

*Preliminary scientific communication
Prethodno znanstveno priopćenje*

Željko Požega*

ANALYSIS OF THE DEVELOPMENT OF HUMAN FACTORS – THE IMPACT OF HUMAN CAPITAL ON REALIZED AND EXPECTED LEVEL OF GDP PER CAPITA OF THE EU COUNTRIES

ANALIZA RAZVOJA LJUDSKIH ČIMBENIKA - UTJECAJ LJUDSKOG KAPITALA NA REALIZIRANE I OČEKIVANU RAZINI BDP-A PO GLAVI STANOVNIKA U ZEMLJAMA EU-a

Abstract

The purpose of this study is to demonstrate and analyze the developmental stage of human capital in all of the European Union countries, as well as the differences in prosperity of each European Union country. It will especially focus on Bosnia and Herzegovina and its parameters, since it is the only state outside of the European Union, and will analyze the stage of its inhabitants, as well as its general social development as opposed to the European Union countries. Furthermore, it will pay attention to the realized and expected level of the gross domestic product per capita for all of the European Union countries and Bosnia and Herzegovina and explore the amount of countries which realized the higher gross domestic product per capita than it was expected according to their human development, i.e. the amount of countries which realized the lower gross domestic product than it was expected based on the education of their population.

The study will offer the degree of human development expressed through the human development index, as well as the economic developmental stage with the

Primljeno: 20.03.2014; Prihvaćeno: 16.05.2014

Received: 20-03-2014; Accepted: 16-05-2014

*** Ph. D. Željko Požega, associate professor Faculty of Economics in Osijek**

help of the gross domestic product per capita for all of the 28 European Union countries and Bosnia and Herzegovina in the year 2012.

The first conjecture states that the European Union countries with the developed human capital achieve the higher gross domestic product per capita than they actually should, i.e. their gross domestic product per capita is higher than expected. The second conjecture deals with the fact that the European Union countries whose gross domestic product per capita is higher have the higher gross domestic product per capita than it is expected. Finally, the third conjecture claims that Bosnia and Herzegovina, with its low development of human capital and low gross domestic product, has a lower gross domestic product per capita than expected.

Keywords: *human capital, GDP, countries, European Union, Bosnia and Herzegovina.*

1. INTRODUCTION

This research, dealing with the analysis of the development of human factors and the influence of human capital on the realised and expected amount of gross domestic product per capita (GDP p.c.) of the European Union (EU) countries and Bosnia and Herzegovina (BiH), is divided in three parts. Part one offers a short theoretical explanation of variables used for analysis and presenting the stages of human and economic development throughout the study. Part two supplies us with the methodology of study and explains both all the data used for the research and the analysis according to the observed countries. Variables used in this study are the human capital shown in the form of human development index (HDI) and the stage of social development represented as the GDP p.c. which is calculated according to the purchasing power parity (PPP). Part three consists of the analysis and interpretation of the research results, showing the analysis of the HDI influence on the expected and realized level of GDP p.c.

2. THE THEORETICAL EXAMINATION OF THE OBSERVED VARIABLES

The human development report introduced a new way of measuring development by combining indicators of life expectancy, educational attainment and income into a composite HDI. The breakthrough for the HDI was the creation of a single statistic which was to serve as a frame of reference for both social and economic development. The HDI sets a minimum and a maximum for each dimension, called goalposts, and then shows where each country stands in relation to these goalposts, expressed as a value between 0 and 1.

Components of the Human Development Index

The HDI—three dimensions and four indicators



Note: The indicators presented in this figure follow the new methodology, as defined in box 1.2.

Source: HDRO.

Picture 1. Components of the HDI (source: <http://hdr.undp.org>).

HDI is a formula that measures poverty, literacy, education, life expectancy, and other factors for countries worldwide. Many, over these formulas, are classified in developed countries (countries of first order), developing (the second-order) and a third world country. By this formula came Pakistani economist Mahbub Al Hak, and the program of United Nations Development uses its benefits in annual report. The HDI measures average achievements in a country for three basic things in human development:

- a) a long and healthy life, as measured by the lifetime of the birth.
- b) knowledge, measured by literacy. It also takes into account the primary, secondary, as well as the percentage of enrollment.
- c) decent standard of living, as measured by GDP p.c. (PPP).

