

THE GLOBALIZATION INDEX. CONSIDERATIONS REGARDING THE POSITIONING OF ROMANIAN'S AND BULGARIAN'S ECONOMIES IN INTERNATIONAL RANKINGS

Prelipcean Gabriela, Cozorici Angela - Nicoleta

Faculty of Economics and Public Administration

Stefan cel Mare University of Suceava, Romania

gabrielap@seap.usv.ro

angelac@seap.usv.ro

Abstract: *Despite the current uncertain economic times, the globalization has continued to perform. One can see the interconnection between the economies around the world in the levels of developing the cross-border trade. The globalization has become an irremovable process, which was developed with a floating speed, but sometimes quite high, including within its sphere in a direct or indirect way the set of the world states. This paper carries out an analysis and compares the effects of the economic openings in Romania and Bulgaria. The results have indicated the idea according to which, the level of economic opening has had a higher impact over the economy in Romania, as comparing to Bulgaria. The defining feature of this paper is related to the use of economic globalization index. The objective evaluation of both causes and consequences on globalization has represented a priority for the contemporaneous societies. The economic, social and political analysis has needed information, and the globalization index has represented an important tool in order to provide the realistic data. The globalization indexes have been used in various ways. Besides the academic analysis, these have been used in the analysis of the economic activity, in the mass-media, as well as in the political groups. This paper emphasizes the assessment of the level of globalization by assessing the importance given to the globalization index. The paper underline that a proper understanding of the globalization process requires interdisciplinary action. Despite some various methodologies, of the variables set or weights in order to study and measure the globalization in a significant way, new cooperation frames have proven to be necessary.*

Keywords: *globalization; globalization index; globalization index's methodology; economic development.*

JEL classification: *F62 - Macroeconomic Impacts; F63 - Economic Development; O11 - Macroeconomic Analyses of Economic Development*

1. Introduction

The globalization index is based on the economic development level of a country, the level of the trading activities, of technological connection, of employment and of political integration of the states in different international groups and/ or organizations etc. In this way, the globalization index has included more variables, such as: political commitments, economic integration, population, technological connections, which are calculated every year, thus following the progress of a country as related to all what the globalization processes assume.

The current paper has in view the globalization measuring, in order to achieve a better understanding of the globalization indexes, thus supervising if the

globalization measuring might guide us to a better understanding of it. Obviously, the indexes should bring a significant contribution and transparency in debates, having in view the fields where the globalization indexes can be used. Forwards, the authors will present the most important indexes of globalization.

2. The globalization indexes

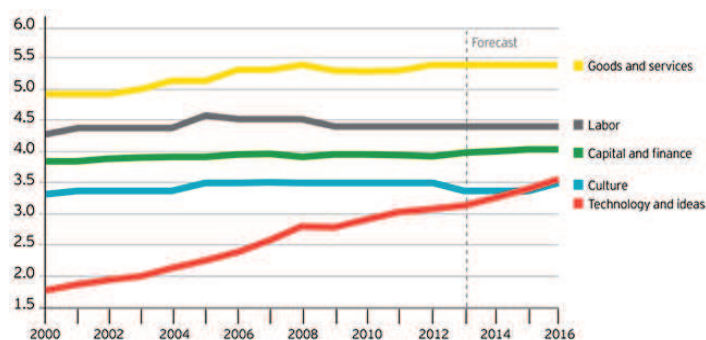
Although it has become difficult to measure the globalization level of countries, the Foreign Policy Magazine published in 1999 the Kearney synthetic index of the economic growth, which signifies a composite index, underlying on four essential elements: the economic integration level, the life standards, the technological development level and political performance. The FP Magazine has published every year the classification of the 62 countries included into the index, countries that carry out the percentage of 96 of the world GDP and include 84% of the world population. The index has four dimensions: the economic, political, technological and individual dimensions. The level of economic globalization is measured by the trade opening and the relative significance of the direct foreign investments in a country. The use of telephone, the travels and the remitters have aimed towards the individual size of the globalization. The level of technological connection has been estimated by means of the Internet users' number and of housing them, as well as by the secured servers' number. Lastly, the political employment on the world level is given by the adhesion to the international organizations, the involvements into the UNO missions on maintaining the peace, on accepting the treats and the governmental transfers. This measure of globalization has not been obviously perfect, but, at least, it included not only the economic issues of globalization, as in the situation of the indexes previously calculated. The Foreign Policy Magazine also published in 2004 an index of cultural globalization, which included a list with the most globalized cities for 2010 (Heshmati, 2006).

