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European Union: Innovation Activity and competitiveness. Realities and perspectives

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Abstract: *This article tries to capture some relevant aspects of the research - development and innovation (RD&I) sector in the European Union and some Member States and the current EU political commitments in this field, with a special focus on the „Innovation Union", the consolidation of the European Research Area, the European re-industrialization and the action plan „Horizon 2020". According to the most recent and relevant documents in the field, the EU is in an industrial revival process, which implies a fruitful activity in research and technological innovation of products, processes and adjacent services. The author envisages evaluating the RDI sector development in some EU member states - both developed and less developed Central and Eastern Europe (including Romania) - and the contribution of this sector to the development and competitiveness of the respective countries on international market (the parallel study between international competitiveness and innovation level of the EU and its Member States being an important point in this paper). The findings of this article highlight the demonstrated importance of innovation for a good EU international competitiveness and the measures (imposed by the reality) that can be taken for its increase at EU and national level (especially for those countries with a less intensive innovative activity).*

Key-Words: *research, development and innovation, EU innovation policy, international competitiveness, EU Member States, Romania, EU re-industrialisation.*

JEL Classification: *O1, O2, O3, O5*

1. Introduction

Analysts define competitiveness through productivity in an economy, which entails the prosperity degree of the entire society. Among the determinant factors of productivity (and thus of competitiveness) there are education and training, infrastructure, macroeconomic stability, complexity of business environment, markets efficiency, scientific and technological progress, which may be achieved nationally or internationally (by trade, cooperation and Foreign Direct Investments - FDI). As it is stated in a document of the World Economic Forum (WEF 2013-2014), it is obsolete today to talk further about traditional distinction between countries as "developed" or "developing", being more

appropriate to speak about „rich in innovation" and „poor in innovation" states, that is a recognition of the innovation role in the economy and, hence, in the economy competitiveness on the global market. While the overall economic situation of a country can not be changed easily, at least in the short term, technology appears to be an important factor supporting the country's hopes for the future of its development. What it is, however, decisive is the practical application of knowledge and innovation, generally speaking, and the proximity to the frontiers of knowledge, a process that can generate more value.

Appealing to the main documents of the European Commission, the World Economic Forum (WEF), the European Patent Office (EPO), the World Intellectual Property Organisation (WIPO) and Romania's authorities, the analysis tries to highlight the link between innovation and competitiveness (link denied by some economists regarding the state role and believed to exist only in relation with companies) of EU countries (and Romania's too), for better understanding the strengths and weaknesses of the respective states and the drivers that may contribute to adopting public policies for improving their position on the international markets.

In the EU, relatively low investments in intangible assets (research and development, human capital, including specialists in information and communication technology, etc.) may explain a part of the productivity gap between the EU and the USA, its main competitor on the international market. Also, lower capacity to absorb scientific and technological achievements obtained worldwide (international transfers), contributes to the gap recalled. Overall, one can say that the EU has managed to defend its competitive position on the international markets, by improving the quality of the products and services, thanks to outcomes in R&D&I. However, the EU manufacturing industry has a less intensive RD&I activity than the USA and Japan.

2. The current performance of EU and Member States in the field of innovation

According to the European Commission "Innovation Union Scoreboard (IUS) 2014" (EC 2014-1), during 2006-2013 average annual growth in EU innovation sector was 1.7%, the responsible community officials considering this rate as an unsatisfactory one. Within the EU, the Member States performance in innovation (measured by a composite indicator made up of 25 simple indicators grouped into three sub-categories: enablers, market activity and outputs) has not changed much compared to the situation described in the previous report, that of 2013. In accordance with the mentioned document, EU Member States were divided into four groups. The first group, the "innovation leaders", includes only four countries, Sweden, Denmark, Germany and Finland. The group of "innovation followers" includes Luxembourg, the Netherlands, Belgium, UK, Ireland, Austria, France, Slovakia, Estonia and Cyprus. Between the second and the fourth group (the "modest innovators"), composed of Romania, Latvia and Bulgaria, and the "followers" group, there is a third group of the "moderate innovators" formed by the remaining EU Member States.

Best overall performance of the innovation leaders is the result of a national research and innovation balanced system, which means that innovation leaders have the slightest variations of innovation outputs, in all aspects of their performance indicators.

Regarding the former socialist states, although the performance is poorer (Slovenia, Czech Republic, Hungary and Slovakia are the best ranked in IUS 2014), the success is ensured by the same factors as in developed countries. But some of the success factors

lack, such as the countries' general development and the RD&I sector development, the latter having a weak heritage from the socialist period. **Romania, ranked 26th (out of 28) in the top IUS 2014, has greatly to recover in the analyzed area, a special role being given to the funding, at national and Community level.** During 2006-2013, Portugal, Estonia and Lithuania had the highest growth rates in the field, while Sweden, Great Britain and Croatia had the weakest. In the innovation leaders group, a visible growth was recorded by Germany, while Sweden had the lowest rate of development. In the category of innovation followers, Estonia recorded the highest growth rate, while the UK, the lowest one. Portugal performed best from the moderate innovators, while Croatia was the weakest.

If weefer to another document, which radiographs the national situation worldwide, the Global Innovation Index Report, 2013 (GII 2013), the EU Member States ranking is quite different, because of the use of a composite indicator - GII (consisting of 21 sub-indicators), built in a more general way and having some different components, or even in minus, relatively to the indicator of the European report. The 21 sub-indicators make up two groups: a) inputs in innovation and b) outputs in innovation. The most striking difference between the two indicators is related to the presence in the European indicator of several sub-indicators missing in the indicator GII, mainly the level of general education, innovation activity of Small and Medium Size Enterprises (SMEs) and some results of innovation such as scientific publications, that EU forums attach a greater emphasis than the international bodies. At the same time, important indicators as the regulatory environment or infrastructure, absent in the European composite indicator are present in GII. As a result of these differences, in the GII 2013, states like Great Britain, Ireland or the Netherlands occupy world leading places on innovation activity in the squad top 10 nations in the world, while in the European rankings they are included among follower innovators. At the same time, Germany, which belongs to the top four innovative European nations, in the Global Innovation classification, is only on the 15th place.

The innovation performance of the EU Member States is reflected also in the patent activity, i.e. the number of patent applications to the European Patent Office - EPO (EPO - 2014). In 2013, there were 147,869 EPO patent applications, 0.5% less than in 2012 (148,562). Patents granted by the EPO in 2013 totalled 52,446, with 21.4% fewer than in 2012. Compared with 2007, the year of Romania's EU accession, in 2013 EPO applications for patents of European countries were 6.7% more numerous (68,527 towards 73,097). According to the data presented in table 1, in 2013, between European states, the most numerous patents applications were registered by Germany, France, Netherlands, UK, Italy, Sweden, Denmark, Austria, Finland, Belgium and Spain, i.e. those countries that lead also in IUS 2014, only in a slightly different order. Of these countries, most marked increases in the number of applications during the considered period were registered by Netherlands, UK and Italy. Finland and Belgium have marked declines. Among the former socialist countries, most patent applications were made by Poland, Slovenia, Czech Republic and Hungary, all with increases rates in the period 2007-2013. Romania has made only 30 patent applications (versus 16 in 2007).

Table 1: EU Member States patent applications to the European Patent Office, during 2007-2013

Country	2007	2013	2013/2007, %
Germany	25,176	26,645	+5.8
France	8,328	9,754	+17.1
Netherlands	6,999	5,826	-16.7
Great Britain	4,979	4,567	-8.3
Italy	4,392	3,704	-15.7
Sweden	2,733	3,668	+34.2
Denmark	1,408	1,929	+37.0
Austria	1,379	1,995	+44.7
Finland	2,045	1,895	-7.3
Belgium	1,900	1,885	-0.8
Spain	1,283	1,504	+17.2
Poland	105	371	3.5 time
Slovenia	115	135	+17.4
Czech R.	96	103	+7.3
Hungary	93	103	1+0.8
Latvia	20	80	4 time
Romania	**16**	**30**	**+87.5**

Source: European Patent Office, 2014 (EPO 2014)

3. Recent developments in EU and its Member States RD&I policies

In the past 3 or 4 years, because of the financial and economic crisis, the European Union has been at an economic crossroads and the leaders of the European institutions are aware that only decisive policy actions will ensure the right path towards long-term growth and prosperity.

Innovation performance has changed since the launch of the "Europe 2020" Strategy, in 2010 (EC 2010). "Innovation Union" (EC 2013-1), the central initiative of the Strategy, with the objective of improving the EU innovation performance, pursues "creating a friendly environment for innovation and for the important ideas that can be turned into products and services needed for growing European economy and jobs and ensuring the global competitiveness of Europe". The largest EU program of research, development and innovation is "Horizon 2020" (instrument for funding RD&I in the EU, in 2014-2020) (EC 2014-2). This program, which brings a huge financing, worth 80 billion euro, develop a broader and more pragmatic vision, compared with the previous Framework Programmes RD&I (seven in number), and supports the objectives of the "European Research Aria" (ERA) (EC 2012).

The RD&I solid performance obtained by the Member States in the EU top echelon is due to more general factors or to the policies implemented in this area, like the follow ones:

a) First, the high level of overall economic and industry development-large transnational corporations that are located in these states have substantial

resources to operate RD&I (SMEs are also involved in programs on Community or national level);

b) High expenses allocated by the state to the RD&I sector (e.g. Sweden 3.4% of GDP, the target investment by 2020 being 4%, Finland 3.87% of GDP, target by 2020 being 4%);

c) R&D&I infrastructure completed in the last 20-30 years by creating platforms and performance clusters;

d) Favourable legal framework for both research and development and for the protection of research results and their application, or patent and intellectual property rights, in general;

e) Academic-industrial partnership; very strong participation in the RD&I Union programs (Germany - 13.81% of total applications to the 7th Framework Programme, in the period 2007-2014, with a success rate of 23.4%; Sweden - 3.56% of total applications and success rate of 23.1%; Finland - 2.29% of the applications, success rate of 20.9%);

f) RD&I international partnership and technology transfer;

g) Financing received from EU Structural Funds or the new founded institutions, like European Research Council1, etc.