The education component of the HDI is now measured by mean of years of schooling for adults aged 25 years and expected years of schooling for children of school entering age. Expected years of schooling estimates are based on enrolment by age at all levels of education and population of official school age for each level of education. The indicators are normalized using a minimum value of zero and maximum values are set to the actual observed maximum value of mean years of schooling from the countries in the time series, 1980–2012. Expected years of schooling is maximized by its cap at 18 years. The education index is the geometric mean of two indices.

The life expectancy at birth component of the HDI is calculated using a minimum value of 20 years and maximum value of 83.57 years. This is the observed maximum value of the indicators from the countries in the time series, 1980–2012. Thus, the longevity component for a country where life expectancy birth is 55 years would be 0.551.

The decent standard of living component is measured by GNI per capita (PPP\$) instead of GDP p.c. The HDI uses the logarithm of income, to reflect the diminishing importance of income with increasing GNI.

The scores for the three HDI dimension indices are then aggregated into a composite index using geometric mean.

One way the use of the human development index has been improved is through disaggregation. A country's overall index can conceal the fact that different groups within the country have very different levels of human development. Disaggregated HDIs are arrived at by using the data for the HDI components pertaining to each of the separate groups; treating each group as if it was a separate country. Such groups may be defined relative to income, geographical or administrative regions, urban/rural residence, gender and ethnicity.

Using disaggregated HDIs at the national and sub-national levels helps highlight the significant disparities and gaps: among regions, between the sexes, between urban and rural areas and among ethnic groups. The analysis made possible by the use of the disaggregated HDIs should help guide policy and action to address gaps and inequalities.

In 2010, the Inequality-adjusted HDI (IHDI) was introduced. The IHDI is the HDI adjusted for inequalities in the distribution of achievements in each of the three dimensions of the HDI (health, education and income). The IHDI will be equal to the HDI value when there is no inequality, but falls below the HDI value as inequality rises. The difference between the HDI and the IHDI represents the 'loss' in potential human development due to inequality and can be expressed as a percentage.

The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The HDI can also be used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with such different human development outcomes. For example, the Bahamas' GNI per capita is higher than New Zealand's (by 17%) but life expectancy at birth is about 5 years shorter, mean years of schooling is 4 years shorter and expected years of schooling differ greatly between the two countries, resulting in New Zealand having a much higher HDI value than the Bahamas. These striking contrasts can stimulate debate about government policy priorities.

National wealth has the potential to expand people's choices. However, it may not. The manner in which countries spend their wealth, not the wealth itself, is decisive. Moreover, an excessive obsession with the creation of material wealth can obscure the ultimate objective of enriching human lives. In many instances, countries with higher average incomes have higher average life expectancies, lower rates of infant and child mortality and higher educational attainment and school enrollment, and consequently a higher human development index (HDI). But these associations are far from perfect. In inter-country comparisons, income variations tend to explain not much more than half the variation in life expectancy, or in infant and child mortality. And they explain an even smaller part of the differences in adult educational attainment.

Although there is a correlation between material wealth and human well-being, it breaks down in many societies. Many countries have high GNI per capita, but low human development indicators and vice versa, while some countries at similar levels of GNI per capita have vastly different levels of human development.

Given the imperfect nature of wealth as gauge of human development, the HDI offers a powerful alternative to GDP and GNI for measuring the relative socio-economic progress at national and sub-national levels. Comparing HDI and per capita income ranks of countries, regions or ethnic groups within countries highlights the relationship between their material wealth on the one hand and their human development on the other. A negative gap implies the potential of redirecting resources to human development.

Each year, UN member states are listed and ranked according to the computed HDI. If high, the rank in the list can be easily used as a means of national aggrandizement. Alternatively, if low, it can be used to highlight national insufficiencies. Using the HDI as an absolute index of social welfare, some authors have used panel HDI data to measure the impact of economic policies on quality of life.