A new index of globalization was published by the Economic Atlantic Journal, including 70 countries and using 21 variables in order to measure the globalization level in these countries. This included more variables, needed to underline the multiple phases of the globalization, such as: the variable representing the international mobility ratio of students. Moreover, this index made more difficult the measure of trade flows, by the distance between the transaction countries, thus admitting that many small countries are underlying a lot on their neighbors, when it comes about trade, but are less globalized in their assembly. As result of such change, many small European countries disappeared from the list of the first 10 globalized nations (Vujakovic, 2010).

Another index issued by the Joint Research Center in Switzerland is represented by the KOF globalization index, which measures the three main dimensions of the globalization: the economic, social and political. The economic dimension of the KOF index measures the effective trade and the volumes of investments on one hand, as well as the measure by which countries apply trade and circulation restrictions on capital, in order to protect the own economies, on the other hand. The social dimension of globalization reflects the level of data and ideas dissemination, while the political dimension shows the level of political cooperation between countries. The KOF index can be used in order to analyze the changes produced by the globalization on the level of a high number of countries, during a long period of time.

The KOF index of globalization was published for the first time in 2002 (Dreher, 2006) and included 123 countries and 23 variables. The KOF index was updated periodically, and for the time being, this index was also valid for 187 countries, as regards the 1970-2010 period of time. The index measured the globalization on a scale from 1 to 100, and the variables expression, which is underlying its calculation, will be expressed in percentages. This fact will reduce the impact of extreme reference points, which has as result fewer fluctuations in time.

The most recent index is represented by the Ernst & Young annual index, which was developed for the first time in 2009, in cooperation to the Economist Intelligence Unit. The globalization index measured the performance of the highest 60 economies in international level, taking into account the 20 indicators that evaluate the key issues on the cross-border integration on economic activities. These indicators have been registered in five larger categories, the change of ideas and technologies, the mobility of labor force and the cultural integration.



Graphic 1: Components of the globalization index

Source: Ernst & Young, 2013, *Looking beyond the obvious: globalization and new opportunities for growth*

Note: Basis = the highest 60 countries depending on GDP

As can be seen in the above graphic, the globalization ratio was slowing down, and its characteristics were different. As the trade on goods and services returns on the level before the financial crisis launching, and the capital flow registered a constant growth, the technology and cross-border changes of ideas will continue to influence the extension and character of the globalization. The technology has always been the today's world ground, more and more connected and more digital, having a profound impact over the level of each country. Taking into account the conditions where the trade integration has continued to become steady, a position changing between the importer and exporter countries was estimated. The economies of fast growing have become consumption markets more and more powerful, and the developed markets have own a higher strength in the production and export of goods and services.

Within the context where most of prognosis, related to the global GDP, have foreseen a growth included within the interval of 3% up to 3.5%, and a modest growth for the years to come, the Ernst & Young index estimated that globalization will continue to extend, and the technology and the cross-borders changes on ideas will establish the main levers on development.

The globalization index measured the relative, and not absolute, level of globalization, which signifies that indicators are taken into account as related to the GDP of each country, and the index will reflect the measure by which the global integration of a country can be noticeable or sensed within its internal part.