4. The international competitiveness of EU Member States according to the undertaken innovation activity

Furthermore, the World Economic Forum has provided a competitiveness evaluation of the world states in its Global Competitiveness Report 2013-2014 (WEF, 2014-2015), using an index composed of 12 indicators (or pillars) grouped into three sub-indices: basic requirements, efficiency and innovation factors, incentives and complexity, which capture all the different aspects of competitiveness. According to the study, states/economies of the world are divided into three stages: stage 1 - economic development is based mainly on the production factors, stage 2 - the economy is based on efficiency and stage 3 - the economy is based on innovation. There are, also, countries located into the intermediate categories, between 1 and 2 and between 2 and 3.

European economies that are part of stage 3 (the most developed) are Sweden, Germany, Denmark, Finland, Luxembourg, the Netherlands, Belgium, UK, Ireland, Austria, France, Cyprus, Czech Republic, Italy, Slovenia, Malta, Portugal, Greece and Spain (first 13 states are of first or second innovation degree, in descending order). The others are part of moderate innovation group. Croatia, Estonia, Latvia, Lithuania, Poland, Slovakia and Hungary, are classified in the intermediate stage 2 to 3. These countries are also moderate innovators (only Latvia is a modest innovator). Romania and Bulgaria are placed in the stage 2 (economy based on efficiency) and they are modest innovators. EU Member States placed in the top 20 most competitive states of the world are: Finland (3rd place), Germany (4th), Sweden (6th), Netherlands (8th), Great Britain (10th), Denmark (15th), Austria (16th) and Belgium (17th).

[1] The European Research Council (ERC) is an institution founded in February 2007 by the European Commission whose role is to manage the Specific Programme „Ideas" of the 7th Framework Programme for Research and Development, continued under the 'Horizon 2020' program.

One can remark the forefront positioning of these countries among the most innovative countries in the EU, the conclusion being that the situation described for developed countries, which have a good or very good progress in terms of competitiveness on the global market, is largely a result of their innovation activity, as we showed in the first chapter of the present paper. Countries with weaker innovation activity falls within the category of those with a lower degree of competitiveness [of the Central and Eastern European, best positions in the world ranking of competitiveness are occupied by Poland, 42nd place, Czech Republic (46th), Lithuania (48th) and Latvia (52nd)]. Romania ranks 76th position, behind Croatia (75th).

To support the competitiveness of the EU, the European Commission in its Communication "For a European industrial renaissance" (EC 2014-3), considers extremely important some requirements:

a) Further deepening the interdependence between industrial policy and other Community policies in order to support the overall competitiveness of the EU economy;
b) Maximizing the potential of the Internal Market by providing a predictable and simplified regulatory framework for entrepreneurship and innovation;
c) Decisive implementation of regional development instruments in accordance with the other instruments of Community and national policies to support innovation, human skills and entrepreneurship;
d) Integration of EU firms in global value chains, improvement of competitiveness and access to international markets in more favourable terms.

To illustrate the correlation between innovation and competitiveness hereinafter one may use some case studies of EU Member States (EC 2014-1 and 2013-2).

Sweden is, according to Innovation Union Scoreboard (IUS) 2014, the best leading innovator in the EU (1st place). His innovative performance increased until 2012 and decreased slightly in 2013, mainly due to the decline in venture capital investment. Performance relative to the EU average decreased from 148% in 2006 to 135% in 2013. Despite fairly stable competitiveness, in 2013, Sweden dropped four places to the position 10 in the Global Competitiveness Report (GCR) 2014-2015. The country has powerful institutions, a very good infrastructure and stable macroeconomic conditions.

Denmark is the second major innovator among EU Member States. Innovation performance of the country has decreased significantly in 2008, but, since, has continuously increased. Compared to the EU average, Denmark's performance fell from 140% in 2009 to 132% in 2013. Strengths in relation to the EU average are recorded at international scientific co-publications, co-scientific public-private publications, the Community design, the RD&I cost in the business sector. Denmark has improved its position in the GCR 2014-15, peaking at number 13. Like its Nordic neighbours, Denmark continues to benefit from a functional and highly transparent institutional framework (16th place in the world), a very good rating education and training system (10), providing workforce able to cope with high-level technology adoption and innovation.

Germany is part of the leading innovators (3rd place in IUS 2014), increasing its performance during 2006-2013, with only a temporary decline in 2011. In terms of comparison to the EU average, the performance of Germany fell from 33% above average in 2008 and 2009 to 28% above average in 2013. Germany dropped one place in 2014-15 GCR ranking. This decrease is the result of concerns about institutions and infrastructure and is only partially offset by the improved macroeconomic environment and good developments in the financial market. Overall, Germany has relatively easily overcome the

global economic crisis in recent years, due to, at least in part, its strong competitiveness, which includes complex business environment (No. 3 worldwide from this point of view), and innovative system (6).

Among the Central and Eastern European the **Czech Republic** appears to be best suited to demonstrate the link between innovation and competitiveness. Czech Republic is a moderate innovator (16th place in IUS 2014). His innovative performance was quite volatile in the last 8 years, but throughout the period, it improved the innovation index. Reported to the EU average innovative performance, it followed the same pattern of volatility, the highest level being recorded in 2011 (78%), in 2013 reaching 76%. In terms of the global competitiveness, the Czech Republic advanced nine places, reaching the 37th position. The indicator relative to "institutions" improved its position with 10 seats (76) and the economic recovery is reflected in a healthy macroeconomic environment, budget deficit below 3% of GDP and improvement of access to loans (40) on the financial market.

Romania is a modest innovator. According to IUS 2014, its performance has increased by 2009 and afterwards, it always fluctuated. Relatively to the EU average performance ratio, its performance worsened from 50% in 2009 to 43% in 2013. Romania is well below the EU average to almost all innovation indicators. In GCR 2013-14 hierarchy, Romania ranks 59, a remarkable result compared to the previous year when it placed on 76th position. According to GCR analysts, the most problematic factors for the competitiveness of our country are related to the access to finance, high rates of taxes, inappropriate infrastructure, corruption, bureaucracy and government inefficiency, the fees regulations, the inefficient labour market, and the political instability. To meet these challenges, it has been developed the "National Strategy for Research, Development and Innovation 2014-2020" (NS 2014-2020) that encourages the creation of an ecosystem for innovation through public-private and public-public partnerships.

5. Conclusions

The undertaken analysis of this article can draw up some important conclusions for the innovative activity and competitiveness of the EU and its Member States. Thus, a first conclusion would be that the causal link between innovative work (that includes the absorption capacity and application of innovations) in an economy and the economy's competitiveness on the international market can not be put in question.

The European Union has still much to do in the innovation field to occupy the deserved place in the international ranking, given the recognized existing potential. During 2010-2012, most Member States and the Union as a whole, have improved their innovation performance, especially leading innovators (innovation leaders) and those from the second category. The process of innovation convergence between Member States, which had started to strengthen until 2011, was followed by a slight increase of gap in 2012. The growing gap is the result of the fact that the innovation performance dropped to almost half of the moderate and modest innovators, increasing only to leaders and followers classes.

EU concerns itself about the continuously increasing of its capacity to produce advanced technology and absorbing this technology, a major role in this process coming to Community policy in the field, with reference to the "Innovation Union", the "European Research Area" and many programs and projects dedicated to this subject, the most important being the Framework Programmes for Research and Development (The 7th Programme completed in July 2014) and "Horizon 2020" for the period 2014-2020. The

monitoring policy of programs is very good (a little too bureaucratic) and there is hope that in the near future EU innovation situation will improve substantially, and the EU will manage to reduce the gap that separates itself from the USA and Japan.

Also, national RD&I sector policies, particularly investment, training, RD&I infrastructure, intra- and extra-EU cooperation, transfer and absorption of world scientific and technological progress, all have a key role in the development degree of this area in the EU Member States. The EU developed countries have a privileged position both in innovation and in the international competitiveness, while less developed countries (mainly countries of Central and Eastern Europe, but also in Southern Europe) are less competitive on the international market. The latter must intensify their efforts to reduce the gap to the developed countries in the EU and worldwide. Re-industrialization process that has unfolded in the European Union is meant to spur more research-development and innovation in the EU and the Member States, for the period 2014-2020.

Among the measures that may improve innovative activity in the less developed EU countries (including Romania) we could mention an increase in state funding of the sector, improvement of the regulatory framework, substantially enhancing RDI infrastructure, including the creation of innovative clusters and platforms, the education and training of a large number of researchers and specialists in information and communication technology, strengthening the link between academia and business, supporting businesses (especially SMEs) in their efforts to invest in RD and innovation, boosting external associations with institutions active in innovation, supporting innovators in patent application process, enforcing the EU institutions efforts for stimulating the international uptake of innovation results.

Romania has greatly to recover both in terms of innovative activity and in its competitive position on the international market. However, in the last years there has been a remarkable progress in terms of competitiveness and according to the "National Strategy for Research, Development and Innovation 2014-2020" it will be recorded a further improvement in the innovation activity.

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Characterising India's Exports to the U.S.: The Post Liberalisation Dynamics

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Abstract: *India has experienced significant export growth over the past two decades and presently stands as the 10th biggest trading partner of the U.S. Using the U.S. trade data compiled by Robert Feenstra, the U.S. CPI data, and the NBER Manufacturing Productivity database, this empirical paper attempts to understand the anatomy of India's exports to the U.S. between 1991 and 2006. In particular, we analyse how the allocation of industries in the export sector, skill intensity of products, product diversification, and contributions of new products have changed as India's exports to the U.S. have grown. Our findings suggest that India has moved from traditional agricultural and raw material products toward exports of sophisticated manufaturing products that require greater skill to produce. Furthermore, our study finds that India has diversified in the range of products it is exporting to the U.S., with new products gaining an increased share in India's export basket.*

Key-Words: *specialization, diversification, trade, extensive margin, intensive margin, skill intensity.*

1. Introduction

In the span of 15 years post liberalisation, India's real exports to the world have increased by 304 percent. India has experienced significant export growth over the past two decades. In 2013, India was the 17th largest exporter in the world and was ranked 8th biggest importer in the world. The recent release from the U.S. Census Bureau for the month of April 2013 showed India as the U.S.'s 10th largest trading partner, contributing about 2.8 percent of the U.S. total trade with its top ten trading partners. This paper attempts to understand the anatomy of India's exports to the U.S. between 1991 and 2006. In particular, this paper attempts to observe how India's export structure changed as the country's export expanded. We do this by analysing how the allocation of industries in the

export sector, skill intensity of products, product diversification, and contributions of new products have changed as India's exports to the U.S. have grown. The paper decomposes India's export growth along variuos dimensions to see: (i) whether India's export basket to the U.S. has undergone significant redistribution; (ii) whether India's exports have become more skill intensive; (iii) how the degree of specialisation has changed in India's export sector; (iv) the contribution of new export varities towards India's exports to the U.S. Post liberalisation, India has experienced phenomenal export growth in general, and with the U.S. in particular. This remarkable export growth draws attention to understand the nature of the growth. This is of particular importance because the analysis would help us better understand the shift in India's competitive advantage in international trade and would have policy implications toward India's further export oriented growth strategies. The major contribution of this analysis would be to understand the global welfare consequences of India's export expansion and the future growth trajectory of India's export sector.

