{Turk}$$
 (73)

Two variables do not correlate with each other.

### 5.1.11 Regression analysis of data for Ukraine

Data collected for Ukraine from the official website of World Bank shows gap in annual data for tertiary School enrollment for the year 1997. The average number of the previous and next years is substituted for the gap year.

Table 5.11: The values for the dependent variables in relation with FDI for Ukraine (1995-2009)

| Variables          | Sig.  | Beta  | T      | $\mathbb{R}^2$ |
|--------------------|-------|-------|--------|----------------|
| $SE_{Ukr}$         | 0.000 | 0.843 | 5.644  | 0.710          |
| GNI <sub>Ukr</sub> | 0.000 | 0.911 | 7.957  | 0.830          |
| LE <sub>Ukr</sub>  | 0.189 | 0.359 | 1.387  | 0.129          |
| HE <sub>Ukr</sub>  | 0.000 | 0.945 | 10.375 | 0.892          |

By looking at the achieved results, it may be concluded that according to this analysis FDI in Ukraine is significantly correlating at level of 1% with SE, GNI and HE. At the same time, result demonstrates that there is no significant relation between FDI and LE in Ukraine

The explanatory power of the relationship is strong, except for  $LE_{Ukr}$ .

## School enrollment, tertiary and FDI for Ukraine

The Model 1:

$$SE_{Ukr} = \alpha_{1Ukr} + \beta_{1Ukr} FDI_{Ukr}$$
 (74)

71% correlation of the variations are explained by equation (74) in Ukraine. Significance = 0.000 demonstrates that there is strong significant correlation between these two variables.

Since  $\beta_{1Ukr} = 0.843$ , that means that 1% increase or decrease in FDI correlates with 0.843% rise or fall in SE in Ukraine.

T-value = 5.644 which reflects a very strong correlation between SE and FDI in Ukraine.

$$SE_{Ukr} = 49.028 + 0.843 \text{ FDI}_{Ukr}$$
 (75)  
(t = 5.644)  
(sign. = 0.000)

#### **GNI** and **FDI** for Ukraine

The Model 2:

$$GNI_{Ukr} = \alpha_{2Ukr} + \beta_{2Ukr} FDI_{Ukr}$$
 (76)

 $R^2 = 0.830$ , which means that there is 83% of the variance is shared between FDI and GNI.

Significance = 0.000, which means that variables have highly 1% significant level of correlation.

T = 7.957 also demonstrates a very strong correlation between the two variables.

Since  $\beta_{2Ukr} = 0.911$ , where 1% increase or decrease in FDI correlates with 0.911% increase or decrease in GNI of Ukraine.

$$GNI_{Ukr} = 3250.987 + 0.911 \text{ FDI}_{Ukr}$$
 (77)  
 $(t = 7.957)$   
 $(sign. = 0.000)$ 

### Life expectancy and FDI for Ukraine

The Model 3:

$$LE_{Ukr} = \alpha_{3Ukr} + \beta_{3Ukr} FDI_{Ukr}$$
 (78)

There is no significant correlation between FDI and LE in Ukraine.

## Health expenditure and FDI for Ukraine

The model 4:

$$HE_{Ukr} = \alpha_{4Ukr} + \beta_{4Ukr} \, FDI_{Ukr} \tag{79}$$

 $R^2 = 0.892$ , means that there is 89.2% of the variance is shared between FDI and HE.

Significance = 0.000, proves that variables are highly correlating with each other.

T = 10.375 shows existence of very strong correlation between variables HE and FDI.

Since  $\beta_{4Ukr}$ = 0.945, every 1% increase or decrease in FDI correlates with 0.945% rise or fall in HE of Ukraine.

$$HE_{Ukr} = 42.518 + 0.945 \text{ FDI}_{Ukr}$$
 (80)  
(t = 10.375)  
(sign. = 0.000)

### 5.1.12 Regression analysis of data for Uzbekistan

Due to the lack of information for the required period on tertiary school enrollment for Uzbekistan, present study does not cover regression analysis for this indicator in case of Uzbekistan.

Table 5.12: The values for the dependent variables in relation with FDI for Uzbekistan (1995-2009)

| Variables          | Sig.  | Beta  | Т     | $\mathbb{R}^2$ |
|--------------------|-------|-------|-------|----------------|
| GNI <sub>Uzb</sub> | 0.000 | 0.886 | 6.889 | 0.785          |
| LE <sub>Uzb</sub>  | 0.003 | 0.715 | 3.690 | 0.512          |
| HE <sub>Uzb</sub>  | 0.000 | 0.795 | 4.725 | 0.632          |

By looking at the achieved results, it may be concluded that according to this analysis FDI in Uzbekistan correlates with GNI, LE and HE at 1% significance level.

The explanatory power of relationships are strong.

### **GNI and FDI for Uzbekistan**

The model 2:

$$GNI_{Uzb} = \alpha_{2Uzb} + \beta_{2Uzb} FDI_{Uzb}$$
 (81)

 $R^2 = 0.785$ , means that there is 78.5% of the variance is shared between FDI and GNI.

Significance = 0.000, which demonstrates that variables have highly significant level of correlation.

T = 6.889 also demonstrates a very strong correlation.

Since  $\beta_{2Uzb} = 0.886$ , where 1% increase or decrease in FDI correlates with 0.886% increase or decrease in GNI of Uzbekistan.

$$GNI_{Uzb} = 1317.563 + 0.886 \text{ FDI}_{Uzb}$$
 (82)  
(t = 6.889)  
(sign. = 0.000)

### Life expectancy and FDI for Uzbekistan

The Model 3:

$$LE_{Uzb} = \alpha_{3Uzb} + \beta_{3Uzb} FDI_{Uzb}$$
 (83)

 $R^2 = 0.512$  which means that there is 51.2 % of the variance is shared between FDI and LE. Significance = 0.003 which proves a strong correlation between FDI and LE.

T = 3.690 shows that correlation between the two variables exists, but is not too high.

Since  $\beta_{3Uzb} = 0.715$ , it means that 1% increase or decrease in FDI correlates with 0.715% rise or fall in LE of Uzbekistan.

$$LE_{Uzb} = 66.651 + 0.715 \text{ FDI}_{Uzb}$$
 (84)  
(t = 3.690)  
(sign. = 0.003)

## Health expenditure and FDI for Uzbekistan

The Model 4:

$$HE_{Uzb} = \alpha_{4Uzb} + \beta_{4Uzb} FDI_{Uzb}$$
 (85)

 $R^2 = 0.632$ , means that there is 63.2% of the variance is shared between FDI and HE. Significance = 0.000, proves that variables are highly correlating with each other.

T = 4.725 shows existence of correlation between variables  $HE_{Uzb}$  and  $FDI_{Uzb}$ .

Since  $\beta_{4Uzb}$ = 0.795, every 1% increase or decrease of FDI correlates with 0.795% rise or fall in HE of Uzbekistan.

$$HE_{Uzb} = 25.192 + 0.795 \text{ FDI}_{Uzb}$$
 (86)  
 $(t = 4.725)$   
 $(sign. = 0.000)$ 

# Chapter 6

## CONCLUSION

The aim of the present work is to see the relationship between FDI and HDI in countries of CIS region. Present research demonstrates that, first of all, in most of CIS countries FDI correlates with GNI. Second, in most of the countries of CIS FDI does not correlate with SE. Third, the results of the correlations show that in all CIS countries except Azerbaijan, to some extent there are significant correlations between FDI inflows and four HDI indicators; namely SE, GNI, LE and HE.

In Azerbaijan there is no correlation between FDI and four HDI indicators.

In Armenia there is a strong correlation of FDI with SE, GNI, LE and HE.

In Belarus there is a strong correlation of FDI with SE, GNI, LE and HE.

In Georgia there is no correlation of FDI with SE, but strong correlation with GNI, LE and HE.

In Kazakhstan there is no correlation of FDI with SE, but strong correlation with GNI, LE and HE.

In Kyrgyzstan there is a weak correlation between FDI and SE, no correlation with LE, but strong with GNI and HE.

In Moldova there is a strong correlation of FDI with SE, GNI, HE, but a weak correlation with LE.

In Russia there is a strong correlation with all four HDI indicators.

In Tajikistan there is only a very low correlation of FDI with SE, strong correlation with GNI and weak correlation with LE and HE.

In Turkmenistan there is strong correlation of FDI with GNI and LE, but no correlation with HE (accurate data for SE in Turkmenistan could not be collected).

In Ukraine there is revealed strong correlation of FDI with SE, GNI and HE, but no correlation with LE.

In Uzbekistan there is a strong correlation with GNI, LE and HE (analysis for Uzbekistan also does not include SE).

The research is aimed at revealing the possible positive or negative impacts of FDI on recipient countries of CIS during the period 1995-2009. Regression analysis technique is used to test whether in the CIS region FDI correlates with improvements in the life quality of population according to four indicators of HDI, such as tertiary school enrollment, life expectancy, GNI and health expenditures. Theoretical discussions are based on published books, articles and news presenting information about CIS countries' situation on FDI and HDI.

CIS may be characterized as a region in the process of improving its economies after the turbulent transition period that took place after 1991. Therefore, it is significant for these countries to get maximum benefit from foreign investment inflows into their countries.

The situation that corruption rate is high in all CIS region creates a favorable condition for those foreign investors that seek to avoid local rules, create business relations answering their own requirements and helping them to achieve whatever is desired for their own benefit.

The current research, demonstrated a strong interest of foreign investors to countries of CIS. These countries attract powerful foreigners with their cheap labor force, cheap natural resources, possibilities to create and expand new business ideas, etc.

FDI inflows during 1995-2009 demonstrate upward trend in all CIS countries. It proves that these countries' resources increased each year.

However, statistics on HDI rank does not demonstrate improved situations by the end of the same period, on the contrary, it demonstrates worsening situation, which means that life quality during the period of 14 years have not positively changed.

When summarizing results on four HDI indicators, it may be seen that tertiary School enrollment in most of the countries been increasing through the period, but with strong volatility in Kazakhstan, Azerbaijan, Armenia, Kyrgyzstan, Tajikistan, smooth upward changes in tertiary school enrollment experienced only by Russia, Ukraine, Belarus and only in Tajikistan school enrollment decreased during the period.

GNI per capita and health expenditures in all CIS countries generally show a positive increase during the period.