In its 2010 human development report, the UNDP began using a new method of calculating the HDI. The following three indices are used:

$$\text{Life Expectancy Index (LEI)} = \frac{\sqrt{\text{MYSI} \cdot \text{EYSI}}}{0.951}$$

$$\text{Education Index (EI)} = \frac{\text{LE} - 20}{82.3 - 20}$$

$$\text{Mean Years of Schooling Index (MYSI)} = \frac{\text{MYS}}{13.2}$$

$$\text{Expected Years of Schooling Index (EYSI)} = \frac{\text{EYS}}{20.6}$$

$$\text{Income Index (II)} = \frac{\ln(\text{GNIpc}) - \ln(100)}{\ln(107,721) - \ln(100)}$$

Finally, the HDI is the geometric mean of the previous three normalized indices:

$$\text{HDI} = \sqrt[3]{\text{LEI} \cdot \text{EI} \cdot \text{II}}$$

LE: Life expectancy at birth

MYS: Mean years of schooling (years that a 25-year-old person or older has spent in schools)

EYS: Expected years of schooling (years that a 5-year-old child will spend with his education in his whole life)

The 2012 HDI covers 187 countries, the same number as in 2011, while only 169 were included in the 2010 HDI. This major expansion of HDI coverage is the result of intensified efforts by the human development report office to work with international data providers and national statistical agencies to obtain required development indicators for the HDI which had been unavailable for some countries in previous years.

The HDI attempts to make an assessment of 187 diverse countries and areas, with very different price levels. To compare economic statistics across countries, the data must first be converted into a common currency. Unlike market exchange rates, PPP rates of exchange allow this conversion to take account of price differences between countries.

The HDI can't alone measure a country's level of development, because the concept of human development is much broader than what can be captured in the HDI, or any other of the composite indices in the human development report (inequality-adjusted HDI, gender inequality index and multidimensional poverty index). The HDI, for example, does not reflect political participation or gender inequalities. The HDI and the other composite indices can only offer a broad proxy on some of the key issues of human development, gender disparity and human poverty. A fuller picture of a country's level of human development requires analysis of other indicators and information presented in the statistical annex of the report.

GDP p.c. (PPP) is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar (USD) has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current international dollars.

The PPP method involves the use of standardized international dollar price weights, which are applied to the quantities of final goods and services produced in a given economy. The data derived from the PPP method probably provide the best available starting point for comparisons of economic strength and well-being between countries. In contrast, the currency exchange rate method involves a variety of international and domestic financial forces that may not capture the value of domestic output. Whereas PPP estimates for OECD countries are quite reliable, PPP estimates for developing countries are often rough approximations. In developing countries with weak

currencies, the exchange rate estimate of GDP in USD is typically one-fourth to one-half the PPP estimate.

This entry gives the GDP or value of all final goods and services produced within a nation in a given year. A nation's GDP at PPP exchange rates is the sum value of all goods and services produced in the country valued at prices prevailing in the United States in the year noted. This is the measure most economists prefer when looking at p.c. welfare and when comparing living conditions or use of resources across countries.

The concept of PPP allows one to estimate what the exchange rate between two currencies would have to be in order for the exchange to be on par with the purchasing power of the two countries' currencies. Using that PPP rate for hypothetical currency conversions, a given amount of one currency thus has the same purchasing power whether used directly to purchase a market basket of goods or used to convert at the PPP rate to the other currency and then purchase the market basket using that currency. Observed deviations of the exchange rate from purchasing power parity are measured by deviations of the real exchange rate from its PPP value of 1.

The purchasing power parity exchange rate serves two main functions. PPP exchange rates can be useful for making comparisons between countries because they stay fairly constant from day to day or week to week and only change modestly, if at all, from year to year. Second, over a period of years, exchange rates do tend to move in the general direction of the PPP exchange rate and there is some value to knowing in which direction the exchange rate is more likely to shift over the long run.

Among other uses, PPP rates facilitate international comparisons of income, as market exchange rates are often volatile, are affected by political and financial factors that do not lead to immediate changes in income and tend to systematically understate the standard of living in poor countries.

Estimation of purchasing power parity is complicated by the fact that countries do not simply differ in a uniform price level; rather, the difference in food prices may be greater than the difference in housing prices, while also less than the difference in entertainment prices. People in different countries typically consume different baskets of goods. It is necessary to compare the cost of baskets of goods and services using a price index. This is a difficult task because purchasing patterns and even the goods available to purchase differ across countries.

When the comparison of GDP p.c. in PPP are repeated for at least two periods, it is possible to infer the relative growth rates for different countries between the two periods. However, an alternative reliable estimate of real GDP p.c. growth exists – that provided by national accounts. By using the growth figures published annually by the national statistical institutes of the OECD countries, it is possible to calculate real GDP p.c. growth in each of the countries concerned, over the same period.