As the globalization has progressed, and new better sets of information became available, it has become necessary to review the information as regards the index and the methodology on reflecting precisely these evolutions. In 2012, a review on the score system of the globalization index was carried out, included more secondary indicators, in order to better reflect the current situation into the global economy, technology and markets. The new calculation system has used a dynamic normalization technique. Moreover, the following variables were influenced into the globalization index, calculated for 2012:

- The weight of the main trade partners within the total trade, as GDP percentage;
- The trade within information and communications technology, as percentage of GDP;
- Foreign direct investments (FDI), in stocks, as GDP percentage;
- Total of the international traffic on fix telephony.

The weights on such indicators, as regards the index above mentioned, were redistributed in order to reflect the changes in variables. The aim of such changes consists in capturing better the country's relative efficiency and the performance in time of the five main engines of globalization. The changes are reflected in some reviews higher than those normal and historical, calculated in 2012, and the updated methodology of the index illustrated at best the nuances of the nowadays globalization process, thus offering us a better ability on analysis.

In accordance to the annual report as regards the globalization, report carried out by Ernst & Young, this process has continued to advance the main 60 economies in the world, despite the weak growth in 2012, and of the uncertain economic perspectives for 2013, concerning most of countries. The study was carried out by the evaluation of 60 of the highest economies in the world, thus following their globalization level, as reported to their GDP, and by means of a poll, which analyzed the opinions on globalization for 750 senior executives; they are leading the top management organizations on the global level. The classification on 2012 for the previous years was emphasized as follows:

Table 1: Classification of the most globalized countries, related to the globalization index

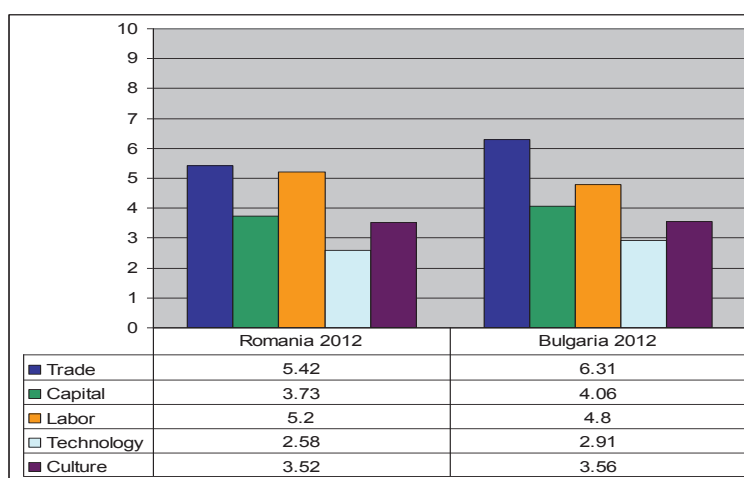
Position (2012)	Country	Year			
		2012	2011	2010	2009
1.	Hong Kong	7,81	7,42	7,48	6,90
2.	Singapore	6,31	6,88	6,78	7,29
3.	Ireland	5,63	7,24	7,43	6,87
4.	Belgium	5,49	5,81	5,82	5,82
5.	Switzerland	5,30	5,46	5,86	5,62

6.	Netherlands	5,19	5,58	5,59	5,45
7.	Sweden	4,96	5,72	5,90	5,77
8.	Denmark	4,94	5,70	5,93	5,77
9.	Hungary	4,75	5,19	5,35	4,88
10.	United Kingdom	4,74	4,95	5,00	4,76
11.	Germany	4,72	4,88	4,89	4,71
12.	Slovakia	4,66	4,84	5,16	4,34
13.	Finland	4,62	5,39	5,29	5,14
14.	France	4,58	4,49	4,71	4,51
15.	Canada	4,55	4,83	4,89	4,87
22.	Bulgaria	4,37	4,25	4,48	4,03
31.	Romania	4,10	4,05	4,32	4,00

Source: Carried out by authors upon basis of data gathered from the annual reports of Ernst & Young during 2010-2013

As can be noticed in the above illustrated table, Romania occupied position 31 in the globalization index for 2012, thus maintaining at the half of classification for those 60 analyzed countries. Bulgaria has 9 positions above Romania, and the first three positions were occupied by Hong Kong, Singapore and Ireland. The Romania's progress is forthright with the global average, and the especial results can be noticed at the "labor force movement" paragraph (+0.77 points above the global average). There are also values registered under the global average level, as mentioned in the paragraphs "changes on technology and ideas", where the value is of -0.51 points under the average, as well as in "the movement of capital and finances" paragraph, with a value of -0.25 points under the average.