Life expectancy in all CIS countries increased, but at different levels. The best increase is demonstrated in Azerbaijan, Armenia and Tajikistan. These countries increased life expectancy for five years during the period of 14 years.

According to official governmental sources of CIS countries, governments have pursued FDI attracting policies. Policies are usually implemented through creating a favorable business climate in the country. First of all, CIS countries created a legal system that provided security and protection for foreign businesses. Nevertheless, legal system is not working properly due to the high corruption, which prevents normal working of existing rules.

Another finding of this research is that there is a lack of transparency in CIS region statistics. Many countries absolutely do not publish some of their statistical data. This is especially attributed to closed economies of the region: the examples are Turkmenistan and Uzbekistan. It is difficult to follow the clear and full data about what is really happening in economies of these countries. The reason for such a situation is both corrupted governments hiding economic figures and the system which does not work properly in the country, since real figures about business are easily avoided, thus collecting real statistical information becomes difficult and as the result, not accurate.

Summarized regression results of the thesis demonstrated how FDI is correlating with the four HDI indicators in each country. It has been found that only in Azerbaijan, FDI does not correlate with any of the four dependent variables at significant levels. It means that foreign investment inflows into Azerbaijan during the period 1995-2009 did not cause any significant changes in the four HDI indicators. At the same time, it is seen that Azerbaijan is one of the biggest FDI recipients in the CIS (after Russia, Kazakhstan and Ukraine).

High correlation is observed in Armenia, Belarus, Russia and Ukraine. Other CIS countries have medium or low correlation between tested indicators.

Two countries in the region, which are Tajikistan and Turkmenistan demonstrate weak correlations.

Noticeable fact is that in most of the countries, there is weaker correlation between FDI and tertiary school enrollment and also on health expenditure. That shows that foreign investors did not much support local populations of host countries for the professional education. Generally, in most cases, local people employed as workers, which are getting salaries according to local low rates or service providers, where there

is not that much need for professional education. At the same time, foreigners are working in administrative positions and earning salaries according to their home country's high rates. It is seen that salaries of the local population do not increase much and as a result, people still can't increase funds for health expenditures. It should be also mentioned, that health care system in CIS region is also corrupted and even though, medical treatment is officially for free, in reality such treatment is usually of a very low quality and people understand that for taking normal cure additional payments are required.

Overall, the research shows that FDI has been positively correlating with the four HDI indicators. Thus, FDI's impact has been positive in all CIS countries except Azerbaijan. In Azerbaijan, the FDI and HDI indicators have no correlation.

The results could be improved if a longer time period could be analyzed. However, the difficulty in finding accurate data in some countries limited expanding the data for more years.

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#### **APPENDIX**

Appendix A: Regression Analysis results for Azerbaijan for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Azerbaijan:

| Model Summary               |      |                         |                            |         |  |  |
|-----------------------------|------|-------------------------|----------------------------|---------|--|--|
| Model R R <sup>2</sup> Adju |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |         |  |  |
| 1                           | .031 | .001                    | 076                        | 1.68470 |  |  |

| ANOVA <sup>b</sup> |                            |    |       |      |       |  |  |  |
|--------------------|----------------------------|----|-------|------|-------|--|--|--|
| Model              | Model Sum Df Square Square |    |       |      |       |  |  |  |
| 1 Regression       | .036                       | 1  | .036  | .013 | .912ª |  |  |  |
| Residual           | 36.897                     | 13 | 2.838 |      |       |  |  |  |
| Total              | 36.933                     | 14 |       |      |       |  |  |  |

| Coefficients <sup>a</sup> |           |               |        |        |      |  |  |
|---------------------------|-----------|---------------|--------|--------|------|--|--|
|                           | Unstand.  |               | Stand. |        | Sig. |  |  |
| Model                     | coeff.    |               | coeff. | Т      |      |  |  |
|                           | В         | Std.<br>Error | Beta   |        |      |  |  |
| 1 (Constant)              | 15.717    | .458          |        | 34.280 | .000 |  |  |
| FDI                       | 2.727E-11 | .000          | .031   | .113   | .912 |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Azerbaijan:

|                        | Model Summary |                         |                            |            |  |  |  |
|------------------------|---------------|-------------------------|----------------------------|------------|--|--|--|
| Model R R <sup>2</sup> |               | Adjusted R <sup>2</sup> | Std. Error of the estimate |            |  |  |  |
| 1                      | .395ª         | .156                    | .091                       | 2291.47403 |  |  |  |

| ANOVAb       |            |    |             |       |                   |  |  |  |
|--------------|------------|----|-------------|-------|-------------------|--|--|--|
| Model        | Sum E      |    | Mean        | F     | Sig.              |  |  |  |
|              | of Squares |    | Square      |       |                   |  |  |  |
| 1 Regression | 1.265E7    | 1  | 1.265E7     | 2.410 | .145 <sup>a</sup> |  |  |  |
| Residual     | 6.826E7    | 13 | 5250853.224 |       |                   |  |  |  |
| Total        | 8.092E7    | 14 |             |       |                   |  |  |  |

| Coefficients <sup>a</sup> |           |         |        |        |      |  |  |  |
|---------------------------|-----------|---------|--------|--------|------|--|--|--|
|                           | Unsta     | ınd.    | Stand. |        |      |  |  |  |
| Model                     | coet      | ff.     | coeff. | Т      | Sig. |  |  |  |
|                           | В         | Std.    | Beta   |        |      |  |  |  |
|                           | Б         | Error   | Deta   |        |      |  |  |  |
| 1 (Constant)              | 3906.613  | 623.617 |        | 6.264  | .000 |  |  |  |
| FDI                       | -5.082E-7 | .000    | 395    | -1.551 | .145 |  |  |  |

# Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Azerbaijan:

|                        | Model Summary |      |                         |                            |  |  |  |
|------------------------|---------------|------|-------------------------|----------------------------|--|--|--|
| Model R R <sup>2</sup> |               |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |
| 1                      | .266ª         | .071 | 001                     | 1.84730                    |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |            |    |        |      |                   |  |  |  |
|-------------------------------|------------|----|--------|------|-------------------|--|--|--|
| Model                         | Sum        | Df | Mean   | F    | Sig.              |  |  |  |
|                               | of Squares |    | Square |      |                   |  |  |  |
| 1 Regression                  | 3.370      | 1  | 3.370  | .988 | .338 <sup>a</sup> |  |  |  |
| Residual                      | 44.363     | 13 | 3.413  |      |                   |  |  |  |
| Total                         | 47.733     | 14 |        |      |                   |  |  |  |

| Coefficients <sup>a</sup> |            |               |        |         |      |  |  |  |
|---------------------------|------------|---------------|--------|---------|------|--|--|--|
|                           | Unstand    | d.            | Stand. |         |      |  |  |  |
| Model                     | coeff.     |               | coeff. | Т       | Sig. |  |  |  |
| Wiodel                    | В          | Std.<br>Error | Beta   |         |      |  |  |  |
| 1 (Constant)              | 67.691     | .503          |        | 134.645 | .000 |  |  |  |
| FDI                       | -2.623E-10 | .000          | 266    | 266     | .338 |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Azerbaijan:

|                        | Model Summary |                         |                            |          |  |  |  |
|------------------------|---------------|-------------------------|----------------------------|----------|--|--|--|
| Model R R <sup>2</sup> |               | Adjusted R <sup>2</sup> | Std. Error of the estimate |          |  |  |  |
| 1                      | .364ª         | .133                    | .066                       | 84.63667 |  |  |  |

| <b>ANOVA</b> <sup>b</sup> |                   |    |                |       |       |  |  |  |
|---------------------------|-------------------|----|----------------|-------|-------|--|--|--|
| Model                     | Sum<br>of Squares | Df | Mean<br>Square | F     | Sig.  |  |  |  |
| 1 Regression              | 14257.171         | 1  | 14257.171      | 1.990 | .182ª |  |  |  |
| Residual                  | 93123.763         | 13 | 7163.366       |       |       |  |  |  |
| Total                     | 107380.933        | 14 |                |       |       |  |  |  |

| Coefficients <sup>a</sup> |           |        |        |        |      |  |  |  |
|---------------------------|-----------|--------|--------|--------|------|--|--|--|
|                           | Unsta     | nd.    | Stand. |        |      |  |  |  |
| Model                     | coef      | f.     | coeff. | Т      | Sig. |  |  |  |
|                           | В         | Std.   | Beta   |        |      |  |  |  |
|                           |           | Error  |        |        |      |  |  |  |
| 1 (Constant)              | 100.536   | 23.034 |        | 4.365  | .001 |  |  |  |
| FDI                       | -1.706E-8 | .000   | 364    | -1.411 | .182 |  |  |  |

Appendix B: Regression Analysis results for Armenia for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Armenia:

|                        | Model Summary     |      |                         |                            |  |  |  |  |  |
|------------------------|-------------------|------|-------------------------|----------------------------|--|--|--|--|--|
| Model R R <sup>2</sup> |                   |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1                      | .923 <sup>a</sup> | .852 | .840                    | 3.98782                    |  |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |          |        |       |  |  |  |  |
|--------------------|------------|----|----------|--------|-------|--|--|--|--|
| Model              | Sum        | Df | Mean     | T.     | C: ~  |  |  |  |  |
| Model              | of Squares | Df | Square   | F      | Sig.  |  |  |  |  |
| 1 Regression       | 1188.598   | 1  | 1188.598 | 74.742 | .000° |  |  |  |  |
| Residual           | 206.735    | 13 | 15.903   |        |       |  |  |  |  |
| Total              | 1395.333   | 14 |          |        |       |  |  |  |  |

|       | Coefficients <sup>a</sup> |                 |        |        |        |      |  |  |  |
|-------|---------------------------|-----------------|--------|--------|--------|------|--|--|--|
|       |                           | Unstand.        |        | Stand. |        |      |  |  |  |
| Model | coeff.                    |                 | coeff. | Т      | Sig.   |      |  |  |  |
|       |                           | B Std.<br>Error |        | Beta   |        |      |  |  |  |
| 1     | (Constant)                | 18.966          | 1.440  |        | 13.173 | .000 |  |  |  |
|       | FDI                       | 3.111E-8        | .000   | .923   | 8.645  | .000 |  |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Armenia:

|       | Model Summary |       |                         |                            |  |  |  |  |  |
|-------|---------------|-------|-------------------------|----------------------------|--|--|--|--|--|
| Model | R             | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1     | .927ª         | .860  | .849                    | 649.33828                  |  |  |  |  |  |

| ANOVA <sup>b</sup> |             |    |            |        |       |  |  |  |  |
|--------------------|-------------|----|------------|--------|-------|--|--|--|--|
| Model              | Sum         | Df | Mean       | F      | Sig   |  |  |  |  |
| Model              | of Squares  | DI | Square     | Г      | Sig.  |  |  |  |  |
| 1 Regression       | 3.365E7     | 1  | 3.365E7    | 79.806 | .000ª |  |  |  |  |
| Residual           | 5481322.585 | 13 | 421640.199 |        |       |  |  |  |  |
| Total              | 3.913E7     | 14 |            |        |       |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |       |      |  |  |  |
|---------------------------|----------|---------------|--------|-------|------|--|--|--|
|                           | Unst     | and.          | Stand. |       |      |  |  |  |
| Model                     | coe      | ff.           | coeff. | Т     | Sig. |  |  |  |
|                           | В        | Std.<br>Error | Beta   |       |      |  |  |  |
| 1 (Constant)              | 1800.764 | 234.440       |        | 7.681 | .000 |  |  |  |
| FDI                       | 5.234E-6 | .000          | .927   | 8.933 | .000 |  |  |  |

#### Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Armenia:

|       | Model Summary          |      |                         |                            |  |  |  |  |  |
|-------|------------------------|------|-------------------------|----------------------------|--|--|--|--|--|
| Model | Model R R <sup>2</sup> |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1     | .729 <sup>a</sup>      | .532 | .496                    | 1.22556                    |  |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |        |                   |  |  |  |  |
|--------------------|-------------------|----|----------------|--------|-------------------|--|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F      | Sig.              |  |  |  |  |
| 1 Regression       | 22.207            | 1  | 22.207         | 14.785 | .002 <sup>a</sup> |  |  |  |  |
| Residual           | 19.526            | 13 | 1.502          |        |                   |  |  |  |  |
| Total              | 41.733            | 14 |                |        |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |         |      |  |  |  |  |
|---------------------------|----------|---------------|--------|---------|------|--|--|--|--|
|                           | Unstai   | nd.           | Stand. |         |      |  |  |  |  |
| Model                     | coeff    | f.            | coeff. | t       | Sig. |  |  |  |  |
|                           | В        | Std.<br>Error | Beta   |         |      |  |  |  |  |
| 1 (Constant               | 70.277   | .442          |        | 158.825 | .000 |  |  |  |  |
| FDI                       | 4.252E-9 | .000          | .729   | 3.845   | .002 |  |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Armenia:

|       | Model Summary          |      |                         |                            |  |  |  |  |  |
|-------|------------------------|------|-------------------------|----------------------------|--|--|--|--|--|
| Model | Model R R <sup>2</sup> |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1     | .972ª                  | .945 | .941                    | 9.27125                    |  |  |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |            |    |           |       |       |  |  |  |  |
|-------------------------------|------------|----|-----------|-------|-------|--|--|--|--|
| Model                         | Sum        | Df | Mean      | F     | Sig.  |  |  |  |  |
|                               | of Squares |    | Square    |       |       |  |  |  |  |
| 1 Regression                  | 14257.171  | 1  | 14257.171 | 1.990 | .182ª |  |  |  |  |
| Residual                      | 93123.763  | 13 | 7163.366  |       |       |  |  |  |  |
| Total                         | 107380.933 | 14 |           |       |       |  |  |  |  |

|   | Coefficients <sup>a</sup> |          |       |        |        |      |  |  |  |
|---|---------------------------|----------|-------|--------|--------|------|--|--|--|
|   |                           | Unstai   | nd.   | Stand. |        |      |  |  |  |
|   | Model                     | coef     | f.    | coeff. | t      | Sig. |  |  |  |
|   |                           | В        | Std.  | Beta   |        |      |  |  |  |
|   |                           | D        | Error | Botta  |        |      |  |  |  |
| 1 | (Constant)                | 29.339   | 3.347 |        | 8.765  | .000 |  |  |  |
|   | FDI                       | 1.254E-7 | .000  | .972   | 14.985 | .000 |  |  |  |

Appendix C: Regression Analysis results for Belarus for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Belarus:

|       | Model Summary     |                |                         |                            |  |  |  |  |  |  |
|-------|-------------------|----------------|-------------------------|----------------------------|--|--|--|--|--|--|
| Model | R                 | $\mathbb{R}^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |  |
| 1     | .732 <sup>a</sup> | .536           | .501                    | 7.84603                    |  |  |  |  |  |  |

| ANOVAb       |            |    |         |        |                   |  |  |  |  |  |
|--------------|------------|----|---------|--------|-------------------|--|--|--|--|--|
| Model        | Sum        | Df | Mean    | F      | C:~               |  |  |  |  |  |
| Model        | of Squares | Di | Square  | T'     | Sig.              |  |  |  |  |  |
| 1 Regression | 925.451    | 1  | 925.451 | 15.033 | .002 <sup>a</sup> |  |  |  |  |  |
| Residual     | 800.282    | 13 | 61.560  |        |                   |  |  |  |  |  |
| Total        | 1725.733   | 14 |         |        |                   |  |  |  |  |  |

| Coefficients <sup>a</sup> |          |       |        |        |      |  |  |  |  |
|---------------------------|----------|-------|--------|--------|------|--|--|--|--|
|                           | Unstai   | nd.   | Stand. |        |      |  |  |  |  |
| Model                     | coef     | f.    | coeff. | Т      | Sig. |  |  |  |  |
|                           | В        | Std.  | Beta   |        |      |  |  |  |  |
|                           |          | Error | Botta  |        |      |  |  |  |  |
| 1 (Constant)              | 51.292   | 2.588 |        | 19.823 | .000 |  |  |  |  |
| FDI                       | 1.111E-8 | .000  | .732   | 3.877  | .002 |  |  |  |  |

## GNI per capita, PPP (current international percent) and FDI, net inflows (BoP, current US dollar) in Belarus:

|       | Model Summary     |       |                         |                            |  |  |  |  |  |  |
|-------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|--|--|
| Model | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |  |
| 1     | .854 <sup>a</sup> | .729  | .708                    | 1759.82492                 |  |  |  |  |  |  |

| ANOVAb       |            |    |             |        |       |  |  |  |  |
|--------------|------------|----|-------------|--------|-------|--|--|--|--|
| N/ 1.1       | Sum        | DC | Mean        | Г      | a.    |  |  |  |  |
| Model        | of Squares | Df | Square      | F      | Sig.  |  |  |  |  |
| 1 Regression | 1.083E8    | 1  | 1.083E8     | 34.973 | .000° |  |  |  |  |
| Residual     | 4.026E7    | 13 | 3096983.736 |        |       |  |  |  |  |
| Total        | 1.486E8    | 14 |             |        |       |  |  |  |  |

|   | Coefficients <sup>a</sup> |          |         |        |       |      |  |  |  |  |
|---|---------------------------|----------|---------|--------|-------|------|--|--|--|--|
|   |                           | Unsta    | and.    | Stand. |       |      |  |  |  |  |
|   | Model                     | coe      | ff.     | coeff. | Т     | Sig. |  |  |  |  |
|   |                           | В        | Std.    | Beta   |       |      |  |  |  |  |
|   |                           |          | Error   |        |       |      |  |  |  |  |
| 1 | (Constant)                | 5008.792 | 580.368 |        | 8.630 | .000 |  |  |  |  |
|   | FDI                       | 3.802E-6 | .000    | .854   | 5.914 | .000 |  |  |  |  |

Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Belarus:

| Model Summary |                   |       |                         |                            |  |  |  |  |  |
|---------------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|--|
| Model         | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1             | .750 <sup>a</sup> | .563  | .530                    | .50976                     |  |  |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |            |    |        |        |                   |  |  |  |  |
|-------------------------------|------------|----|--------|--------|-------------------|--|--|--|--|
| Model                         | Sum        | Df | Mean   | F      | Sig.              |  |  |  |  |
|                               | of Squares |    | Square |        |                   |  |  |  |  |
| 1 Regression                  | 4.355      | 1  | 4.355  | 16.761 | .001 <sup>a</sup> |  |  |  |  |
| Residual                      | 3.378      | 13 | .260   |        |                   |  |  |  |  |
| Total                         | 7.733      | 14 |        |        |                   |  |  |  |  |

|   | Coefficients <sup>a</sup> |           |       |        |         |      |  |  |  |  |
|---|---------------------------|-----------|-------|--------|---------|------|--|--|--|--|
|   |                           | Unstan    | d.    | Stand. |         |      |  |  |  |  |
|   | Model                     | coeff     |       | coeff. | Т       | Sig. |  |  |  |  |
|   |                           | В         | Std.  | Beta   |         |      |  |  |  |  |
|   |                           |           | Error |        |         |      |  |  |  |  |
| 1 | (Constant)                | 68.438    | .168  |        | 407.102 | .000 |  |  |  |  |
|   | FDI                       | 7.624E-10 | .000  | .750   | 4.094   | .001 |  |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Belarus:

|       | Model Summary |                |                         |                            |  |  |  |  |  |  |
|-------|---------------|----------------|-------------------------|----------------------------|--|--|--|--|--|--|
| Model | R             | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |  |
| 1     | .877ª         | .768           | .751                    | 47.77986                   |  |  |  |  |  |  |

| ANOVAb       |            |    |           |        |                   |  |  |  |  |
|--------------|------------|----|-----------|--------|-------------------|--|--|--|--|
| Model        | Sum        | Df | Mean      | F      | C:~               |  |  |  |  |
| Model        | of Squares | Di | Square    | Г      | Sig.              |  |  |  |  |
| 1 Regression | 98451.835  | 1  | 98451.835 | 43.125 | .000 <sup>a</sup> |  |  |  |  |
| Residual     | 29677.899  | 13 | 2282.915  |        |                   |  |  |  |  |
| Total        | 128129.733 | 14 |           |        |                   |  |  |  |  |

|   | Coefficients <sup>a</sup> |          |        |        |       |      |  |  |  |  |
|---|---------------------------|----------|--------|--------|-------|------|--|--|--|--|
|   |                           | Unsta    | ind.   | Stand. |       |      |  |  |  |  |
|   | Model                     | coef     | f.     | coeff. | Т     | Sig. |  |  |  |  |
|   |                           | В        | Std.   | Beta   |       |      |  |  |  |  |
|   |                           | _        | Error  |        |       |      |  |  |  |  |
| 1 | (Constant)                | 91.158   | 15.757 |        | 5.785 | .000 |  |  |  |  |
|   | FDI                       | 1.146E-7 | .000   | .877   | 6.567 | .000 |  |  |  |  |