The formula for PPP requires two prices in different currencies to calculate the price ratio: S (PPP ratio) = Price 1/Price 2

In this case, P1 refers to one price in a specific currency, and P2 refers to price in USD. The basic formula for calculating the GDP is: $Y = C + I + E + G$

Y = GDP

C = Consumer Spending

I = Investment made by industry

E = Excess of Exports over Imports

G = Government Spending

To get GDP (PPP) you need divide GDP with PPP exchange rate and then you need to divide GDP (PPP) with population size to get GDP p.c. (PPP).

3. DATA COLLECTION AND RESEARCH METHODOLOGY

The collected data refer to the 28 EU countries and BiH and their official statistical data concerning HDI (shown as a coefficient from 0 to 1) and GDP p.c. (shown as the amount of USD) in the year 2012. These are the official statistical data of the World Bank and UNDP, published in 2013.¹

3.1. Analysis of research results

The collected data were processed and analyzed using the statistical software package SPSS analysis using the matrix of linear correlation, matrix of multiple linear correlation and regression equation. The results of research are presented and interpreted assist crafted table.

3.2. Analysis of HDI by EU

The research serves to show the developmental stage of human factor for the following countries.

Table 1. Analysis of HDI by EU

Austria	0,895	Finland	0,892	Lithuania	0,818	Portugal	0,816
Belgium	0,897	France	0,893	Luxembourg	0,875	Romania	0,786
Bulgaria	0,782	Greece	0,86	Hungary	0,831	Slovakia	0,84
Cyprus	0,848	Croatia	0,805	Malta	0,847	Slovenia	0,892
Czech Republic	0,873	Ireland	0,916	The Netherlands	0,921	Spain	0,885
Denmark	0,901	Italy	0,881	Germany	0,92	Sweden	0,916
Estonia	0,846	Latvia	0,814	Poland	0,821	The UK	0,875
BiH							0,735

¹ The collected data and monitoring methodology and calculation data was explained in detail on the web <http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.D>

<http://www.undp.org/content/dam/undp/library/corporate/HDR/2013GlobalHDR/English/HDR2013%20Report%20En>

The collected data are part of the annual statistical report of the UNDP called: "Human Development Report 2013".

Source: by author.

The analysis of HDI coefficient by EU (including BiH) in Table 1. shows a great dispersion in its size, allowing us to divide all of the observed countries in three groups. The first group consists of Denmark, Ireland, Holland, Germany and Sweden, countries with a great deal higher stage of human capital development than all of the other countries, inferred from their life expectancy and education which is evidenced by the average duration of educational process and the expected time required for education. The second group involves Austria, Belgium, Cyprus, Czech Republic, Estonia, Finland, France, Greece, Croatia, Italy, Latvia, Lithuania, Luxembourg, Hungary, Malta, Poland, Portugal, Slovakia, Slovenia, Spain, and the UK. These countries have a somewhat lower HDI than the first group. The third group of countries with a much lower HDI encompasses Bulgaria and Romania as the EU countries and BiH. This last group is yet to experience a great deal of population advancement as well as the development of educational and health systems.

Countries from the first group should base their social and economic standard, presented as GDP p.c. which is a relevant indicator of the population's life standard, more on their educational, competent, productive, healthy, and active manpower, and less on technological advancements and the newest scientific and technical achievements which enable the competitiveness of the company, their products and services. Furthermore, countries from the third group should focus upon their technological productivity until they reach a fine level of their human factor development.

3.3. Analysis of GDP p.c. by EU

The study observed the level of economic and social development according to the observed countries.

Table 2. Analysis of GDP p.c. by EU

Austria	44 208	Finland	38 655	Lithuania	23 399	Portugal	25 411
Belgium	39 788	France	36 104	Luxembourg	91 388	Romania	16 518
Bulgaria	15 933	Greece	25 331	Hungary	22 119	Slovakia	25 300
Cyprus	30 597	Croatia	20 532	Malta	29 013	Slovenia	27 475
Czech Republic	26 590	Ireland	43 592	The Netherlands	43 198	Spain	32 682
Denmark	42 086	Italy	33 111	Germany	40 901	Sweden	43 180
Estonia	23 065	Latvia	20 969	Poland	22 162	The UK	36 901
<i>BiH</i>							9 235

Source: by author.