Romania has an opened economy, which has beneficated a lot by the access to the new markets, especially for those within European Union. It will beneficiate forwards by the step by step liberalization of the world trade and of the trade integration, more and more connected to European Union. A part of the goods trade impediments within European Union, which still persists currently, might bring benefits to Romania, and will continue, even if this is done in a slower rhythm, as comparing to that previously estimated.



Graphic 2: Components of the globalization index

Source: Carried out by authors, upon basis of Ernst & Young data, 2013, *Looking beyond the obvious: globalization and new opportunities for growth*

For both Romania and Bulgaria, the five categories that form the index will occupy the same positions, and respectively, the trade occupies the first place, followed by the labor force mobility, and the capital movements, where the last two positions were occupied by the cultural integration and the change of ideas and technologies. Data emphasized here shows us that the globalization index related to Romania has a superior value as comparing to Bulgaria, but only as regards the labor force mobility (5.2 as comparing to 4.8); for all the other categories, Romania registered lower values for 2012. Moreover, during 2009-2012, Romania held every year an inferior position as related to Bulgaria, starting from a differentiation of only two positions in 2009, and thus reaching for the time being at 9 positions distance, as can be seen in the following table.

Table 2: Position occupied by Romania and Bulgaria within the classification of the most globalized countries

Country	2009	2010	2011	2012
Bulgaria	28	23	26	22
Romania	30	30	32	31

Source: Carried out by authors upon basis of data gathered from the annual reports, Ernst&Young, 2009-2012

In this way, one can notice that Romania occupies a relatively constant position within the classification, where the index of globalization registered a growth, from a score of 4.00 in 2009, to 4.10 in 2012, while Bulgaria grew in the classification by 6 positions, meaning from the position 28 in 2009 to position 22 in 2012, and the globalization index registered a growth from 4.03 to 4.37 in 2012.

3. The opening and economic development in Romania and Bulgaria

More empirical studies have confirmed the hypothesis, according to which the growth of the economy's opening level has a positive impact over the economic development. This section compares the economic opening and performances in Romania and Bulgaria, by using a graphical approach. An advantage of such comparison consists in the idea that this will offer a perspective over the way an opening level of economy might determine a higher growth, considering that two countries might have some resemblances, although their opening level can be quite different.

Romania is the ninth country, in accordance to the territory surface (238.391 km²) and the seventh country, in accordance to the people's number, within the member states of the European Union, with over 22 million of inhabitants, according to the National Institute of Statistics. After the communist regime comedown, Romania has known a decade of profound unsteadiness and economic decline. According to the National Institute of Statistics, the GDP knew a growth in 2006, in real terms of 7.9%, one of the highest in Europe, and even equaled the GDP per capita, carried by Romania in 1988. As regards Romania, the percentage of 32% of the country's people is employed in the agricultural and production fields, one of the highest rates in Europe.

Generally, Romania has held an intense trade with countries of the European Union, and especially with Germany and Italy, which represent one of the most important trading partners of Romania.

After a series of privatize actions and reforms at the end of nineties and beginning of the years 2000, the government intervention within the country's economy was quite absent, as comparing to the economies of other states in Europe ([Index of Economic Freedom: Romania](#), heritage.org). In 2005, Romania has replaced the progressive system of taxation, where the maximum quota was of 40%, with a unique quota of 16%. In 2007, this was the lowest quota of EU ([Taxation trends in the EU](#), Eurostat 2007). Though, in 2008, Romania was overshadowed by Bulgaria, which has now a unique quota of 10%. The economy is predominantly based upon services, which represent 55% of the GDP, and the industry and agriculture have also a significant contribution of 35%, and respectively 10% of the GDP.