Appendix D: Regression Analysis results for Georgia for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Georgia:

| Model Summary          |                   |      |                         |                            |  |  |  |  |
|------------------------|-------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model R R <sup>2</sup> |                   |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1                      | .343 <sup>a</sup> | .118 | .038                    | 4.89769                    |  |  |  |  |

| $ANOVA^b$    |            |    |        |       |                   |  |  |  |  |
|--------------|------------|----|--------|-------|-------------------|--|--|--|--|
| Model        | Sum        | Df | Mean   | T.    | C: ~              |  |  |  |  |
| Model        | of Squares | Df | Square | F     | Sig.              |  |  |  |  |
| 1 Regression | 35.216     | 1  | 35.216 | 1.468 | .251 <sup>a</sup> |  |  |  |  |
| Residual     | 263.861    | 11 | 23.987 |       |                   |  |  |  |  |
| Total        | 299.077    | 12 |        |       |                   |  |  |  |  |

|       | <b>Coefficients</b> <sup>a</sup> |           |        |        |        |      |  |  |  |
|-------|----------------------------------|-----------|--------|--------|--------|------|--|--|--|
|       |                                  | Unsta     | nd.    | Stand. |        |      |  |  |  |
| Model | coef                             | f.        | coeff. | Т      | Sig.   |      |  |  |  |
|       |                                  | В         | Std.   | Beta   |        |      |  |  |  |
|       |                                  | Б         | Error  | Deta   |        |      |  |  |  |
| 1     | (Constant)                       | 40.344    | 1.970  |        | 20.482 | .000 |  |  |  |
|       | FDI                              | -3.031E-9 | .000   | 343    | -1.212 | .251 |  |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Georgia:

|       | Model Summary          |      |                         |                            |  |  |  |  |  |
|-------|------------------------|------|-------------------------|----------------------------|--|--|--|--|--|
| Model | Model R R <sup>2</sup> |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1     | .808ª                  | .654 | .622                    | 1418.84436                 |  |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |             |        |                   |  |  |  |  |
|--------------------|------------|----|-------------|--------|-------------------|--|--|--|--|
| N/ 1.1             | Sum        | DC | Mean        | Г      | a.                |  |  |  |  |
| Model              | of Squares | Df | Square      | F      | Sig.              |  |  |  |  |
| 1 Regression       | 4.180E7    | 1  | 4.180E7     | 20.762 | .001 <sup>a</sup> |  |  |  |  |
| Residual           | 2.214E7    | 11 | 2013119.314 |        |                   |  |  |  |  |
| Total              | 6.394E7    | 12 |             |        |                   |  |  |  |  |

|       | Coefficients <sup>a</sup> |          |         |        |       |      |  |  |  |  |
|-------|---------------------------|----------|---------|--------|-------|------|--|--|--|--|
|       |                           | Unsta    | and.    | Stand. |       |      |  |  |  |  |
| Model | coe                       | ff.      | coeff.  | Т      | Sig.  |      |  |  |  |  |
|       | В                         | Std.     |         |        |       |      |  |  |  |  |
| 1     | (Constant)                | 4839.503 | 570.615 |        | 8.481 | .000 |  |  |  |  |
|       | FDI                       | 3.302E-6 | .000    | .808   | 4.556 | .001 |  |  |  |  |

Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Georgia:

|                        | Model Summary     |      |                         |                            |  |  |  |  |  |  |
|------------------------|-------------------|------|-------------------------|----------------------------|--|--|--|--|--|--|
| Model R R <sup>2</sup> |                   |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |  |
| 1                      | .712 <sup>a</sup> | .506 | .462                    | .58751                     |  |  |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |        |                   |  |  |  |  |
|--------------------|-------------------|----|----------------|--------|-------------------|--|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F      | Sig.              |  |  |  |  |
| 1 Regression       | 3.859             | 1  | 3.895          | 11.286 | .006 <sup>a</sup> |  |  |  |  |
| Residual           | 3.797             | 11 | .345           |        |                   |  |  |  |  |
| Total              | 7.692             | 12 |                |        |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |         |      |  |  |  |
|---------------------------|----------|---------------|--------|---------|------|--|--|--|
|                           | Unstai   | nd.           | Stand. |         |      |  |  |  |
| Model                     | coefi    | f.            | coeff. | t       | Sig. |  |  |  |
|                           | В        | Std.<br>Error | Beta   |         |      |  |  |  |
| 1 (Constant)              | 71.579   | .236          |        | 302.945 | .000 |  |  |  |
| FDI                       | 1.008E-9 | .000          | .712   | 3.359   | .00  |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Georgia:

|                        | Model Summary |                         |                            |          |  |  |  |  |  |
|------------------------|---------------|-------------------------|----------------------------|----------|--|--|--|--|--|
| Model R R <sup>2</sup> |               | Adjusted R <sup>2</sup> | Std. Error of the estimate |          |  |  |  |  |  |
| 1                      | .807ª         | .652                    | .620                       | 48.50225 |  |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |        |                   |  |  |  |  |
|--------------------|-------------------|----|----------------|--------|-------------------|--|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F      | Sig.              |  |  |  |  |
| 1 Regression       | 48380.081         | 1  | 48380.081      | 20.566 | .001 <sup>a</sup> |  |  |  |  |
| Residual           | 25877.150         | 11 | 2352.468       |        |                   |  |  |  |  |
| Total              | 74257.231         | 12 |                |        |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |        |        |       |      |  |  |  |
|---------------------------|----------|--------|--------|-------|------|--|--|--|
|                           | Unsta    | nd.    | Stand. |       |      |  |  |  |
| Model                     | coef     | f.     | coeff. | t     | Sig. |  |  |  |
|                           | В        | Std.   | Beta   |       |      |  |  |  |
|                           |          | Error  |        |       |      |  |  |  |
| 1 (Constant)              | 47.480   | 19.506 |        | 2.434 | .033 |  |  |  |
| FDI                       | 1.123E-7 | .000   | .807   | 4.535 | .001 |  |  |  |

Appendix E: Regression Analysis results for Kazakhstan for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Kazakhstan:

| Model Summary                     |                   |                         |                            |         |  |  |  |  |
|-----------------------------------|-------------------|-------------------------|----------------------------|---------|--|--|--|--|
| Model R R <sup>2</sup> Adjusted F |                   | Adjusted R <sup>2</sup> | Std. Error of the estimate |         |  |  |  |  |
| 1                                 | .544 <sup>a</sup> | .296                    | .242                       | 8.64629 |  |  |  |  |

| ANOVAb       |            |    |         |       |                   |  |  |  |  |
|--------------|------------|----|---------|-------|-------------------|--|--|--|--|
| Model        | Sum        | Df | Mean    | F     | Sig.              |  |  |  |  |
| Model        | of Squares | Di | Square  | Г     |                   |  |  |  |  |
| 1 Regression | 408.576    | 1  | 408.576 | 5.465 | .036 <sup>a</sup> |  |  |  |  |
| Residual     | 971.857    | 13 | 74.758  |       |                   |  |  |  |  |
| Total        | 1380.433   | 14 |         |       |                   |  |  |  |  |

|       | Coefficients <sup>a</sup> |          |        |        |        |      |  |  |  |
|-------|---------------------------|----------|--------|--------|--------|------|--|--|--|
|       |                           | Unstand. |        | Stand. |        | Sig. |  |  |  |
| Model | coef                      | ff.      | coeff. | Т      |        |      |  |  |  |
|       | B Std. Beta Error         |          |        |        |        |      |  |  |  |
| 1     | (Constant)                | 33.654   | 3.115  |        | 10.804 | .000 |  |  |  |
|       | FDI                       | 1.144E-9 | .000   | .544   | 2.338  | .036 |  |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Kazakhstan:

| Model Summary |                        |      |                         |                            |  |  |  |  |
|---------------|------------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model         | Model R R <sup>2</sup> |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1             | .875ª                  | .766 | .748                    | 1197.57422                 |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |             |        |       |  |  |  |  |
|--------------------|------------|----|-------------|--------|-------|--|--|--|--|
| Model              | Sum Df     |    | Mean        | F      | Sig.  |  |  |  |  |
| 1110001            | of Squares |    | Square      |        | B     |  |  |  |  |
| 1 Regression       | 6.119E7    | 1  | 6.119E7     | 42.665 | .000ª |  |  |  |  |
| Residual           | 1.864E7    | 13 | 1434184.002 |        |       |  |  |  |  |
| Total              | 7.983E7    | 14 |             |        |       |  |  |  |  |

| Coefficients <sup>a</sup> |                   |         |        |        |      |  |  |  |
|---------------------------|-------------------|---------|--------|--------|------|--|--|--|
|                           | Unsta             | and.    | Stand. |        |      |  |  |  |
| Model                     | coe               | ff.     | coeff. | T      | Sig. |  |  |  |
|                           | B Std. Beta Error |         |        |        |      |  |  |  |
| 1 (Constant)              | 4353.125          | 431.467 |        | 10.089 | .000 |  |  |  |
| FDI                       | 4.428E-7          | .000    | .875   | 6.532  | .000 |  |  |  |

### Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Kazakhstan:

| Model Summary          |       |      |                         |                            |  |  |  |  |
|------------------------|-------|------|-------------------------|----------------------------|--|--|--|--|
| Model R R <sup>2</sup> |       |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1                      | .783ª | .612 | .583                    | .68497                     |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |        |        |                   |  |  |  |  |
|--------------------|------------|----|--------|--------|-------------------|--|--|--|--|
| Model              | Sum        | Df | Mean   | F      | Sig.              |  |  |  |  |
|                    | of Squares |    | Square |        | Ö                 |  |  |  |  |
| 1 Regression       | 9.634      | 1  | 9.634  | 20.533 | .001 <sup>a</sup> |  |  |  |  |
| Residual           | 6.099      | 13 | .469   |        |                   |  |  |  |  |
| Total              | 15.733     | 14 |        |        |                   |  |  |  |  |

| Coefficients <sup>a</sup> |           |               |        |         |      |  |  |  |
|---------------------------|-----------|---------------|--------|---------|------|--|--|--|
|                           | Unstan    | d.            | Stand. |         |      |  |  |  |
| Model                     | coeff     | -             | coeff. | t       | Sig. |  |  |  |
|                           | В         | Std.<br>Error | Beta   |         |      |  |  |  |
| 1 (Constant)              | 65.087    | .247          |        | 263.740 | .000 |  |  |  |
| FDI                       | 1.757E-10 | .000          | .783   | 4.531   | .001 |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Kazakhstan:

| Model Summary |                        |      |                         |                            |  |  |  |  |
|---------------|------------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model         | Model R R <sup>2</sup> |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1             | .957ª                  | .915 | .908                    | 30.78497                   |  |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |                   |    |                |         |                   |  |  |  |  |
|-------------------------------|-------------------|----|----------------|---------|-------------------|--|--|--|--|
| Model                         | Sum<br>of Squares | Df | Mean<br>Square | F       | Sig.              |  |  |  |  |
| 1 Regression                  | 132582.111        | 1  | 132582.111     | 139.897 | .000 <sup>a</sup> |  |  |  |  |
| Residual                      | 12320.289         | 13 | 947.715        |         |                   |  |  |  |  |
| Total                         | 144902.400        | 14 |                |         |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |        |      |  |  |  |  |
|---------------------------|----------|---------------|--------|--------|------|--|--|--|--|
|                           | Unsta    | nd.           | Stand. |        |      |  |  |  |  |
| Model                     | coef     | f.            | coeff. | t      | Sig. |  |  |  |  |
|                           | В        | Std.<br>Error | Beta   |        |      |  |  |  |  |
| 1 (Constant)              | 35.370   | 11.091        |        | 3.183  | .007 |  |  |  |  |
| FDI                       | 2.061E-8 | .000          | .957   | 11.828 | .000 |  |  |  |  |

Appendix F: Regression Analysis results for Kyrgyzstan for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Kyrgyzstan:

| Model Summary |                   |                |                         |                            |  |  |  |
|---------------|-------------------|----------------|-------------------------|----------------------------|--|--|--|
| Model         | R                 | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |
| 1             | .502 <sup>a</sup> | .252           | .194                    | 8.88028                    |  |  |  |

| ANOVAb       |            |    |         |       |                   |  |  |  |  |
|--------------|------------|----|---------|-------|-------------------|--|--|--|--|
| Model        | Sum        | Df | Mean    | F     | Sig.              |  |  |  |  |
| Wiodei       | of Squares | Di | Square  |       |                   |  |  |  |  |
| 1 Regression | 345.227    | 1  | 345.227 | 4.378 | .057 <sup>a</sup> |  |  |  |  |
| Residual     | 1025.173   | 13 | 78.859  |       |                   |  |  |  |  |
| Total        | 1370.400   | 14 |         |       |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |       |      |  |  |  |
|---------------------------|----------|---------------|--------|-------|------|--|--|--|
|                           | Unsta    | ınd.          | Stand. |       |      |  |  |  |
| Model                     | coeff.   |               | coeff. | Т     | Sig. |  |  |  |
|                           | В        | Std.<br>Error | Beta   |       |      |  |  |  |
| 1 (Constant)              | 31.642   | 3.367         |        | 9.398 | .000 |  |  |  |
| FDI                       | 4.812E-8 | .000          | .502   | 2.092 | .057 |  |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Kyrgyzstan:

|       | Model Summary     |       |                         |                            |  |  |  |  |
|-------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|
| Model | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .717 <sup>a</sup> | .515  | .477                    | 284.97579                  |  |  |  |  |

| ANOVA <sup>b</sup> |             |    |             |        |                   |  |  |  |  |
|--------------------|-------------|----|-------------|--------|-------------------|--|--|--|--|
| Model              | Sum         | Df | Mean        | F      | Q: -              |  |  |  |  |
| Wiodei             | of Squares  | Di | Square      | Г      | Sig.              |  |  |  |  |
| 1 Regression       | 1119347.731 | 1  | 1119347.731 | 13.783 | .003 <sup>a</sup> |  |  |  |  |
| Residual           | 1055745.602 | 13 | 81211.200   |        |                   |  |  |  |  |
| Total              | 2175093.333 | 14 |             |        |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |        |      |  |  |  |
|---------------------------|----------|---------------|--------|--------|------|--|--|--|
|                           | Unsta    | and.          | Stand. |        |      |  |  |  |
| Model                     | coe      | ff.           | coeff. | Т      | Sig. |  |  |  |
|                           | В        | Std.<br>Error | Beta   |        |      |  |  |  |
| 1 (Constant)              | 1196.942 | 108.044       |        | 11.078 | .000 |  |  |  |
| FDI                       | 2.740E-6 | .000          | .717   | 3.713  | .003 |  |  |  |

# Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Kyrgyzstan:

| Model Summary |                   |                |                         |                            |  |  |  |
|---------------|-------------------|----------------|-------------------------|----------------------------|--|--|--|
| Model         | R                 | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |
| 1             | .030 <sup>a</sup> | .001           | 076                     | .89404                     |  |  |  |

| ANOVA <sup>b</sup> |        |      |      |      |                   |  |  |  |  |
|--------------------|--------|------|------|------|-------------------|--|--|--|--|
| Model              | F      | Sig. |      |      |                   |  |  |  |  |
| 1 Regression       | .009   | 1    | .009 | .011 | .917 <sup>a</sup> |  |  |  |  |
| Residual           | 10.391 | 13   | .799 |      |                   |  |  |  |  |
| Total              | 10.400 | 14   |      |      |                   |  |  |  |  |

| Coefficients <sup>a</sup> |           |       |        |         |      |  |  |  |
|---------------------------|-----------|-------|--------|---------|------|--|--|--|
|                           | Unstan    | d.    | Stand. |         |      |  |  |  |
| Model                     | coeff     |       | coeff. | t       | Sig. |  |  |  |
|                           | В         | Std.  | Beta   |         |      |  |  |  |
|                           |           | Error |        |         |      |  |  |  |
| 1 (Constant)              | 67.774    | .339  |        | 199.946 | .000 |  |  |  |
| FDI                       | 2.464E-10 | .000  | .030   | .106    | .917 |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Kyrgyzstan:

|                        | Model Summary |                         |                            |         |  |  |  |  |
|------------------------|---------------|-------------------------|----------------------------|---------|--|--|--|--|
| Model R R <sup>2</sup> |               | Adjusted R <sup>2</sup> | Std. Error of the estimate |         |  |  |  |  |
| 1                      | .850ª         | .723                    | .702                       | 7.71595 |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |        |       |  |  |  |  |
|--------------------|-------------------|----|----------------|--------|-------|--|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F      | Sig.  |  |  |  |  |
| 1 Regression       | 2021.633          | 1  | 2021.633       | 33.957 | .000° |  |  |  |  |
| Residual           | 773.967           | 13 | 59.536         |        |       |  |  |  |  |
| Total              | 2795.600          | 14 |                |        |       |  |  |  |  |

|      | <b>Coefficients</b> <sup>a</sup> |          |       |        |       |      |  |  |  |
|------|----------------------------------|----------|-------|--------|-------|------|--|--|--|
|      |                                  | Unstai   | nd.   | Stand. |       | Sig. |  |  |  |
| M    | Model                            | coef     | f.    | coeff. | t     |      |  |  |  |
|      |                                  | В        | Std.  | Beta   |       |      |  |  |  |
|      |                                  | _        | Error |        |       |      |  |  |  |
| 1 (C | Constant)                        | 15.117   | 2.925 |        | 5.168 | .000 |  |  |  |
| F    | FDI                              | 1.164E-7 | .000  | .850   | 5.827 | .000 |  |  |  |

Appendix G: Regression Analysis results for Moldova for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Moldova:

|       | Model Summary |                |                            |         |  |  |  |  |
|-------|---------------|----------------|----------------------------|---------|--|--|--|--|
| Model | R             | $\mathbb{R}^2$ | Std. Error of the estimate |         |  |  |  |  |
| 1     | .767ª         | .588           | .556                       | 2.91382 |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |         |        |                   |  |  |  |  |
|--------------------|------------|----|---------|--------|-------------------|--|--|--|--|
| Model              | Sum        | Df | Mean    | F      | C: ~              |  |  |  |  |
| Model              | of Squares | DI | Square  | Г      | Sig.              |  |  |  |  |
| 1 Regression       | 157.525    | 1  | 157.525 | 18.553 | .001 <sup>a</sup> |  |  |  |  |
| Residual           | 110.375    | 13 | 8.490   |        |                   |  |  |  |  |
| Total              | 267.900    | 14 |         |        |                   |  |  |  |  |

|   | Coefficients <sup>a</sup> |               |      |        |        |      |  |  |  |
|---|---------------------------|---------------|------|--------|--------|------|--|--|--|
|   |                           | Unsta         | nd.  | Stand. | Т      | Sig. |  |  |  |
|   | Model                     | coef          | f.   | coeff. |        |      |  |  |  |
|   | В                         | Std.<br>Error | Beta |        |        |      |  |  |  |
| 1 | (Constant)                | 30.906        | .993 |        | 31.112 | .000 |  |  |  |
|   | FDI                       | 1.694E-8      | .000 | .767   | 4.307  | .001 |  |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Moldova:

|       | Model Summary     |       |                         |                            |  |  |  |  |
|-------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|
| Model | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .760 <sup>a</sup> | .578  | .545                    | 460.33205                  |  |  |  |  |

| ANOVA <sup>b</sup> |             |    |             |        |                   |  |  |  |
|--------------------|-------------|----|-------------|--------|-------------------|--|--|--|
| Model              | Sum         | Df | Mean        | F      | Sig.              |  |  |  |
| Model              | of Squares  | Di | Square      | I.     | oig.              |  |  |  |
| 1 Regression       | 3772400.555 | 1  | 3772400.555 | 17.802 | .001 <sup>a</sup> |  |  |  |
| Residual           | 2754772.778 | 13 | 211905.598  |        |                   |  |  |  |
| Total              | 6527173.333 | 14 |             |        |                   |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |        |      |  |  |  |
|---------------------------|----------|---------------|--------|--------|------|--|--|--|
|                           | Unsta    | and.          | Stand. |        |      |  |  |  |
| Model                     | coe      | ff.           | coeff. | Т      | Sig. |  |  |  |
|                           | В        | Std.<br>Error | Beta   |        |      |  |  |  |
| 1 (Constant)              | 1688.959 | 156.934       |        | 10.762 | .000 |  |  |  |
| FDI                       | 2.622E-6 | .000          | .760   | 4.219  | .001 |  |  |  |

### Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Moldova:

|       | Model Summary     |                |                         |                            |  |  |  |  |
|-------|-------------------|----------------|-------------------------|----------------------------|--|--|--|--|
| Model | R                 | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .488 <sup>a</sup> | .238           | .179                    | .57967                     |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |       |                   |  |  |  |
|--------------------|-------------------|----|----------------|-------|-------------------|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F     | Sig.              |  |  |  |
| 1 Regression       | 1.365             | 1  | 1.365          | 4.063 | .065 <sup>a</sup> |  |  |  |
| Residual           | 4.368             | 13 | .336           |       |                   |  |  |  |
| Total              | 5.733             | 14 |                |       |                   |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |         |      |  |  |  |
|---------------------------|----------|---------------|--------|---------|------|--|--|--|
|                           | Unstai   | nd.           | Stand. |         | Sig. |  |  |  |
| Model                     | coefi    | f.            | coeff. | t       |      |  |  |  |
|                           | В        | Std.<br>Error | Beta   |         |      |  |  |  |
| 1 (Constant)              | 67.207   | .198          |        | 340.082 | .000 |  |  |  |
| FDI                       | 1.577E-9 | .000          | .488   | 2.016   | .065 |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Moldova:

|       | Model Summary     |       |                         |                            |  |  |  |  |  |  |
|-------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|--|--|
| Model | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |  |
| 1     | .751 <sup>a</sup> | .564  | .530                    | 37.70250                   |  |  |  |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |                   |    |                |        |                   |  |  |  |  |
|-------------------------------|-------------------|----|----------------|--------|-------------------|--|--|--|--|
| Model                         | Sum<br>of Squares | Df | Mean<br>Square | F      | Sig.              |  |  |  |  |
| 1 Regression                  | 23888.112         | 1  | 23888.112      | 16.805 | .001 <sup>a</sup> |  |  |  |  |
| Residual                      | 18479.221         | 13 | 1421.479       |        |                   |  |  |  |  |
| Total                         | 42367.333         | 14 |                |        |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |       |      |  |  |  |  |
|---------------------------|----------|---------------|--------|-------|------|--|--|--|--|
|                           | Unsta    | nd.           | Stand. |       |      |  |  |  |  |
| Model                     | coef     | f.            | coeff. | t     | Sig. |  |  |  |  |
|                           | В        | Std.<br>Error | Beta   |       |      |  |  |  |  |
| 1 (Constant)              | 30.927   | 12.853        |        | 2.406 | .032 |  |  |  |  |
| FDI                       | 2.086E-7 | .000          | .751   | 4.099 | .001 |  |  |  |  |

Appendix H: Regression Analysis results for Russia for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Russia:

|       | Model Summary     |                |                         |                            |  |  |  |  |  |
|-------|-------------------|----------------|-------------------------|----------------------------|--|--|--|--|--|
| Model | R                 | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1     | .718 <sup>a</sup> | .516           | .478                    | 9.20344                    |  |  |  |  |  |

| ANOVAb       |            |    |          |        |                   |  |  |  |  |  |
|--------------|------------|----|----------|--------|-------------------|--|--|--|--|--|
| Model        | Sum        | Df | Mean     | F      | Sig.              |  |  |  |  |  |
| Wiodei       | of Squares | 21 | Square   | 1      | 515.              |  |  |  |  |  |
| 1 Regression | 1172.589   | 1  | 1172.589 | 13.843 | .003 <sup>a</sup> |  |  |  |  |  |
| Residual     | 1101.144   | 13 | 84.703   |        |                   |  |  |  |  |  |
| Total        | 2273.733   | 14 |          |        |                   |  |  |  |  |  |

|   | <b>Coefficients</b> <sup>a</sup> |           |               |        |        |      |  |  |  |  |
|---|----------------------------------|-----------|---------------|--------|--------|------|--|--|--|--|
|   |                                  | Unsta     | nd.           | Stand. |        |      |  |  |  |  |
|   | Model                            | coef      | f.            | coeff. | Т      | Sig. |  |  |  |  |
|   |                                  | В         | Std.<br>Error | Beta   |        |      |  |  |  |  |
| 1 | (Constant)                       | 54.527    | 3.032         |        | 17.984 | .000 |  |  |  |  |
|   | FDI                              | 4.088E-10 | .000          | .718   | 3.721  | .003 |  |  |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Russia:

|       | Model Summary |                |                         |                            |  |  |  |  |  |  |
|-------|---------------|----------------|-------------------------|----------------------------|--|--|--|--|--|--|
| Model | R             | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |  |
| 1     | .927ª         | .859           | .848                    | 1949.55213                 |  |  |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |             |        |       |  |  |  |  |  |
|--------------------|------------|----|-------------|--------|-------|--|--|--|--|--|
| N/ 1.1             | Sum        | DC | Mean        | Г      | a.    |  |  |  |  |  |
| Model              | of Squares | Df | Square      | F      | Sig.  |  |  |  |  |  |
| 1 Regression       | 3.014E8    | 1  | 3.014E8     | 79.311 | .000° |  |  |  |  |  |
| Residual           | 4.941E7    | 13 | 3800753.512 |        |       |  |  |  |  |  |
| Total              | 3.509E8    | 14 |             |        |       |  |  |  |  |  |

| <b>Coefficients</b> <sup>a</sup> |          |          |         |        |       |      |  |  |  |
|----------------------------------|----------|----------|---------|--------|-------|------|--|--|--|
|                                  |          | Unsta    | and.    | Stand. |       |      |  |  |  |
| Model                            | coe      | ff.      | coeff.  | Т      | Sig.  |      |  |  |  |
|                                  |          | В        | Std.    | Beta   |       |      |  |  |  |
|                                  |          |          | Error   |        |       |      |  |  |  |
| 1 (Co                            | onstant) | 6368.785 | 642.270 |        | 9.916 | .000 |  |  |  |
| F                                | DI       | 2.073E-7 | .000    | .927   | 8.906 | .000 |  |  |  |

Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Russia:

|       | Model Summary     |       |                         |                            |  |  |  |  |  |  |
|-------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|--|--|
| Model | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |  |
| 1     | .663 <sup>a</sup> | .439  | .396                    | 1.01202                    |  |  |  |  |  |  |

| ANOVA <sup>b</sup>            |        |    |        |        |                   |  |  |  |  |  |
|-------------------------------|--------|----|--------|--------|-------------------|--|--|--|--|--|
| Model Sum Df Mean F Si Square |        |    |        |        |                   |  |  |  |  |  |
| 1 Regression                  | 10.419 | 1  | 10.419 | 10.173 | .007 <sup>a</sup> |  |  |  |  |  |
| Residual                      | 13.315 | 13 | 1.024  |        |                   |  |  |  |  |  |
| Total                         | 23.733 | 14 |        |        |                   |  |  |  |  |  |

|   | Coefficients <sup>a</sup> |           |       |        |         |      |  |  |  |  |
|---|---------------------------|-----------|-------|--------|---------|------|--|--|--|--|
|   | Model                     | Unstan    | d.    | Stand. |         |      |  |  |  |  |
|   |                           | coeff     |       | coeff. | t       | Sig. |  |  |  |  |
|   |                           | В         | Std.  | Beta   |         |      |  |  |  |  |
|   |                           |           | Error |        |         |      |  |  |  |  |
| 1 | (Constant)                | 65.473    | .333  |        | 196.376 | .000 |  |  |  |  |
|   | FDI                       | 3.854E-11 | .000  | .663   | 3.189   | .007 |  |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Russia:

|       | Model Summary     |                |                         |                            |  |  |  |  |
|-------|-------------------|----------------|-------------------------|----------------------------|--|--|--|--|
| Model | R                 | $\mathbb{R}^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .956 <sup>a</sup> | .913           | .907                    | 49.18644                   |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |         |                   |  |  |  |  |
|--------------------|-------------------|----|----------------|---------|-------------------|--|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F       | Sig.              |  |  |  |  |
| 1 Regression       | 331801.953        | 1  | 331801.953     | 137.148 | .000 <sup>a</sup> |  |  |  |  |
| Residual           | 31450.980         | 13 | 2419.306       |         |                   |  |  |  |  |
| Total              | 363252.933        | 14 |                |         |                   |  |  |  |  |

|   | Coefficients <sup>a</sup> |          |               |        |        |      |  |  |  |
|---|---------------------------|----------|---------------|--------|--------|------|--|--|--|
|   |                           | Unsta    | nd.           | Stand. |        |      |  |  |  |
|   | Model                     | coef     | f.            | coeff. | t      | Sig. |  |  |  |
|   |                           | В        | Std.<br>Error | Beta   |        |      |  |  |  |
| 1 | (Constant)                | 120.204  | 16.204        |        | 7.418  | .000 |  |  |  |
|   | FDI                       | 6.877E-9 | .000          | .956   | 11.711 | .000 |  |  |  |

Appendix I: Regression Analysis results for Tajikistan for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) for Tajikistan:

| Model Summary          |                   |      |                         |                            |  |  |  |  |
|------------------------|-------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model R R <sup>2</sup> |                   |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1                      | .447 <sup>a</sup> | .199 | .138                    | 2.42816                    |  |  |  |  |

| $ANOVA^b$    |            |         |        |       |                   |  |  |  |  |
|--------------|------------|---------|--------|-------|-------------------|--|--|--|--|
| Model        | Sum        | Df      | Mean   | T.    | C: ~              |  |  |  |  |
| Model        | of Squares | ares Df |        | F     | Sig.              |  |  |  |  |
| 1 Regression | 19.086     | 1       | 19.086 | 3.237 | .095 <sup>a</sup> |  |  |  |  |
| Residual     | 76.647     | 13      | 5.896  |       |                   |  |  |  |  |
| Total        | 95.733     | 14      |        |       |                   |  |  |  |  |

|   | Coefficients <sup>a</sup> |          |       |        |        |      |  |  |  |  |
|---|---------------------------|----------|-------|--------|--------|------|--|--|--|--|
|   | Model                     | Unstar   | nd.   | Stand. |        |      |  |  |  |  |
|   |                           | coeff    | :     | coeff. | Т      | Sig. |  |  |  |  |
|   |                           | В        | Std.  | Beta   |        |      |  |  |  |  |
|   |                           | D        | Error | Deta   |        |      |  |  |  |  |
| 1 | (Constant)                | 16.178   | .787  |        | 20.558 | .000 |  |  |  |  |
|   | FDI                       | 8.021E-9 | .000  | .447   | 1.799  | .095 |  |  |  |  |