This research provides valuable insights into the existing literature on trade theory by characterising the Indo-U.S. bilateral trade data. There is a considerable debate in trade literature on understanding the growth pattern of emerging economies and the factors driving that growth. For instance, Hummels and Klenow (2005) concluded that the extensive margin contributes relatively more in export growth, while Helpman, Melitz, and Rubinstein (2008) argued that growth in the export of existing products (intensive margin) plays the dominant role. In his study on the liberalisation of trade in India in the 1990s, Mukherji (2009) found growth in the extensive margin in both Indian exports and imports. According to his study, the least-traded commodities grew from 10 percent to 33.8 percent of total imports and from 10 percent to 26.5 percent of total exports. A more recent study by Besedes and Prusa (2011) suggested that developing countries would experience significantly higher export growth if they were able to improve their performances at the intensive margin. On the other hand, Aldan and Culha (2013) reported that the export share of the least exported goods increased dramatically for countries such as India, the Czech Republic, and China.

Previous trade literature also argued that developing countries could meet the challenges of unemployment and low growth through diversification of their export bundles. Agosin (2009) attributed export diversification to be an important factor for economic growth across countries. Furthermore, Aditya and Roy (2007) found a U-shaped relationship between economic growth and specialisation of exports. Their findings suggested that export diversification increases economic growth until a critical level of export concentration is reached. Beyond this point increased specialisation leads to higher growth. Given that China is the leading exporter in the world, these findings may explain why we observe increased specialisation in China's exports over the past few years.

Kowalski and Dihel (2009) reported the skill intensity evolution of India's export mix. Their study found that although India managed to secure rapid growth in trade flows, not much development happened in the high-technology export sector. In fact, the skill requirements in India's exports remained stable between 1996 and 2005. Hamburg Institute of International Economics reveals that India's export growth of high-technology manufactured goods has increased less than 5 percent since 1996. On the other hand, India has evolved dramatically as a major exporter of services, and in some cases the export orientation has shifted toward skill intensive services (Kowalski and Dihel, 2009).

This study contributes to the existing literature on trade of emerging economies by particularly focusing on India's export sector to gauge the relation between the country's growth and the changes in its export basket. In relation to the questions posed in this paper,

our findings suggest that India has moved from traditional agricultural and raw material products toward exports of sophisticated manufaturing products such as heavy machinery, chemicals, and transportation equipment that require greater skill to produce. The contribution of relatively less skilled industries to India's export growth fell by 30 percentage between 1991 and 2006. Furthermore, our study finds that India's export sector has become relatively more diversified, meaning a variety of products within each product category have contributed to India's export growth. Also new products gaining an increased share in India's export basket.

The rest of the paper is organised as follows: Section 2 describes the data, Section 3 examines the reallocation of exports across industries, Sections 4 and 5 discuss the skill intensity and product diversification in India's export sector, Section 6 examines the contribution of new varities (extensive margin) versus existing varities (intensive margin) in India's export growth, Section 7 compares India's export prices to the U.S. to those from the rest of the world, and Section 8 concludes the paper and discusses future research avenues.

2. Data

The Indo-U.S. trade data used in this paper is obtained from the U.S. import and export data compiled by Robert Feenstra (Feenstra, 1994). The most disaggregated trade data is available at HS 10-digit, which includes 14918 unique product codes. Following Feenstra (1994), we generate cost, insurance, and freight (c.i.f) by adding customs value and charges of imports for consumption. As c.i.f., trade value of the U.S. import from India, is in nominal terms, we use the year 2000 as the base period to deflate c.i.f by the U.S. CPI to generate real values. HS 6-digit data, which includes 4657 unique product codes, is used to measure the industry skill intensity, degree of specialisation, and intensive and extensive margins of India's exports to the U.S. Following Zhu and Trefler (2005), industry skill intensity is measured using the National Bureau of Economic Research (NBER) Manufacturing Productivity Database. We use both SITC1-digit and 2-digit codes in our analysis. The SITC1-digit code data is used to examine the export pattern across nine major industries, while the SITC 2-digit classification is used to analyse the changes within the manufacturing sector.

Table 1 shows both India's total export and export to the U.S. India's real export to the world increased by 304 percent bewteen 1991 and 2006. The share of its exports to the U.S. increased from 16.6 percent in 1991 to 18.5 percent in 2006. Although India's exports to the U.S. increased in absolute terms between 1991 and 2006, the percentage of India's export to the U.S. out of total exports was stagnant between 1994 and 1997 and in fact declined after 2000.

Table 1. - Summary statistics of India's export

Year	1991	1994	1997	2000	2003	2006
India's Exports to the U.S. (Real Value)	4.33	6.56	8.24	11.3	12.9	19.5
India's Total Exports (Real Value)	26.04	33.12	43.35	41.20	53.57	105.23

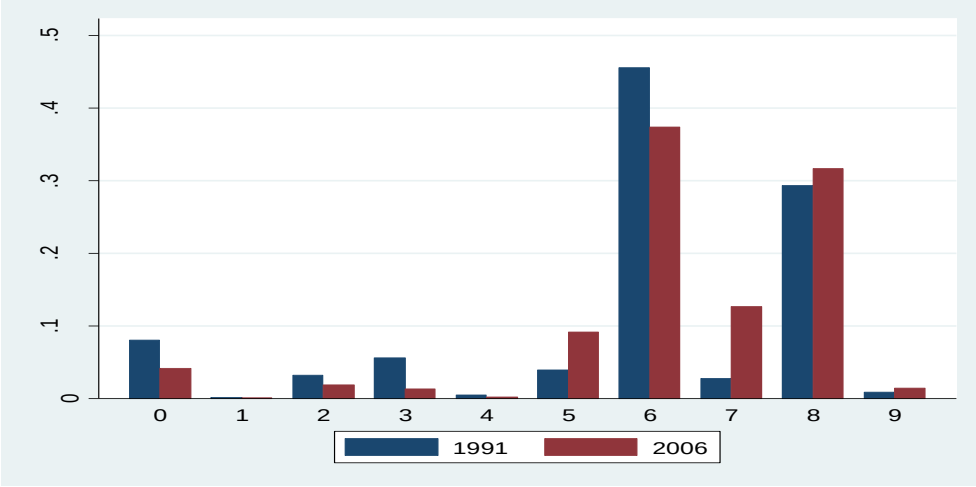
All Export figures are in US billion dollars.

Source: own contribution

3. Reallocation across Industries

India's export composition underwent a significant redistribution between 1991 and 2006. It has moved from the first stage of agricultural, raw materials, and manufacturing materials (SITC0, SITC2, SITC3, SITC4, SITC6) to heavy machinery, chemicals, and transportation equipment (SITC5, SITC7, SITC8). This is depicted in figure 1, which plots the export share of each 1-digit SITC sector in 1991 and 2006. It can be observed that the percentage of total exports declined in less sophisticated sectors, while the percentage of total exports in more sophisticated sectors rose. Among the more sophisticated manufacturing sectors, SITC7 (Industrial machinery, office machinery, telecommunications equipment, electrical machinery, transportation equipment) experienced a sharp increase in export shares (358 percent), followed by 133 percent and 8 percent for SITC5 and SITC8, respectively.

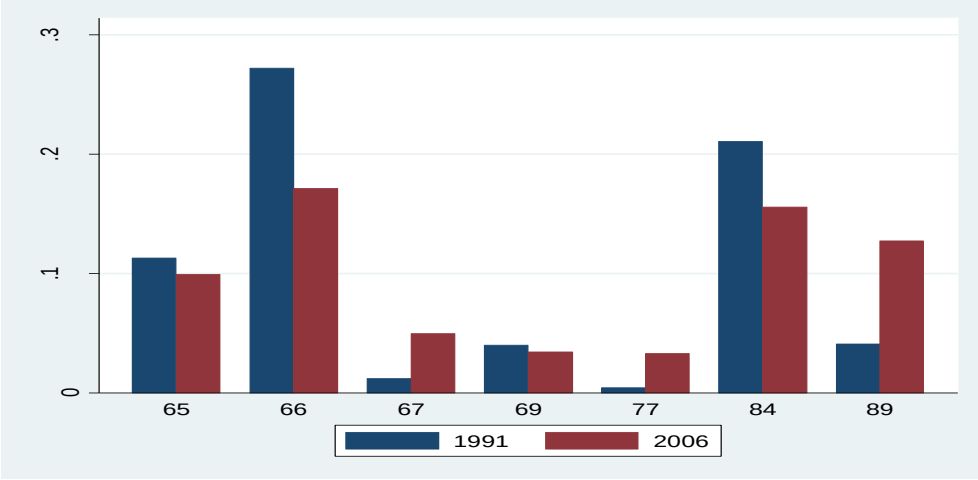
Fig. 1 – Reallocation of exports across SITC 1-digit industries



Source: own contribution

Figure 2 focuses on changes within the manufacturing sector in particular. Here we look at changes in trade share in all major 2-digit SITC sectors. Figure 2 confirms what we observed in figure 1. Within manufacturing there has been a shift in export shares from apparel and textiles to electric machinery, arms and amuniations, printed matter, toys, games, musical instrument, office and stationary suppliers, jewellery, and iron and steel. For instance, export shares increased significantly in SITC67, SITC77, and SITC89 (by 315 percent, 645 percent, and 210 percent respectively), while SITC65, SITC66, SITC69, and SITC64 experienced a fall in export shares by 12 percent, 37 percent, 15 percent, and 26 percent respectively.