Table 2. shows a large and significant variety of the economic standard, presented as a GDP p.c. which is a relevant indicator of life, for some EU countries. There is a large gap between, for instance, Luxembourg with more than 90 000 USD p.c.

and Bulgaria and Romania with 15 933 and 16 518 USD, respectively. BiH, being the only observed country which doesn't belong to the EU and showing the tendency to enter it, which should be the common goal of all the economic and political subjects in that country, has even lower level of GDP p.c.: 9 235 USD. Here we can also divide the countries in three groups according to their wealth, i.e. their quality of life standard.

The first group includes countries with a GDP p.c. above 40 000 USD, namely Austria, Denmark, Ireland, Luxembourg, the Netherlands, Germany, and Sweden. The second group consists of countries such as Belgium, Cyprus, Finland, France, Italy, Spain, and the UK. The third, less wealthy group of countries is made of Bulgaria, Czech Republic, Estonia, Greece, Croatia, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovakia, and Slovenia.

Countries from the first two groups have achieved a sufficient level of economic and life standard development, being thus able to base their GDP p.c. growth on technological competitiveness to a much larger extent, reducing the influence of education and productivity of their population.

3.4. Analysis of the realized and expected level of GDP p.c. by EU

The study deals with discrepancy between the expected and realized level of GDP p.c. according to the observed countries.

Table 3. Analysis of the realized and expected level of GDP p.c. by EU

<i>country</i>	<i>realized GDP p.c.</i>	<i>expected GDP p.c.</i>	<i>country</i>	<i>realized GDP p.c.</i>	<i>expected GDP p.c.</i>
Austria	44 208	39 841	Lithuania	23 399	23 384
Belgium	39 788	40 269	Luxembourg	91 388	35 567
Bulgaria	15 933	15 690	Hungary	22 119	26 163
Cyprus	30 597	29 796	Malta	29 013	29 582
Czech Rep.	26 590	35 139	The Netherl.	43 198	45 398
Danska	42 086	41 124	Njemačka	40 901	45 185
Estonia	23 065	29 369	Poland	22 162	24 025
Finland	38 655	39 200	Portugal	25 411	22 957
France	36 104	39 414	Romania	16 518	16 545
Greece	25 331	32 361	Slovakia	25 300	28 086
Croatia	20 532	20 606	Slovenia	27 475	39 200
Ireland	43 592	44 330	Spain	32 682	37 704
Italy	33 111	36 849	Sweden	43 180	44 330
Latvia	20 969	22 529	The UK	36 901	35 567
<i>country</i>	<i>realized GDP p.c.</i>		<i>expected GDP p.c.</i>		
<i>BiH</i>	<i>9 235</i>		<i>5 645</i>		

Source: by author.

As can be seen in Table 3, if look at the difference between the actual GDP p.c. and the expected GDP p.c., i.e. GDP p.c. which the country should achieve with regard to its level of human capital development, which is seen through the HDI parameters or life expectancy and education of the population, there are significant distinctions among a large number of countries observed, regardless of whether they have achieved higher GDP p.c. than expected or vice versa. The observed countries that have achieved higher GDP p.c. than expected actually produced more goods and services than expected with regard to their power and development of the human factor, and the observed countries that have achieved lower GDP p.c. than expected actually produced a smaller number of goods and services than expected if we take into account the level of education and competence of its population. The distinctions occurring in this analysis are the result either of under-utilization of all potentials of the population in some countries or of technological development that significantly affects the competitiveness of the country's enterprises, which the analysis of this study doesn't take into account.

Results were obtained on the basis of the regression equation, where is a constant: - 151446.16 square coefficient: 0.87 standard error of regression: 1,685.00 number of observations: 29 Degrees of freedom: 26 and coefficient: 213,729.00

The observed countries can be divided into two groups, the first group consisting of countries that have achieved higher GDP p.c. than expected, while the second group includes countries that have achieved lower GDP p.c. than expected.