## GNI per capita, PPP (in current international dollars) and FDI, net inflows (BoP, current US dollar) for Tajikistan:

|       | Model Summary     |                |                         |                            |  |  |  |  |  |
|-------|-------------------|----------------|-------------------------|----------------------------|--|--|--|--|--|
| Model | R                 | $\mathbb{R}^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |  |
| 1     | .956 <sup>a</sup> | .431           | .387                    | 368.48734                  |  |  |  |  |  |

| ANOVA <sup>b</sup> |             |    |             |       |                   |  |  |  |
|--------------------|-------------|----|-------------|-------|-------------------|--|--|--|
| Model              | Sum         | Df | Mean        | F     | Sig.              |  |  |  |
| Wiodei             | of Squares  |    | Square      | •     | 515.              |  |  |  |
| 1 Regression       | 1336715.424 | 1  | 1336715.424 | 9.845 | .008 <sup>a</sup> |  |  |  |
| Residual           | 1765177.909 | 13 | 135782.916  |       |                   |  |  |  |
| Total              | 3101893.333 | 14 |             |       |                   |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |       |      |  |  |  |  |
|---------------------------|----------|---------------|--------|-------|------|--|--|--|--|
|                           | Unsta    | and.          | Stand. |       |      |  |  |  |  |
| Model                     | coe      | ff.           | coeff. | Т     | Sig. |  |  |  |  |
|                           | В        | Std.<br>Error | Beta   |       |      |  |  |  |  |
| 1 (Constant)              | 940.883  | 119.420       |        | 7.879 | .000 |  |  |  |  |
| FDI                       | 2.123E-6 | .000          | .656   | 3.138 | .008 |  |  |  |  |

# Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) for Tajikistan:

| Model Summary |                   |       |                         |                            |  |  |  |  |
|---------------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|
| Model         | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1             | .626 <sup>a</sup> | .392  | .345                    | 1.29266                    |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |       |                   |  |  |  |
|--------------------|-------------------|----|----------------|-------|-------------------|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F     | Sig.              |  |  |  |
| 1 Regression       | 14.011            | 1  | 14.011         | 8.385 | .013 <sup>a</sup> |  |  |  |
| Residual           | 21.723            | 13 | 1.671          |       |                   |  |  |  |
| Total              | 35.733            | 14 |                |       |                   |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |         |      |  |  |  |  |
|---------------------------|----------|---------------|--------|---------|------|--|--|--|--|
|                           | Unstand. |               | Stand. |         |      |  |  |  |  |
| Model                     | coeff    | f.            | coeff. | t       | Sig. |  |  |  |  |
|                           | В        | Std.<br>Error | Beta   |         |      |  |  |  |  |
| 1 (Constant)              | 63.800   | .419          |        | 152.294 | .000 |  |  |  |  |
| FDI                       | 6.873E-9 | .000          | .626   | 2.896   | .013 |  |  |  |  |

Health expenditure per capita (in current US dollars) and FDI, net inflows (BoP, current US dollar) for Tajikistan:

|       | Model Summary     |       |                         |                            |  |  |  |  |
|-------|-------------------|-------|-------------------------|----------------------------|--|--|--|--|
| Model | R                 | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .956 <sup>a</sup> | .913  | .907                    | 49.18644                   |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |         |                   |  |  |  |
|--------------------|-------------------|----|----------------|---------|-------------------|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F       | Sig.              |  |  |  |
| 1 Regression       | 331801.953        | 1  | 331801.953     | 137.148 | .000 <sup>a</sup> |  |  |  |
| Residual           | 31450.980         | 13 | 2419.306       |         |                   |  |  |  |
| Total              | 363252.933        | 14 |                |         |                   |  |  |  |

| <b>Coefficients</b> <sup>a</sup> |          |               |        |        |      |  |  |  |
|----------------------------------|----------|---------------|--------|--------|------|--|--|--|
|                                  | Unsta    | nd.           | Stand. |        |      |  |  |  |
| Model                            | coef     | f.            | coeff. | t      | Sig. |  |  |  |
| 1110001                          | В        | Std.<br>Error | Beta   |        |      |  |  |  |
| 1 (Constant)                     | 120.204  | 16.204        |        | 7.418  | .000 |  |  |  |
| FDI                              | 6.877E-9 | .000          | .956   | 11.711 | .000 |  |  |  |

Appendix J: Regression Analysis results for Turkmenistan for period 1995-2009 by PASW Statistics 18

GNI per capita, PPP (in current international dollars) and FDI, net inflows (BoP, current US dollar) in Turkmenistan:

|                        | Model Summary      |      |                         |                            |  |  |  |  |
|------------------------|--------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model R R <sup>2</sup> |                    |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1                      | 0.743 <sup>a</sup> | .552 | .518                    | 1319.65011                 |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |             |        |                   |  |  |  |
|--------------------|------------|----|-------------|--------|-------------------|--|--|--|
| Madal              | Sum        | Dt | Mean        | E      | a:                |  |  |  |
| Model              | of Squares | Df | Square      | F      | Sig.              |  |  |  |
| 1 Regression       | 2.791E7    | 1  | 2.791E7     | 16.025 | .002 <sup>a</sup> |  |  |  |
| Residual           | 2.264E7    | 13 | 1741476.407 |        |                   |  |  |  |
| Total              | 5.055E7    | 14 |             |        |                   |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |       |      |  |  |  |
|---------------------------|----------|---------------|--------|-------|------|--|--|--|
|                           | Unst     | and.          | Stand. |       |      |  |  |  |
| Model                     | coe      | ff.           | coeff. | Т     | Sig. |  |  |  |
|                           | В        | Std.<br>Error | Beta   |       |      |  |  |  |
| 1 (Constant)              | 2530.937 | 404.194       |        | 6.262 | .000 |  |  |  |
| FDI                       | 1.460E-6 | .000          | .743   | 4.743 | .002 |  |  |  |

#### Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) for Turkmenistan:

| Model Summary |                        |      |                         |                            |  |  |  |
|---------------|------------------------|------|-------------------------|----------------------------|--|--|--|
| Model         | Model R R <sup>2</sup> |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |
| 1             | .597ª                  | .356 | .307                    | .58598                     |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |            |    |        |       |                   |  |  |  |
|-------------------------------|------------|----|--------|-------|-------------------|--|--|--|
| Model                         | Sum        | Df | Mean   | F     | Sig.              |  |  |  |
|                               | of Squares |    | Square |       |                   |  |  |  |
| 1 Regression                  | 2.470      | 1  | 2.470  | 7.192 | .019 <sup>a</sup> |  |  |  |
| Residual                      | 4.464      | 13 | .343   |       |                   |  |  |  |
| Total                         | 6.933      | 14 |        |       |                   |  |  |  |

| Coefficients <sup>a</sup> |           |               |        |         |      |  |  |  |
|---------------------------|-----------|---------------|--------|---------|------|--|--|--|
|                           | Unstan    | d.            | Stand. |         |      |  |  |  |
| Model                     | coeff     |               | coeff. | t       | Sig. |  |  |  |
|                           | В         | Std.<br>Error | Beta   |         |      |  |  |  |
| 1 (Constant)              | 63.808    | .179          |        | 355.517 | .000 |  |  |  |
| FDI                       | 4.343E-10 | .000          | .597   | 2.682   | .019 |  |  |  |

Health expenditure per capita (in current US dollars) and FDI, net inflows (BoP, current US dollar) for Turkmenistan:

|       | Model Summary          |      |                         |                            |  |  |  |  |
|-------|------------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model | Model R R <sup>2</sup> |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .288ª                  | .083 | .013                    | 36.14350                   |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |          |       |                   |  |  |  |
|--------------------|------------|----|----------|-------|-------------------|--|--|--|
| Model              | Sum        | Df | Mean     | F     | Sig.              |  |  |  |
| Wiodei             | of Squares | Di | Square   | 1     | oig.              |  |  |  |
| 1 Regression       | 1538.352   | 1  | 1538.352 | 1.178 | .298 <sup>a</sup> |  |  |  |
| Residual           | 16982.582  | 13 | 1306.352 |       |                   |  |  |  |
| Total              | 18520.933  | 14 |          |       |                   |  |  |  |

|   | Coefficients <sup>a</sup> |          |               |        |       |      |  |  |  |
|---|---------------------------|----------|---------------|--------|-------|------|--|--|--|
|   |                           | Unsta    | nd.           | Stand. |       |      |  |  |  |
|   | Model                     | coef     | f.            | coeff. | t     | Sig. |  |  |  |
|   |                           | В        | Std.<br>Error | Beta   |       |      |  |  |  |
|   |                           |          |               |        |       |      |  |  |  |
| 1 | (Constant)                | 62.471   | 11.070        |        | 5.643 | .000 |  |  |  |
|   | FDI                       | 1.084E-8 | .000          | .288   | 1.085 | .298 |  |  |  |

Appendix K: Regression Analysis results for Ukraine for period 1995-2009 by PASW Statistics 18

School enrollment, tertiary (percent gross) and FDI, net inflows (BoP, current US dollar) in Ukraine:

| Model Summary |                          |      |                         |                            |  |  |  |  |
|---------------|--------------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model         | Model R R <sup>2</sup> A |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1             | .843ª                    | .710 | .688                    | 7.81437                    |  |  |  |  |

| ANOVAb       |            |    |          |        |                   |  |  |  |  |
|--------------|------------|----|----------|--------|-------------------|--|--|--|--|
| Model        | Sum        | Df | Mean     | F      | Sig.              |  |  |  |  |
| Wiodei       | of Squares | Di | Square   | 1      | 515.              |  |  |  |  |
| 1 Regression | 1945.096   | 1  | 1945.096 | 31.853 | .000 <sup>a</sup> |  |  |  |  |
| Residual     | 793.838    | 13 | 61.064   |        |                   |  |  |  |  |
| Total        | 2738.933   | 14 |          |        |                   |  |  |  |  |

|   | Coefficients <sup>a</sup> |          |       |        |        |      |  |  |  |  |
|---|---------------------------|----------|-------|--------|--------|------|--|--|--|--|
|   | Model                     | Unstai   | nd.   | Stand. |        | Sig. |  |  |  |  |
|   |                           | coef     | f.    | coeff. | T      |      |  |  |  |  |
|   |                           | В        | Std.  | Beta   |        |      |  |  |  |  |
|   |                           | Б        | Error | Deta   |        |      |  |  |  |  |
| 1 | (Constant)                | 49.028   | 2.674 |        | 18.334 | .000 |  |  |  |  |
|   | FDI                       | 3.168E-9 | .000  | .843   | 5.644  | .000 |  |  |  |  |