Fig. 2 – The reallocation of manufacturing exports across major 2-digit sectors*

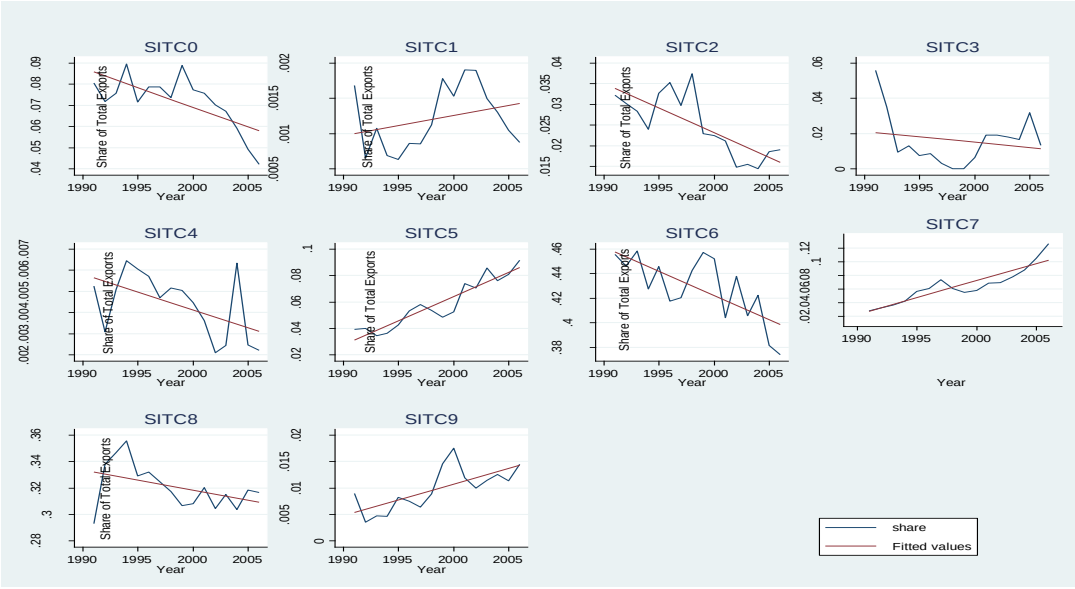


* Major is defined as accounting for at least 3 percent of exports in 1991 and/or 2006

Source: own contribution

Figure 3 depicts the movement of export shares for all the years in the sample across the 1-digit SITC sectors. As it can be seen from the figure, the change in export shares from 1991 to 2006 has not been smooth. There has been a subtantial amount of fluctuation in export shares during the intervening years. This is particulary true for the industries in which export shares declined between 1991 and 2006. For example, SITC6 reported an 18 percent decline in export shares from 1991 to 2006. However, this decline is accompanied by a series of increases in export share in this time frame. Similar trends are observed in other sectors such as SITC0, SITC2, and SITC4. The sectors which have reported an increase in export shares between 1991 and 2006 have more or less experinced a smooth upward trend over the years, with a notable exception being SITC8. Although the export share in SITC8 grew by about 8 percent from 1991 to 2006, it shows an average downward trend. Overall, what we can see from figure 3 is that the shift of India's export composition from agricultural to manufacturing and heavy industries (as infered from figure 1) has not been smooth with frequent ups and downs in agriculutiral export shares.

Fig. 3 – Trend in export shares of SITC 1-digit industries



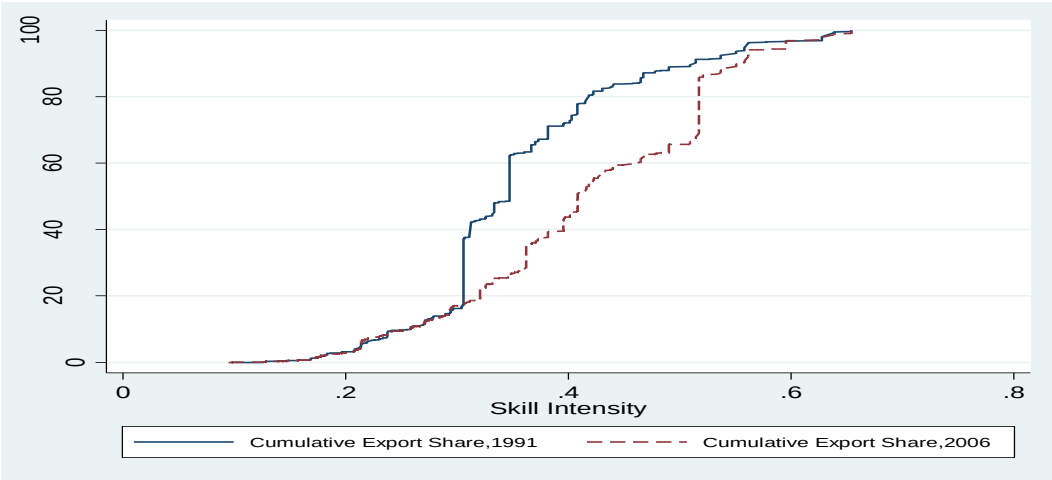
Source: own contribution

4. Skill Content of Export Growth

So far we have seen that India's export bundle experienced a shift from agricultural products to manufacturing industries between 1991 and 2006. In light of India's growing economy, this transformation is not surprising. However, it is worth analysing whether the growth of manufacturing's share of export has also brought in increased sophistication to India's exports.

As increased sophistication may be reflected in the overall skill content of India's exports, figure 4 plots skill intensity and cumulative export share. We rank industries from low to high skill intensity on the horizontal axis of figure 4 and plot the cumulative export share on the vertical axis. The skill intensity is measured as the ratio of non-production workers to total employment for manufacturing industries. In figure 4 the shift of the curve to the right indicates that the skill content of India's exports to the U.S. increased over the sample period. For example, in 1991, 40 percent of the least skill-intensive industries produced 70 percent of India's export share. By 2006, the export share that these industries produced fell to 40 percent. However, this increase in skill intensity may be due to processing trade. Due to unavailability of processing trade data for India, this analysis cannot be extended to see whether the observed increase in skill intensity actually happened in non-processing manufacturing exports or if India is importing intermediate inputs with high skill content and then assembling them for export.

Fig. 4 – Skill intensity of India's manufacturing exports



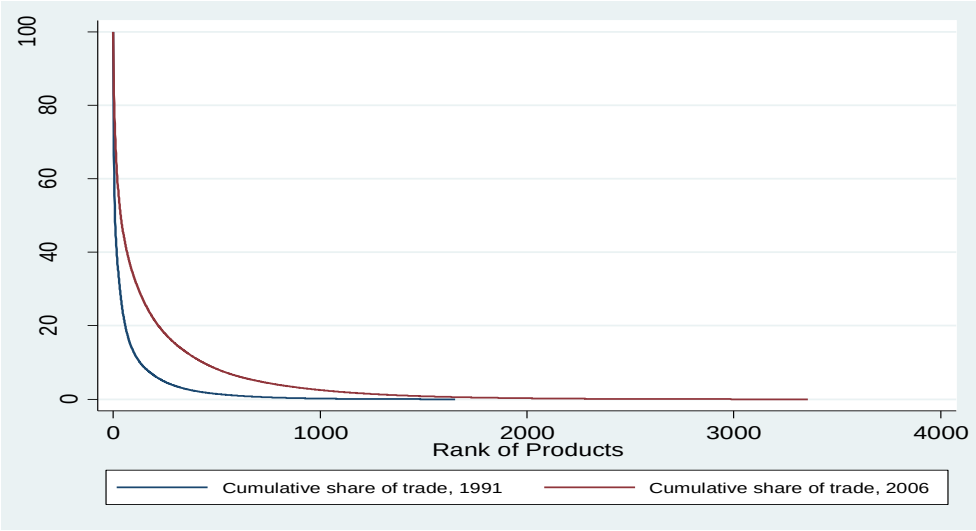
Source: own contribution

5. Diversification versus Specialisation

So far we have seen that India's export sector has undergone a significant transformation, with increased churning from agricultural and manufacturing materials into machinery, transportation equipment, and chemicals. As traditional trade theory suggests, a higher standard of living is achieved through more specialised trading. The next step would be to see the extent to which specailisation has changed as a result of this transformation. Imbs and Warziarg (2003), however, found that countries tend to diversify production as they grow from low levels of income and that they only begin to specialise once they reach a relatively high level of income. This is consistent with countries moving from exploiting natural resources to developing new industrial sectors as they grow. Hausmann and Rodrik (2003) argued that in the early stage of development, more entrepreneurship and potentially greater diversification may help producers identify the sectors in which they have a competitive advantage.

To see whether India's exports show increased or decreased specialisation between 1991 and 2006, we plot the inverse cumulative export shares for all products at the HS 6-digit level with the rank of the product in figure 5. A shift of the curve to the right indicates that India experienced a decrease in specialisation from 1991 to 2006, particularly in the first 1000 product categories. Lesser ranked products have undergone no significant change in the degree of specialisation.

Fig. 5 – Cumulative share of exports by rank using HS 6-digit classifications



Source: own contribution

Using the Gini Coefficient to measure the export equality in each period can be an alternative way to measure the changes in specialisation. Here, the Gini Coefficient can be defined as $Gini \equiv 1 - \frac{1}{n}\sum_{i}(cshare_{i-1} + cshare_{i})$, where n is the number of products, i is the product's rank (1 is the smallest and n is the largest), and cshare_i denotes the cumulative share of exports of the *i*th product. The Gini Coefficient, by definition, lies between 0 and 1. A value of zero indicates that export shares are equally distributed, while an increase in the coefficient implies an increase in specialisation.

The values of the Gini Coefficient for 1991 and 2006 for all, top 90 percent, and top 100 products are reported in table 2. Values close to one when all products are included indicate high degree of specialisation, meaning that most of the export is happening from a specified range of products. However, these values are substantially less for the top 90 percent and the top 100 product categories.