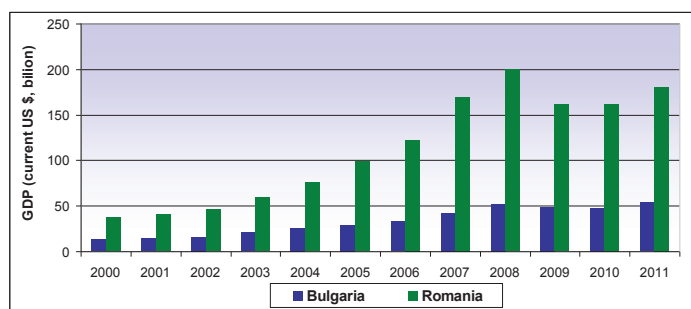
With a territory of 110.994 km², Bulgaria is the fourteenth country, in size, within Europe. The value of 7.327 million people in 2012, in accordance to Eurostat, is predominantly urbane, being more intensive in the residences of the 28 regions. Most of the trade activities are carried out in the capital Sofia. The most developed sectors of economy are represented by the heavy industry, the energetics engineering, the agriculture and tourism, all of them underlying on locally available resources.

Bulgaria has an industrialized market economy (Alfred Levinson, 1994), existing on the average revenues region and where the private sector produces over 80% of the GDP (The World Bank Group, 2008). Regarded as a country predominantly agricultural, and with a prevailing rural population in 1948, Bulgaria has become an industrialized economy, whose main priority relied on the technological and scientific research.

The crisis of planned economies, and afterwards, the shocks therapy applied on changing into a market economy, has had as result the sharp diminution of the industrial and agricultural production, which reached the high point by the economic

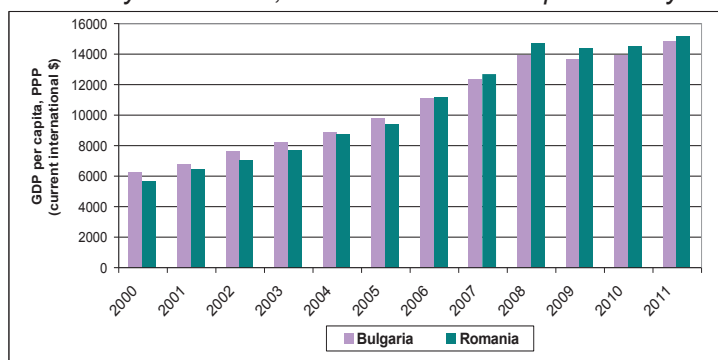
collapse in 1997.

After 2000, Bulgaria has reached a period of fast economic growth (European Committee, 2007), although the level of revenues has remained one of the lowest in EU, and the gross average wage was of 386 Euro in March, 2012 ([Average monthly wages and salaries in 2012](#), National Institute of Statistics). The wages have represented only a half of the domestic revenues total ([Households Income, Expenditure and Consumption in 2011](#), National Institute of Statistics, 2012). The GDP per capita, in terms of the purchasing power parity was almost 46% of the EU average in 2011 for Bulgaria and 49% for Romania, in accordance to the Eurostat data.



Graphic 3: The Gross Domestic Product (milliards of dollars)

Source: Carried out by the authors, in accordance to data provided by the World Bank



Graphic 4: The Gross Domestic Product per capita (dollars)

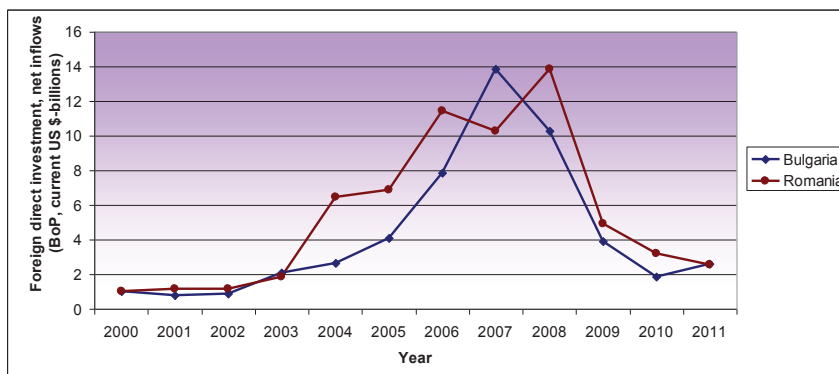
Source: carried out by the authors, in accordance by the World Bank