The first group, having a higher GDP p.c. the expected, is made of Austria, Bulgaria, Cyprus, Denmark, Lithuania, Luxembourg, Portugal, the United Kingdom and BiH as the only observed country outside the EU. While Bulgaria, Cyprus, Denmark, Lithuania and Great Britain have a very small increase in GDP p.c. when concerning the expected one, i.e. a very small difference between actual and expected GDP p.c., which implies that these countries generally exploit the potential of its population achieve quite a realistic GDP p.c., Austria and Portugal, and in particular in Luxembourg and BiH, show significant differences which confirm that these countries have achieved growth rates that are not objective and consistent with the level of human factor development in these countries. In the following years, these countries, especially Luxembourg and BiH, will have experienced a number of difficulties with their rate of economic growth and their GDP p.c. growth based on the productivity of their manpower without any significant investment in the newest technologies.

The second group of countries, which they have achieved a lower GDP p.c. than expected, consists of Belgium, Czech Republic, Estonia, Finland, France, Greece, Ireland, Italy, Latvia, Hungary, Malta, Netherlands, Poland, Romania, Slovakia, Slovenia, Spain and Sweden. Here we can separate the countries that have achieved a slight decline in their real GDP p.c. than expected, which means they succeeded in exploiting the potential of its population and produced an objective level of products and

services, and these are Belgium, Finland, France, Croatia, Ireland, Italy, Latvia, Malta, Netherlands, Poland, Romania, Slovakia, Spain, and Sweden.

The observed countries whose GDP p.c. did not help achieve their human potential and who realized a significantly lower GDP p.c. than expected, for instance Czech Republic, Estonia, Greece, Hungary, Germany and Slovenia, can, in the following years, base the rate of their economic growth on the untapped potential of the human capital of their residents.

4. SYNTHESIS OF RESEARCH

The first conjecture of the study stated that the EU countries with developed human capital achieve higher GDP p.c. than they reasonably should, i.e. that their realized GDP p.c. is higher than expected. The second conjecture of the study was that the EU countries with a higher GDP p.c. also achieved higher GDP p.c. than expected. The third conjecture concerns the work of BiH, which has a low level of human capital development and low level of GDP p.c., and whose realized GDP p. c. is lower than expected.

The first conjecture of the study states that the EU countries with the developed human capital achieve the higher GDP p.c. than they reasonably should, i.e. that they have achieved higher GDP p.c. than expected, proved to be false. According to the research, Denmark, Ireland, the Netherlands, Germany and Sweden have extremely high and significantly higher level of human capital than the other observed countries, and of the three, only Denmark managed to achieve the reasonable level of GDP p.c., or higher than expected.

The second conjecture which states that the EU countries with a higher GDP p.c. have a higher realized GDP p.c. than expected, also proved false. Namely, the countries with the highest GDP p.c. are Austria, Denmark, Ireland, Luxembourg, the Netherlands, Germany and Sweden, and from these countries, Austria, Denmark and Luxembourg have managed to achieve a higher GDP p.c. than expected.

The third conjecture, stating that BiH, which has a low level of human capital development and a low level of GDP p.c., has a lower GDP p.c. than expected, also wasn't correct. In the observed year, BiH had achieved a GDP p.c. which is significantly higher than expected, based on the degree of human capital development in the country.

Generally speaking, apart from the constant tendency of economic state policy towards development and education of the population as one of the main flywheel of economic and social development of each country, i.e. apart from managing a high and continuous growth rate of GDP p.c., this study proved that the reasonable or realized GDP p.c. ought to be based on human capital, labor productivity, and significant investment in the latest and most advanced technologies which are the the path to a higher degree of competitiveness, whereby investing in any of these parameters must not be neglected.

LITERATURE

1. Bradshaw, M., J., Dymond, J., P. and G. W. White (2004), *Contemporary world regional geography: global connections, local voices*, McGraw-Hill, New York.
2. Ivancevich, J. M. (1995), *Human Resource Management*, sixth edition, Irwin.
3. Krugman, P., R. and M. Obstfeld (2003), *International economics: theory and policy*, sixth edition, Addison-Wesley, cop., Boston.
4. Nadler, L. and Z. Nadler (1991), *Developing Human Resources*, third edition, Jossey-Bass Publishers, San Francisco, Oxford.
5. Walker, J. W. (1992), *Human Resource Strategy*, McGraw-Hill, Inc., New York.
6. <http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD> (01. 12. 2013.)
7. <http://hdr.undp.org/> (01. 12. 2013.)
8. <http://www.undp.org/content/dam/undp/library/corporate/HDR/2013GlobalHDR/English/HDR2013%20Report%20English.pdf> (03. 12. 2013.)