Table 2. – Gini coefficient for India's export

Period	All	Top 90%	Top 100
1991	0.90	0.54	0.25
2006	0.90	0.51	0.05

Source: own contribution

Comparing the two sample periods, we see that between 1991 and 2006, there was a drop in the value of the Gini Coefficient, especially for the top 100 product categories. This indicates that over the sample period, India experienced decreased specialisation, meaning that India's export growth is not driven by an increase in the export of particular products within each product category. Rather the export of many products within each product category is contributing to the export growth, and we see more export equality between 1991 and 2006.

6. Intensive and Extensive Margins

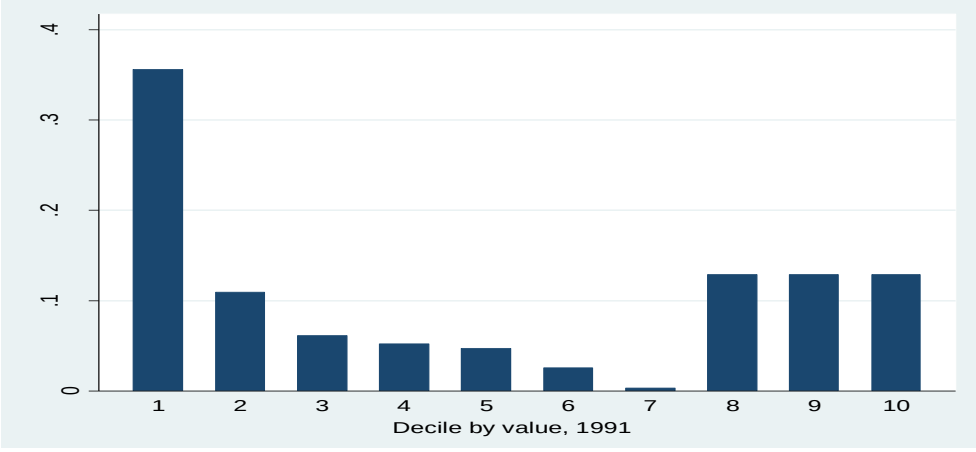
It has been observed so far that post liberalisation India has experienced large export growth with a shift of export share from agricultural to manufacturing. However, a question that remains is whether or not this large export growth mainly happened due to introduction of new products. Extensive margin, or growth in new product varieties, is defined as the export of products with new product codes. For new product codes, export figures will be positive in a particular period but will be zero in the preceding period.

One major problem in measuring export growth from new products is the issue of trade data reclassification. Due to major reclassification in the trade data in 1996 and 2002 at the HS 6-digit level, many existing products were identified as new just because they got a new product code or previous codes were split.

6.1. Export Shares

To see whether or not India's export growth actually happened in the extensive margin, we follow Kehoe and Rhul (2013) by splitting exports into deciles by value in 1991 and calculating their shares of exports in 2006. If export growth is attributable to the introdution of new products, then the bottom deciles, which had negligible growth in 1991, would show up with high export figures in 2006. Figure 6 depicts the share of exports in 2006 for products falling into each decile by value in 1991. Export shares of products in decile 1, which accounted for the bottom 10 percent export share in 1991, is observed to have more than tripled in 2006, meaning that there was a substantial increase in export shares in 2006 of the products that were least traded in 1991. This indicates that extensive margin significantly contributed to India's export growth between 1991 and 2006.

Fig. 6 – Reallocation of exports by value using HS 6-digit classifications

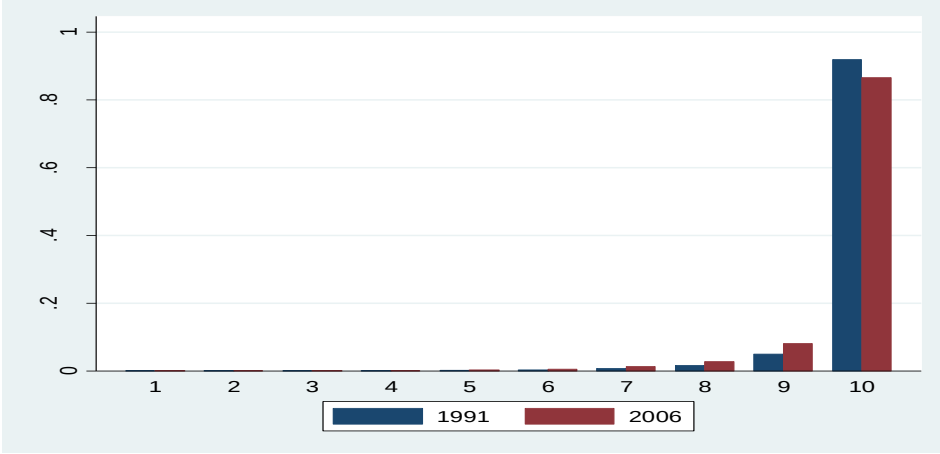


Source: own contribution

As exports may tend to concentrate in a smaller number of categories, we divide exports into deciles according to the number of categories of trade that there were in 1991. For instance, the tenth decile is the top ten percent of product categories when products are ranked by value. Figure 7 depicts the share of total value of exports for each such decile for 1991 and 2006. As we can see from the figure, the distribution of export share is highly

skewed for both 1991and 2006. For both the years 1991and 2006, 10 percent of the category accounted for more than 80 percent of India's import from the U.S. while the bottom 5 deciles do not even show up in the figure. Also, there has been no gain in the export shares between 1991 and 2006 for the other deciles. Figure 7 thus indicates that there was no sizeable reallocation of trade, especially for the bottom deciles which show almost no change in export shares between 1991 and 2006.

Fig. 7 – Reallocation of exports by product shares using HS 6-digit classifications



Source: own contribution

6.2. Variety growth

In this section, we extend our analysis on the contribution of new varieties to export growth by utilising more disaggregated trade data at the HS 10-digit level. We use two complementary methods: first is the Feenstra index, and second is a decomposition of export growth into new, disappearing, and existing varieties.

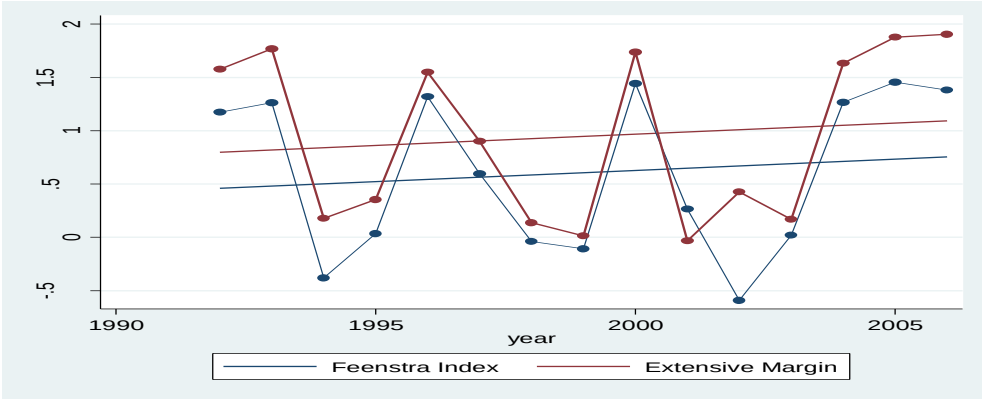
The Feenestra index provides an indication of the importance of new varieties in trade. A positive value of the index would indicate that the number of varieties has grown relative to the base period while a zero value would indicate no growth. However, the significance of new products in export growth may be understated by the Feenstra Index if there is a lot of churning of export varieties. We refer to Feenstra (1994) for a detailed analysis.

The second measure gives more information on the magnitude of export creation and destruction. In order to get an idea of how important churning is in Indo-U.S. trade, we follow Amiti and Fruend (2010) to decompose trade growth into new, disappearing, and existing goods. The intensive margin accounts for the growth in export shares of products that were exported in both periods. Whereas, the extensive margin can be defined as the net share of trade growth attributed to the growth of new product share less the share of disappearing goods.

Figure 8 plots the Feenstra Index of net variety growth and the share of trade growth attributed to the extensive margin for U.S. imports from India at the 10-digit level from 1991 to 2006. Both measures show a similar pattern in the growth of extensive margin between 1991 and 2006, with considerable variation in the intervening years. In particular, the years 1996, 2000, and 2003 experienced a sharp increase in variety growth followed by a big fall in

the subsequent years. This may be explained with the major reclassifications in trade data that happened in 1996 and 2002. The sudden rise and fall in export figures may reflect the fact that while new classifications were used in 1996, old classifications were not removed until the following year. What figure 8 indicates is that there is a possibility that major reclassifications with creation and destruction of export varieties contributed toward the rises and falls of export varieties in between 1991 and 2006.

Fig. 8 – Growth in extensive margin of India imports from US using HS 10-digit classifications, 1991-2006



Source: own contribution

Table 3, however, weakens the possibility of the growth of export varieties due to reclassification of trade data. Table 3 reports the average values of the Feenstra index, intensive and extensive margins, and India's total export growth from 1991-2006 and from 1997-2006. If increases in net export variety and share of trade, which are attributable to extensive margin happened due to trade reclassification in 1996, then the average values of the Feenstra and extensive margin indexes from 1997-2006 should be larger than those from 1991-2006. However, table 3 suggests that reclassification did not affect Indo-U.S. trade. The average values of the Feenstra index and the extensive margin calculated using the post reclassification years are the same as the ones obtained from the entire sample period. Positive values of the Feenstra index and the extensive margin indicates that new export varieties have in fact contributed towards India's total export growth to the U.S. However, we see an upward trend in both the Feenstra index and the measure of extensive margin, although it is relatively flat.

Table 3. - Variety growth in India's export: extensive margin using 10-Digit US data

Year	Feenstra	Intensive	Extensive	Growth
1991-2006	.01	.91	.09	108%
1997-2006	.01	.92	.08	109%

Source: own contribution

8. Conclusion

This paper analyses Indo-U.S. bilateral trade along various dimensions between 1991 and 2006. The primary contribution of this paper to the existing literature is to

identify the key structural changes that characterise India's export growth during this period. The major findings of the paper may be summarized as follows:

(1) As India's export grew over time, data reveals that the manufacturing sector has gained an increasing share in India's export mix while the share of traditional agricultural products has declined. Within the manufacturing sector, growth in the export of products related to industrial machinery, office machinery, telecommunications equipment, electrical machinery, and transportation equipment has been the highest.