As can be seen in the two graphics illustrated above, the significant differences between Romania and Bulgaria's GDP, which are underlined in the first graphic, are lost in the second graphic, which reflects the gross domestic product per capita. Though, Romania is placed in front of Bulgaria, with a GDP per capita of 15.138,94 \$ in 2011, as comparing to Bulgaria (14.825,07 \$). During 2000-2005, Bulgaria registered the GDP per capita higher than Romania, the last one exceeding it, by starting with 2006. Since 2000 and until 2011, GDP/per capita of Bulgaria was risen by 2.38 times, from 6.225,06 \$ in 2000 up to 14.825,08 \$ in 2011, as comparing to Romania, which registered a growth of 2.67 times higher, from 5.661,77 \$ in 2000 to 15.138,94 \$ in the year 2011.

According to official statistics offered by the World Bank, the Romania's GDP on 2011 was of 179,793 milliards \$, value of 4.85 times higher as comparing to that registered in 2000. As regards Bulgaria, the GDP grew 4.14 times, from 12,903 milliards \$ in 2000 up to 53,514 milliards \$ in 2011.

Romania was situated in February 2013 on the first position in European Union, as regards the industrial production growth, as comparing to the similar period in 2012, in conditions where the indicator was reduced by 3.1% in the Euro region (EA17) and by 2.5% in the European Union (EU27), data published by the European Office of Statistics (Eurostat). In accordance to Eurostat, the industrial production grew in six member states of the European Union, and was reduced in 16 member states. The highest increasing was registered in Romania (6.5%) and Bulgaria (5.1%).

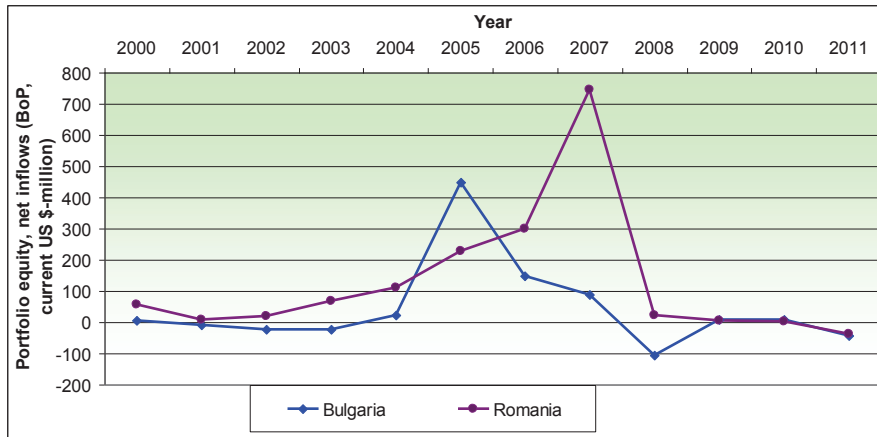
The unemployment ratio in Romania increased from 12.9% in February 2013 (Unemployment rate, Eurostat, 2013) and the GDP growth passed from 6.2% (2008) to -5.5% (2009) within the context of financial crisis ([Real GDP growth rate – volume, Eurostat, 2013](#)). The crisis has had a negative impact over the industry, thus producing a reduction by 10% of the national industrial production, a reduction of 31% in mining, and of 60% in the non-ferrous metals ([Economist: financial crisis brewed by U.S. market fundamentalism, Xinhua, 2009](#)). The positive growth knew a recovering in 2010, reaching to 0.2% ([Real GDP growth rate – volume, Eurostat, 2013](#)).