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in Ukraine:

| Model Summary          |                   |      |                         |                            |  |  |  |  |
|------------------------|-------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model R R <sup>2</sup> |                   |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1                      | .911 <sup>a</sup> | .830 | .817                    | 678.01730                  |  |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |             |    |            |        |       |  |  |  |  |
|-------------------------------|-------------|----|------------|--------|-------|--|--|--|--|
| Model                         | Sum         | Df | Mean       | F      | Sig.  |  |  |  |  |
| Wiodei                        | of Squares  | Di | Square     | 1      | 515.  |  |  |  |  |
| 1 Regression                  | 2.910E7     | 1  | 2.910E7    | 63.310 | .000ª |  |  |  |  |
| Residual                      | 5976197.047 | 13 | 459707.465 |        |       |  |  |  |  |
| Total                         | 3.508E7     | 14 |            |        |       |  |  |  |  |

| Coefficients <sup>a</sup> |          |         |        |        |      |  |  |  |
|---------------------------|----------|---------|--------|--------|------|--|--|--|
|                           | Unsta    | and.    | Stand. |        |      |  |  |  |
| Model                     | coe      | ff.     | coeff. | Т      | Sig. |  |  |  |
|                           | В        | Std.    | Beta   |        |      |  |  |  |
|                           | _        | Error   |        |        |      |  |  |  |
| 1 (Constant)              | 3250.987 | 232.029 |        | 14.011 | .000 |  |  |  |
| FDI                       | 3.875E-7 | .000    | .911   | 7.957  | .000 |  |  |  |

## Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) in Ukraine:

| Model Summary          |                   |      |                         |                            |  |  |  |  |
|------------------------|-------------------|------|-------------------------|----------------------------|--|--|--|--|
| Model R R <sup>2</sup> |                   |      | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1                      | .359 <sup>a</sup> | .129 | .062                    | .50015                     |  |  |  |  |

| $\mathbf{ANOVA}^{\mathbf{b}}$ |                   |    |                |       |                   |  |  |  |  |
|-------------------------------|-------------------|----|----------------|-------|-------------------|--|--|--|--|
| Model                         | Sum<br>of Squares | Df | Mean<br>Square | F     | Sig.              |  |  |  |  |
| 1 Regression                  | .481              | 1  | .481           | 1.924 | .189 <sup>a</sup> |  |  |  |  |
| Residual                      | 3.252             | 13 | .250           |       |                   |  |  |  |  |
| Total                         | 3.733             | 14 |                |       |                   |  |  |  |  |

|       | Coefficients <sup>a</sup> |           |               |        |         |      |  |  |  |
|-------|---------------------------|-----------|---------------|--------|---------|------|--|--|--|
|       |                           | Unstan    | d.            | Stand. |         |      |  |  |  |
| Model | coeff                     |           | coeff.        | t      | Sig.    |      |  |  |  |
|       |                           | В         | Std.<br>Error | Beta   |         |      |  |  |  |
|       |                           |           |               |        |         |      |  |  |  |
| 1     | (Constant)                | 67.711    | .171          |        | 395.598 | .000 |  |  |  |
|       | FDI                       | 4.984E-11 | .000          | .359   | 1.387   | .189 |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Ukraine:

|                        | Model Summary |                         |                            |          |  |  |  |  |
|------------------------|---------------|-------------------------|----------------------------|----------|--|--|--|--|
| Model R R <sup>2</sup> |               | Adjusted R <sup>2</sup> | Std. Error of the estimate |          |  |  |  |  |
| 1                      | .945ª         | .892                    | .884                       | 24.61045 |  |  |  |  |

| ANOVA <sup>b</sup> |                   |    |                |         |                   |  |  |  |  |
|--------------------|-------------------|----|----------------|---------|-------------------|--|--|--|--|
| Model              | Sum<br>of Squares | Df | Mean<br>Square | F       | Sig.              |  |  |  |  |
| 1 Regression       | 65195.966         | 1  | 65195.966      | 107.642 | .000 <sup>a</sup> |  |  |  |  |
| Residual           | 7873.768          | 13 | 605.674        |         |                   |  |  |  |  |
| Total              | 73069.733         | 14 |                |         |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |        |      |  |  |  |
|---------------------------|----------|---------------|--------|--------|------|--|--|--|
|                           | Unstai   | nd.           | Stand. |        |      |  |  |  |
| Model                     | coef     | f.            | coeff. | t      | Sig. |  |  |  |
|                           | В        | Std.<br>Error | Beta   |        |      |  |  |  |
| 1 (Constant)              | 42.518   | 8.422         |        | 5.048  | .000 |  |  |  |
| FDI                       | 1.834E-8 | .000          | .945   | 10.375 | .000 |  |  |  |

Appendix L: Regression Analysis results for Uzbekistan for period 1995-2009 by PASW Statistics 18

GNI per capita, PPP (current international dollar) and FDI, net inflows (BoP, current US dollar) in in Uzbekistan:

|       | Model Summary     |                |                         |                            |  |  |  |  |
|-------|-------------------|----------------|-------------------------|----------------------------|--|--|--|--|
| Model | R                 | $\mathbb{R}^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .886 <sup>a</sup> | .785           | .768                    | 261.77307                  |  |  |  |  |

| ANOVAb       |             |    |             |        |                   |  |  |  |  |
|--------------|-------------|----|-------------|--------|-------------------|--|--|--|--|
| Model        | Sum         | Df | Mean        | F      | Sig.              |  |  |  |  |
| Wiodei       | of Squares  | Di | Square      | T.     | Jig.              |  |  |  |  |
| 1 Regression | 3251866.534 | 1  | 3251866.534 | 47.455 | .000 <sup>a</sup> |  |  |  |  |
| Residual     | 890826.799  | 13 | 68525.138   |        |                   |  |  |  |  |
| Total        | 4142693.333 | 14 |             |        |                   |  |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |        |      |  |  |  |
|---------------------------|----------|---------------|--------|--------|------|--|--|--|
|                           | Unsta    | nd.           | Stand. |        | Sig. |  |  |  |
| Model                     | coef     | f.            | coeff. | Т      |      |  |  |  |
|                           | В        | Std.<br>Error | Beta   |        |      |  |  |  |
| 1 (Constant)              | 1317.563 | 92.972        |        | 14.172 | .000 |  |  |  |
| FDI                       | 1.902E-6 | .000          | .886   | 6.889  | .000 |  |  |  |

## Life expectancy at birth, total (years) and FDI, net inflows (BoP, current US dollar) Uzbekistan:

|       | Model Summary     |                |                         |                            |  |  |  |  |
|-------|-------------------|----------------|-------------------------|----------------------------|--|--|--|--|
| Model | R                 | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .715 <sup>a</sup> | .512           | .474                    | .38768                     |  |  |  |  |

| ANOVA <sup>b</sup>      |       |    |       |        |       |  |  |  |  |
|-------------------------|-------|----|-------|--------|-------|--|--|--|--|
| Model Sum Df Mean F Sig |       |    |       |        |       |  |  |  |  |
| 1 Regression            | 2.046 | 1  | 2.046 | 13.614 | .003ª |  |  |  |  |
| Residual                | 1.954 | 13 | .150  |        |       |  |  |  |  |
| Total                   | 4.000 | 14 |       |        |       |  |  |  |  |

| Coefficients <sup>a</sup> |                 |          |        |         |      |  |  |  |
|---------------------------|-----------------|----------|--------|---------|------|--|--|--|
|                           | Unstar          | nd.      | Stand. |         |      |  |  |  |
| Model                     | coeff           | <b>.</b> | coeff. | t       | Sig. |  |  |  |
|                           | B Std.<br>Error |          | Beta   |         |      |  |  |  |
| 1 (Constant)              | 66.651          | .138     |        | 484.065 | .000 |  |  |  |
| FDI                       | 1.509E-9        | .000     | .715   | 3.690   | .003 |  |  |  |

Health expenditure per capita (current US dollar) and FDI, net inflows (BoP, current US dollar) in Uzbekistan:

|       | Model Summary |       |                         |                            |  |  |  |  |
|-------|---------------|-------|-------------------------|----------------------------|--|--|--|--|
| Model | R             | $R^2$ | Adjusted R <sup>2</sup> | Std. Error of the estimate |  |  |  |  |
| 1     | .795ª         | .632  | .604                    | 7.41230                    |  |  |  |  |

| ANOVA <sup>b</sup> |            |    |          |        |                   |  |  |  |
|--------------------|------------|----|----------|--------|-------------------|--|--|--|
| Model              | Sum        | Df | Mean     | F      | Sig.              |  |  |  |
|                    | of Squares |    | Square   |        | _                 |  |  |  |
| 1 Regression       | 1226.685   | 1  | 1226.685 | 22.327 | .000 <sup>a</sup> |  |  |  |
| Residual           | 714.248    | 13 | 54.942   |        |                   |  |  |  |
| Total              | 1940.933   | 14 |          |        |                   |  |  |  |

| Coefficients <sup>a</sup> |          |               |        |       |      |  |  |  |
|---------------------------|----------|---------------|--------|-------|------|--|--|--|
|                           | Unstai   | nd.           | Stand. |       | Sig. |  |  |  |
| Model                     | coef     | f.            | coeff. | t     |      |  |  |  |
|                           | В        | Std.<br>Error | Beta   |       |      |  |  |  |
| 1 (Constant)              | 25.192   | 2.633         |        | 9.569 | .000 |  |  |  |
| FDI                       | 3.694E-8 | .000          | .795   | 4.725 | .000 |  |  |  |