(2) The skill content of India's manufacturing exports has increased.

(3) India's export sector has become relatively more diversified. New export varieties have contributed towards India's export to the U.S.

The above findings lead to some observations. First, the finding that the skill content of India's manufacturing exports has increased is consistent with the fact that India has moved toward the export of sophisticated manufacturing products. However, this finding must be interpreted with a little caution. The data for exports are aggregated and include processing trade. If processing trade plays an important role in manufacturing export, then this finding may be incorrect, as it would mean that India is importing intermediate inputs with higher skill content to assemble them for exporting. We could not test this hypothesis due to the unavailability of processing trade data for India. Second, diversification of India's export is consistent with the previous literature which claims export diversification as an important factor for export growth. This finding is consistent with the more recent trade theories that emphasise the gains from trade as importing countries access new product varieties. On the other hand, traditional trade theory suggests specialisation in relatively cost advantage sectors as a key to growth. Amiti and Freund (2010) find China to exhibit increased specialisation in its export. It seems that the volume of trade matters—countries at initial level of export growth may find it more beneficial to diversify export than counties at a later stage of export growth.

Overall the study finds that the growth of an emerging economy is typically associated with sophistication and diversification of export products. As skill intensive manufacturing products may give India favorable terms of trade as compared to the traditional agricultural commodities, policies should be directed towards improving the terms of trade of those product categories.

Future research may be directed towards using more recent data and also working with Indian trade and manufacturing data. Analysing recent data would build on the existing literature by observing the current trends in bilateral trade dynamics, especially for the years after the great recession of 2008. Furthermore, a detailed data on India's trade and manufacturing would allow us to get a better understanding of the role that processing trade might play in India's trade growth. If manufacturing technologies used in developing nations such as India is different than those in the U.S., then Indian manufacturing data would be more reliable in measuring skill intensity of India's exports.

Acknowledgements

We are indebted to Dr. Chang Hong for her insightful inputs and Dr. Theodore Roggenbuck and Mr. Avram Slone for their editorial assistance.

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How EU Economic Integration Advances on the Way of Some Important Unions

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Abstract: *Economic union and monetary union are deeply connected: two dimensions of the third stage of European integration. But achieving monetary union without a complete single market in the field of financial services proved the vulnerability of Eurozone to external shocks and the need to a further economic integration. While banking union has advanced quite fast in the last two years, capital markets union is only a project, also the fiscal union, which is the basic foundation of a true political union. A complete financial union will take a long time to accomplish due to many political, financial and bureaucratic obstacles facing such an ambitious project. Energy Union is another important project meant to remove market fragmentation, to enhance energy security and to reduce environmental impact of energy sector. Finally the political union, the last stage of European integration, the dream of many famous politicians and scholars, will be only possible on the long run as a new type of federation of nation states, provided that all components of economic union will be fully attained.*

Key-Words: *integration, union, single market, monetary union, economic governance, policy, financial sector, banking sector, capital market.*

JEL Classification: *E 52, E 62, G 15, G 21, G 23, G 28, Q 48, Q 58.*

1. Introduction

After a rapid progress of European integration between 1986 and 1992 mirrored by the completion of the Single Market in 1993 based on the four fundamental freedoms: free movement of goods, services, people and capital and on common policies and also by a new and important treaty, the 'Maastricht' Treaty on European Union concluded in 1993 aiming at establishing an Economic and Monetary Union, we have witnessed a considerable slowing down of the process over the next 15 years and only the outbreak of economic and financial crisis has led to new significant advances in economic integration. Can we accept the idea of a constant progress of integration in all fields which demonstrates the soundness and the imperfection of the European integration model? I rather think that we have a syncopation development, with many obstacles which were amplified as the European Community has expanded its geographic dimensions. We may apply the typology stop-and-go to this specific process, due to the alternation of acceleration periods with those of stagnation, the first shorter, the last longer. A

multinational and supranational organization associated with a process which is in a state of permanent evolution, uneven and syncopated, can never be perfect and only may be improved constantly. The *"constant progress syndrome*" is a reality and also a permanent challenge for the European model of integration and this proves that European Union will continue to evolve all the time (Europedia), sometimes faster, trying to reach an integration ideal or objective, very difficult to attain, as political union is for example. Can external shocks contribute to the substantial progress of European integration as we saw in the past or indigenous political and social factors will attract the advance of integration, particularly in economic field? After an Economic and Monetary Union incompletely achieved we are witnessing the proliferation of some financial and specific economic unions, designed to deepen the level of economic integration and to support more effective the EU economic governance. We are going now through a period of acceleration, because of the crisis and some external factors, which could have spectacular results both in terms of economic integration and also in terms of political integration.

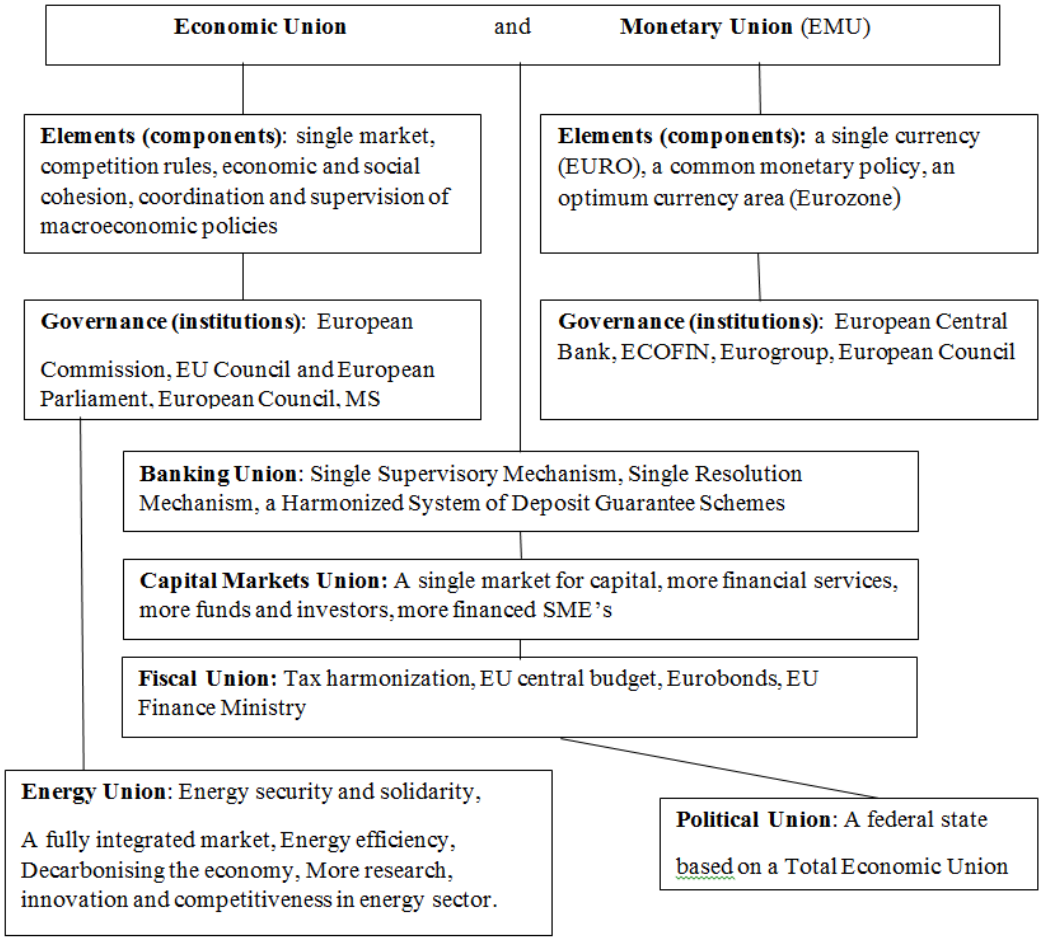
2. Economic and Monetary Union

Economic and Monetary Union (EMU) represents the fourth stage of economic integration and involves not only an economic union with all Member States of EU but also a monetary union with the participation of some Member States, forming so-called euro area. The decision to form EMU was taken by the European Council in Maastricht in December 1991, and was later enshrined in the Treaty on European Union (the Maastricht Treaty) based on the nominal convergence. Economic and Monetary Union is the next step further in European process of economic integration, which started in 1957 with the Rome Treaty of European Economic Community, after the previous step, that of the single (internal) market. Economic integration brings the benefits of a larger market, more efficiency and competitively of the EU economy as a whole and to the economies of every Member State, thus offering good opportunities for economic stability, higher growth and more employment, increase of living standard in Europe. Economic union is based on subsidiary principle which means less centralization of policy competences at EU level and it is founded on the internal market, common rules for competition on this market, economic and social cohesion and coordination of economic policy-making between Member States and coordination of fiscal policies (limits on government debt and deficit). The supervision and coordination of macroeconomic policies at supranational (EU) level is often called EU economic governance and the responsibility for this is divided between EU institutions and Member States, the main actors being the European Council that sets the main policy orientations, the Council of the EU (the Council) that coordinates EU economic policy-making and decides whether a Member State may adopt the euro, the Eurogroup that coordinates policies of common interest for the euro-area Member States, the European Commission that monitors performance and compliance, the European Central Bank (ECB) that sets monetary policy, with price stability as the primary objective, the European Parliament who shares the job of formulating legislation with the Council, and subjects economic governance to democratic scrutiny in particular through the new Economic Dialogue, the Member States that set their national budgets within agreed limits for deficit and debt, and determine their own structural policies involving labor, pensions and capital markets.