Graphic 5: Foreign Direct Investments (milliards of dollars)

Source: Carried out by the authors, in accordance to data provided by the World Bank

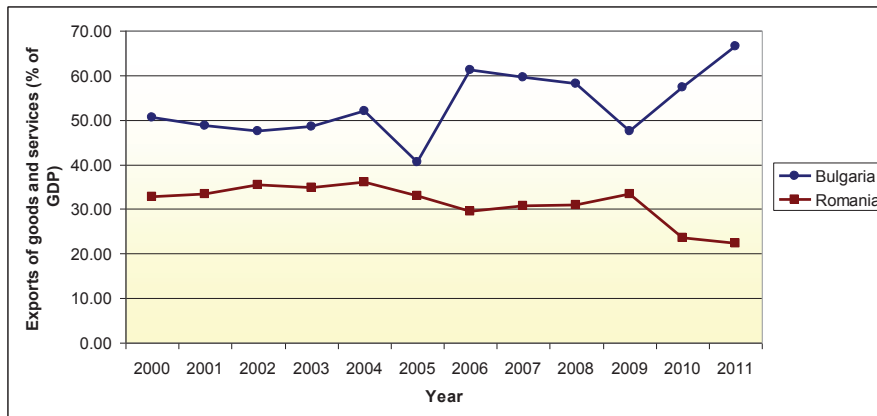
Starting with 2000, Romania has represented an attraction point for many foreign investors, becoming the most important destination of foreign investments in the Central and South-East Europe. The foreign direct investments had in 2011 the value of 2,557 milliards \$, on the decrease from 3,204 milliards \$ with a year before. During 2000-2008, the highest value of foreign direct investments in Romania was registered in 2008, and respectively of 13,849 milliards \$. Bulgaria reached the maximum of the same period in 2007, when the FDI volume reached 13,875 milliards \$. At the end of 2011, the investments in Bulgaria were on decrease, and the consumption was constantly reduced because of the unemployment growth ([Looming Recession to Fuel Further Bulgaria's Jobless Rate](#), Novinite, 2012).



Graphic 6: Investments of portfolio (milliards of dollars)
Source: Carried out by the authors, in accordance to data provided by the World Bank

The investments of portfolio in Romania registered a maximum level in 2007, of 746 million of \$, after which this were reduced from one year to another, and the more pronounced reduction was registered in 2008, when the level of portfolio investments was of only 23 million of \$.

Regarding Bulgaria, the portfolio investments registered reductions during 2000-2003, the maximum level of 449 million \$ being reached in 2005, after which 3 years of reductions followed until 2008, and a slow recovering in 2009 and 2010 also took place, followed by new reductions in 2011, so that the level on portfolio investments reached the level registered at the beginning of the time.



Graphic 7: Export of goods and services (percentages of GDP)
Source: Carried out by the authors, in accordance to data provided by the World Bank

If one analyzes the exports of goods and services, as percentage of the gross domestic product, one can see a better situation for Bulgaria, which indicates growths by starting with 2009, after three years of coming-downs. Romania hasn't known significant changes during 2000 to 2009, though an essential diminution of almost 30 percentages was registered in 2010, where after this have continued in 2011, as well.

4. Conclusions

The nature of globalization continues to progress and keep changing. The technology has always ensured new development and strengthening ways as regards the capital, ideas and innovations flows, towards directions that are yet difficult to be accomplished. Any evaluation of the relevance of the globalization indexes should take into account the various definitions of the globalization. Unfortunately, the globalization, by having such indexes, it seems to be difficult to be distinguished by internationalization or liberalization.

All the indexes have had component indicators and data that haven't been able to make a differentiation between globalization and internationalization (or liberalization). A composite index of globalization can solve many approaches. An index should be conceptually analyzed and well-defined, and this issue has involved measuring issues. Instead of calling in question the accurate feature of the globalization measuring, a certain level of optimism would be benefic, in order to bring improvements in the measuring processes, as well as in a better understanding of the globalization phenomenon.