A monetary union in Europe succeeded the European Monetary System and began to take effect in 1990, over a series of three steps. The first step abolished individual member exchange rate control, the second step established the European Central Bank, which run an independent monetary policy and targeted the objective of price stability and the third step created the Euro as a single currency for the Member States of euro area. In Maastricht Treaty there are stipulated so-called convergence criteria. In order to be able to adopt the euro as single currency, a Member State must fulfill a number of economic and financial conditions also called convergence criteria. There are four conditions: price stability (inflation rate); government finances (fiscal deficit and public debt); participation in the exchange rate mechanism of the European Monetary System (ERM II); convergence of long term interest rates. For the countries not adopting the single currency the European Commission and the European Central Bank produce convergence reports on these Member States at least every two years. The reports examine the progress made by the Member States as regards compliance with the convergence criteria. The legal foundation for the convergence criteria is Article 140 of the Treaty on the Functioning of the European Union (EU) and they are subject to Protocol No 13 annexed to the founding Treaties of the EU.

Convergence criteria have become compulsory and permanent by means of Stability and Growth Pact concluded in Amsterdam in 1997, being supported by some regulations and directives adopted by legislative actors. The recent financial and economic crisis imposed some reforms of EU economic governance by enforcing the supervision provided by SGP with the aid of European Semester (stability and convergence programmes and reform programmes) and a package of six regulatory measures (5 regulations and a directive), introducing a new procedure for monitoring the macroeconomic imbalances (11 specific indicators), endorsing a permanent mechanism for ensuring the financial stability in Eurozone (ESM). New reforms for supporting the progress and success of economic governance were debated and adopted in the last two years in the field of banking union, capital markets union, fiscal union and energy union which are meant not only to provide the financial stability within EU but also to reinforce and extend the dimensions of the internal market.

Figure 1. EU Economic Governance and its New Components



Source: Made by the author

3. Banking Union

Banking Union is a process imposed by financial crisis and sovereign debt crisis effects in the Eurozone and was defined as based on four pillars: a single regulatory framework for financial institutions, a Single Surveillance Mechanism (SSM), a Single Resolution Mechanism, a harmonized system of deposit guarantee schemes, the last three being essential components of this union.

Sovereign debt crisis induced by the financial crisis focused on the great difficulties encountered especially by the banks from Ireland, Spain, Greece, Cyprus, and also by the banks from more developed countries, mainly due to the over financing of real estate sector and also due to the risky derivative transactions and to the massive purchase of state bonds, has revealed not only the serious deficiencies of corporate governance in the banking sector but has demonstrated that financial stability can not be achieved at national level because of the vicious circle created between banks and national governments

(shocks transmitted from the governments to the banking sector and from this to the governments) and hence the need to remove it by creating a banking union (Stratfor, 2013)

Based on the provisions of EU Regulation no. 1024/2013 European Central Bank has constituted a Supervisory Board within its structure, apart from monetary policy tasks, that was involved in assessing banks participating in Single Supervision Mechanism through audits and stress tests. The Supervisory Board will supervise 124 banks from euro area, which each has net assets of more than 30 billion euros, a balance sheet that exceeds 20% of gross national income of the Member State, is among the first most important banks or credit institutions in the country and may receive direct financial support from the European Stability Mechanism. Supervisory Board was set up at the beginning of 2014 and was involved in the evaluation based on audits and stress tests of the 124 banks participating in the Single Supervisory Mechanism (SSM). Evaluation of assets quality that preceded the stress tests was practically carried on in 2014 by the Supervisory Board (ECB) in collaboration with the national competent authorities (NCAs) of the Member States participating in SSM and was sustained by independent third parties at all levels. Overall evaluation consisted of three interlinked elements: a) an assessment of supervision risk to review, quantitatively and qualitatively, key risks, including liquidity, leverage and financing risks; b) an analysis of assets quality to enhance the transparency of banks' exposure, including the assets adequacy and evaluation of guarantees and associated provisions; 3) a stress test to examine the resilience of banks' balance sheet in various stress scenarios (Oxford Analytica, 2014). The assessment was based on capital benchmark of 8% (which may descend to 5.5% under a severe adverse scenario) and on the definition of the Capital Requirements Directive IV and the Regulation on capital requirements, including transitional arrangements both for evaluating the assets quality and for the base scenario of stress test. The details of the stress test were announced in time, in coordination with the European Banking Authority that has issued several reports on risk assessment in the European banking system, the last one in 2014.

Single Resolution Mechanism(SRM), is based on the provisions of Directive 2014/59 / EU of 15 May 2014 adopted by the European Parliament and EU Council establishing a framework for the recovery and resolution of credit institutions and investment firms. Each Member State will have to establish a national authority responsible for the resolution of troubled banks in order to solve the difficult situation. All credit institutions and investment firms that are regulated by the Capital Requirements Directive will be covered by the provisions of Directive 2014/59 and will have to prepare recovery and complete resolution plans that may provide valuable information to the resolution authorities, plans to be updated at least once a year and which may require appropriate measures to restore the financial soundness or for business reorganization and should not rely on massive public financial support (bail-out). The recovery and resolution of banks will be based on different scenarios, including systemic instability scenario and will provide appropriate tools/ways for the resolution of banks that experience difficulties. The resolution authority may implement actions based on its investigation/inquiry regarding the capital requirements, assets, liabilities, financial position and its prospects, which are designed to promote the public interest and avoid dissemination of systemic risk. The main resolution actions or tools include: a) sale of business; b) creating a bridge institution (the temporary transfer of assets to a public controlled entity); c) separation of assets (transfer of impaired assets to an asset management vehicle); d) recapitalization measures (the imposition of losses, with an order of seniority, for shareholders and creditors/uninsured depositors, the so-called bail-in. Single Resolution Board, composed of

representatives of the ECB, the European Commission and the relevant(supervisory) national authorities will prepare an adequate solution for a bank resolution, decided by the European Commission. The European Resolution Fund of 55 billion Euro will be established in 8-10 years and it will be under the control of the Single Resolution Board to ensure needed funds for medium-term financing of restructuring operations of troubled banks, it will be created by the contributions of banking sector and thus replace the funds of the Member States participating in the banking union.

For bank deposit guarantee schemes there have been applied the provisions of Directive 94/19 /EC, as amended in 2008 and 2010, now we have the provisions of Directive 2014/49/EU of the European Parliament and the EU Council of 16 April 2014 but also the provisions of Article 109 of Directive 2014/59 /EU of 15 May 2014 of the European Parliament and EU Council on the use of deposit guarantee schemes in the context of resolution.

4. Capital Markets Union (CMU)

The Capital Markets Union (CMU) is a plan of the European Commission aiming at creating deeper and more integrated capital markets in the 28 Member States of the EU and by which the European Commission will explore ways of reducing fragmentation in financial markets, diversifying financing sources, strengthening cross border capital flows and improving access to finance for businesses, particularly SMEs. The CMU is considered to be a pillar of Europe's single market and its creation is seen as a key element of the Investment Plan announced by the Juncker Commission in November 2014. In February 18th, 2015 European Commission published the Green Paper*: Building a Capital Markets Union* (**COM/2015/063 final).** Accompanying the Green Paper it is the Commission Staff Working Document*: Initial reflections on the obstacles to the development of deep and integrated EU capital markets* (**SWD/2015/0013 final**)

The purpose of the Green Paper is to consult all interested parties on the EC's approach to putting in place the foundations for CMU by 2019, the underlying economic rationale of CMU, and on possible measures which could be taken to achieve this objective.

The main areas that the Green Paper seeks to address are:

- improving **access to financing** for all businesses across Europe and investment projects, in particular start-ups, SMEs and long-term projects;
- increasing and **diversifying the sources of funding** from investors in the EU and all over the world;
- making the **markets work more effectively** so that the connections between investors and those who need funding are more efficient and effective, both within Member States and cross-border.

A CMU would ensure greater diversification in the funding of the EU economy and reduce the cost of raising capital, particularly for SMEs. More integrated capital markets, especially for equity, would enhance the shock-absorption capacity of the European economy and allow for more investment without increasing levels of indebtedness. A Capital Markets Union should enhance the flow of capital - through efficient market infrastructure and intermediaries - from investors to European investment projects, improving allocation of risk and capital across the EU and, ultimately, making Europe more resilient to future shocks.

A Capital Markets Union will differ from Banking Union: deepening capital markets requires steps that will be distinct from the key elements of Banking Union. However, the Banking Union's focus on breaking the link between bank failures and sovereign entities in the euro area will provide a platform of stability to underpin the development of a Capital Markets Union across all EU Member States. Likewise, well integrated capital markets will contribute to the resilience of the Economic and Monetary Union.

A Capital Markets Union should be based on the following key principles:

- it should maximize the benefits of capital markets for the economy, jobs and growth;
- it should create a single market for capital for all 28 Member States by removing barriers to cross-border investment within the EU and fostering stronger connections with global capital markets;
- it should be built on firm foundations of financial stability, with a single rulebook for financial services which is effectively and consistently enforced;
- it should ensure an effective level of consumer and investor protection;
- it should help to attract investment from all over the world and increase EU competitiveness.

If we refer to the current state of capital markets in Europe one should notice that total EU stock market capitalization, for example, amounted to €8.4 trillion (around 65% of GDP) by end 2013, compared to €1.3 trillion in 1992 (22% of GDP). The total value of outstanding debt securities exceeded €22.3 trillion (171% of GDP) in 2013, compared to €4.7 trillion (74% of GDP) in 1992. However there is wide variation in capital market development across EU Member States while private equity markets in the US are around twice the size of those in the EU (as a percentage of GDP), whilst private placement markets for bonds are up to three times bigger in the US.

On the demand side, improving access to finance, including to risk capital, notably for SMEs (for example innovative and high growth start-ups), is an important priority. On the supply side, the development of capital markets in the EU will depend on the flow of funds into capital market instruments. Achieving bigger, more integrated and deeper capital markets will depend on overcoming the barriers that are fragmenting markets and holding back the development of specific market segments.

As priorities for early action European Commission has proposed: lowering barriers to accessing capital markets, widening the investor base for SMEs, building sustainable securitization, boosting long term investment, developing European private placement markets.