Regarding the globalization from the economic processes point of view might signify a reductionist action. The globalization concept has had in subordination the culture, society, politics and environment concepts, as well.

The globalization has opened the world towards the international competition, and has also induced better allotments concerning the labor force, capital and technology. The globalization has offered to each country that enters into competition the possibility of specialize their production, in accordance to the relative advantages related to the production factors.

References

- [Anuarul Statistic al României](http://www.insse.ro), <http://www.insse.ro>
- Comisia Europeană (2007) [The economies of Bulgaria and Romania](http://ec.europa.eu/economy_finance/een/005/article_4326_en.htm), http://ec.europa.eu/economy_finance/een/005/article_4326_en.htm
- Dreher, A. (2006) *Does Globalization Affect Growth? Evidence from a New Index of Globalization*, *Applied Economics* 38(10): 1091–1110.
- Dreher, A., et.al. (2010) *Measuring Globalization – Opening the Black Box. A Critical Analysis of Globalization Indices*, *Journal of Globalization Studies*, Vol. 1 No. 1, 166–185
- Eurostat (2007) [Taxation trends in the EU](http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_structures/structure_s2007.pdf), http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_structures/structure_s2007.pdf
- Eurostat (2013) [GDP per capita in PPS](http://epp.eurostat.ec.europa.eu/Focus/Bulgaria's_Eurozone_accession_drifts_away), [http://epp.eurostat.ec.europa.eu/Focus, \[Bulgaria's Eurozone accession drifts away\]\(http://www.focus-fen.net/\), <http://www.focus-fen.net/>](http://epp.eurostat.ec.europa.eu/Focus/Bulgaria's_Eurozone_accession_drifts_away)
- Heshmati, A. (2006) *Measurement of a Multidimensional Index of Globalization*, *Global Economy Journal*. Volume 6, Issue 2, Pages –, ISSN (Online) 1524-5861 <http://data.worldbank.org/>
<http://globalization.kof.ethz.ch/>
<http://www.heritage.org/>
<https://www.cia.gov/library/publications/the-world-factbook/index.html>
- Institutul National de Statistică (2012) [Households Income, Expenditure and](#)

[Consumption in 2011](http://www.nsi.bg), <http://www.nsi.bg>
Institutul Național de Statistică (2013) [Average monthly wages and salaries in 2012](http://www.nsi.bg), <http://www.nsi.bg>
Levinson, A. (1994) [Bulgaria's Transition to a Market Economy](#), Sofia University
Martens, P. and Amelung, B. (2010) *On the correlation between globalization and vulnerability in times of economic crisis - a statistical analysis for Europe*. *Globality Studies Journal*, 17 (6 May 2010), 1-15.
Martens, P., Raza, M. (2009) *Globalization in the 21st Century: Measuring Regional Changes in Multiple Do-mains*. *The Integrated Assessment Journal* 9(1): 1–18.
Nallari, R. and Engozogo L. (2010) *Rethinking multipliers in a globalized world*, Policy Research Working Paper Series 5277, The World Bank, www.worldbank.org
Novinite, (2012) [Looming Recession to Fuel Further Bulgaria's Jobless Rate](http://www.novinite.com/view_news.php?id=138799), http://www.novinite.com/view_news.php?id=138799
The World Bank Group (2008) [World Bank: Data and Statistics: Country Groups](#)
UNCTAD (2011) UNCTADstat, available: <http://unctadstat.unctad.org>.
Vujakovic, P. (2010) *How to Measure Globalization? A New Globalization Index (NGI)*, in *Atlantic Economic Journal*, International Atlantic Economic Society, available at <http://link.springer.com/content/pdf/10.1007%2Fs11293-010-9217-3>
World Bank (2007, 2011) *World Development Indicators*, Washington, DC.
Xinhua News Agency (2009) [Economist: financial crisis brewed by U.S. market fundamentalism](http://news.xinhuanet.com/english/2009-03/12/content_11000486.htm), http://news.xinhuanet.com/english/2009-03/12/content_11000486.htm