Improving access to finance, especially for SME's is extremely important and capital markets can complement the role of bank lending for SMEs in particular for start-ups and small but rapidly growing firms in innovative industries. Related to SME's financing EC insists upon: addressing information problems, standardization as a mechanism to kick start markets, enabling alternative means of financing to develop. For developing and diversifying the supply of funding capital markets need to attract institutional, retail and international investors. For boosting institutional investment like that made by investment (mutual) funds, pensions and insurance funds one needs to remove regulatory barriers and other factors. Boosting retail investment by attracting private households in investing in capital markets is possible only if they are able to get a better return on their savings and also if is provided a better regulation and supervision of capital markets which may contribute to building investor confidence. Attracting international investment by ensuring market integrity, financial stability and investor

protection is important due to negative impact of financial crisis on gross capital inflows and outflows (as a percentage of GDP) which were lower in 2013 than in 2007. At the end of 2013 according to IMF data the total stock of cross-border portfolio investments between EU Member States was €9.6 trillion, whereas portfolio investments coming from outside the EU amounted to €5 trillion.

Improving market effectiveness – intermediaries, infrastructures and the broader legal framework- may be achieved through development of a single rulebook, enforcement of EU financial legislation, ensuring a fair competition, supervisory convergence, development of common data and reporting across the EU, a proper market infrastructure and securities law, adequate EU legislation in the field of company law, corporate governance, insolvency, and taxation, rapid development of new technologies as electronic trading platforms, high frequency trading and so-called "FinTech" companies.

5. Fiscal Union

The first step to a fiscal union may be considered the establishment of the Macroeconomic Imbalances Procedure (under the provisions of Lisbon Treaty and package of six regulatory measures) with two components: a preventive one based on 11 Scoreboard Indicators and a corrective one involving an action plan and measures to be implemented by a state under the supervision of European Commission and EU Council.

Maybe the second step towards a genuine fiscal union is Fiscal Compact or Treaty on Stability, Coordination and Governance in the EMU signed on 2 March 2012 by all member states of the EU, except the Czech Republic, the United Kingdom, and Croatia. Fiscal Compact defines a balanced budget as one with a general budget deficit not exceeding 3.0% of the GDP, while the structural deficit is not exceeding a country-specific Medium-Term budgetary Objective (MTO) which at most can be set to 0.5% of GDP for states with a debt-to-GDP ratio exceeding 60% - or at most 1.0% of GDP for states with debt levels under the 60%-limit. The country-specific MTOs are recalculated every third year and might be set at stricter levels compared to what the treaty allows at most. The treaty also contains a direct copy of the "debt brake" criteria outlined in the Stability and Growth Pact, which defines the rate at which debt levels above the limit of 60% of GDP shall decrease.

In June 2012 president of European Commission José Manuel Durao Barroso laid ground for future EU Treaty change, making some suggestions related to a fiscal union by setting "upper limits" on member states' annual budgets; by a “prior approval” for issuing government debt” beyond the level agreed in common"; by issuance of "common debt" as a medium term option; by setting up an EU "treasury office"; by closer coordination on "labor mobility" and "tax coordination". For Barroso "*Fiscal union is about much more than just eurobonds,*" proposed by French President François Hollande.

Debating Europe Forum has recently presented some reliable arguments for and against EU fiscal union.

Arguments for a fiscal union

a) Debt crisis has provided enough evidence that monetary union cannot properly work without fiscal union because the euro-zone is unable to manage its macro-economic imbalances without some sort of federal structure to oversee revenue collection and expenditure. Without this structure, the euro will always be vulnerable to asymmetric shocks. As we may see combining supranational monetary policies with national fiscal

policies is unsustainable, so there is a great need for a fiscal union run by a fully empowered EU Finance Ministry under proper democratic oversight which may give to the EU enough strength and stability, mutualizing credit risk while imposing tough fiscal discipline.

b) Closer economic union is the only way to halt Europe's decline in the new global environment. In 1990, EU nations made up half the world's 10 biggest economies, but Europe is losing ground in the global game and by 2050, Europe will have only two nations in the top. The former arrangements made under SGP have not worked properly and Greece case proves that markets can easily ruin the weakest members of euro zone in terms of fiscal policy and economic governance. Fiscal union is needed for raising Europe's market credibility and bring eurobonds to the level of US treasuries.

c) Fiscal union would be the second major step after a single currency towards a true political union if it will be administered by real federal bodies. Despite the fierce opposition of euroskeptics, central tax resources and mutualized debt may become powerful symbols of a united Europe, but we need less democratic deficit and more representation and accountability on behalf of new shaped and stronger institutions, like a two-chamber European Parliament and a directly elected European Commission, the last one evolving to a genuine body of a federal state (United States of Europe) able to impose as a leading power in an emerging multipolar world.

d) A European fiscal union backed by proper institutions will be able to provide a better economic governance in the EU and to impose an ex-ante control in order to avoid tax and budget irresponsible behavior, that may cause damaging financial bubbles and unsustainable deficits and debts. A better economic management will give more trust to investors and stimulate economic growth, in providing more stability and prosperity in Europe.

Arguments against a fiscal union

a) European Union consists of independent nations which have their own elected governments; their economic and financial problems are essentially specific and they need specific solutions. For Southern Europe countries entering the Monetary Union was a failure, which may be exacerbated by entering a Fiscal Union. Governments need flexibility to deal with their own problems. A Fiscal Union implies a centralized budget with an appreciable financial volume what may cause heated disputes between Member States regarding individual contributions, to which it may be added the involved bureaucracy and possibilities of frequent blockage in decision-making process.

b) One of the arguments frequently used by Great Britain against fiscal integration is that fiscal policy and national budget are the responsibility of sovereign parliament and other public authorities and any transfer of these tasks to Brussels institution would be undemocratic and ineffective. It is quite difficult for the citizens from a country to accept any taxation without representation. How popular or unpopular a fiscal union would be depends not only by its components (structure) but also by the opposition/propaganda of anti-European political demagogues, who have strengthened their position in the European Parliament and are trying to undermine the foundations of the EU.

c) Fiscal Union implies the tax harmonization that will be done mainly by increasing taxes in most Member States. Most European citizens will pay higher taxes and countries like Ireland, Slovakia, Romania, Bulgaria that applied lower revenue and profit taxes which boosted their economies will be forced to increase the level of taxes and achieve the fiscal harmonization (do not forget French-led crusade against fiscal dumping) and this will negatively affect the economic competitiveness and households consumption.

d) Moral hazard may characterize not only the Monetary Union but also on the Tax Union. Countries with budget or fiscal surpluses like Germany will be in a position to finance (bail out) the deficits of other countries, and a Fiscal Union involving high financial transfers will not boost the budget discipline and the implementation of structural reforms in Southern and Eastern European countries whose high deficits and high debts will continue to impede the progress of all Union.

6. Energy Union

European Union imports 53% of all the energy that is consumed and this share will increase in the future decades. But some Member States depend on gas imports coming from a single main supplier. That is why the diversification of energy resources and suppliers are two objectives that will contribute to energy security. The development of green energies and finding new gas suppliers are two major ways to enhance the energy security and to reduce environmental impact.

At **European Council** meeting in March this year it was maintained that EU is committed to building an Energy Union with a forward-looking climate policy on the basis of the Commission's framework strategy, based on 3 objectives: security of energy distribution, sustainability and competitiveness and also on five dimensions which are closely interrelated and mutually reinforcing - energy security, solidarity and trust; a fully integrated European energy market; energy efficiency contributing to moderation of demand; decarburizing the economy; and research, innovation and competitiveness. The EU institutions and the Member States will work together and the EU Council will report to the European Council before December, 2015, that will continue to give guidance. European Council emphasized the importance of all dimensions of the Energy Union and focusing on some of the aspects called for:

a) Accelerating infrastructure projects, including interconnections in particular to peripheral regions, for electricity and gas to ensure energy security and a well functioning internal energy market. There have been mentioned the recent agreement by France, Portugal, Spain, the Commission and the EIB for achieving the 10% electricity interconnections objective by 2020; the agreement by the Baltic States to proceed towards synchronous operation of Member States within the Continental European Network which also contributes to the increase of energy security; the work of the Central East South Europe Gas Connectivity High Level Group; the setting up by the Commission of Regional High Level Groups composed by all relevant key players to ensure regular monitoring of progress in the selection and financing of projects of common interest.

b) Fully implementing and rigorously enforcing existing energy legislation;

c) Reinforcing the legislative framework for the security of supply for electricity and gas; energy security may also be strengthened by robust grids, increased energy efficiency and having recourse to indigenous resources as well as safe and sustainable low carbon technologies;

d) Ensuring full compliance with EU law of all agreements related to the buying of gas from external suppliers, notably by reinforcing transparency of such agreements and compatibility with EU energy security provisions. As regards commercial gas supply contracts, the confidentiality of commercially sensitive information needs to be guaranteed;

e) Assessing options for voluntary demand aggregation mechanisms in full compliance with WTO and EU competition rules;

f) Developing a more effective, flexible market design which should go together with enhanced regional cooperation, including with neighboring countries, and help integrate renewables, while ensuring that public intervention is compatible with the internal market and that the right of Member States to decide on their own energy mix is respected. This will help provide affordable energy to households and industry;

g) Reviewing and developing legislation related to emissions reduction, energy-efficiency and renewables to underpin the agreed 2030 targets; developing a reliable and transparent governance system;

h) Developing an energy and climate-related technology and innovation strategy, including for example on the next generation of renewables, on electricity storage and carbon capture and storage, on improving energy efficiency in the housing sector as well as on sustainable transport;

i) Using all external policy instruments to establish strategic energy partnerships with increasingly important producing and transit countries, notably with a view to promoting energy security, while ensuring that the sovereignty and sovereign rights of Member States to explore and develop their natural resources are safeguarded.

The European Council supports a strong coordinated action through an active European climate diplomacy ahead of the COP 21 (United Nations Climate Change Conference) in Paris to be held in December, in line with the ambitious objective fixed by the October 2014 European Council, as reflected in the contribution submitted recently by the EU and its Member States and urges all Parties in a position to do so, including major economies, to submit their contributions by the end of March 2015. It is also necessary to intensify work on solutions on financing, technology transfer and capacity-building, which are key issues in view of an ambitious agreement in Paris. COP 21 has a crucial role because it must result in an international climate agreement which will limit global warming to below 2°C. The first decision to be made is a binding agreement on climate change that applies to all countries and the second decision is related to intended national determined contributions (INDC) representing the investment that each country is able to make. Climate finance will also be a major component, the initial capitalization of the Green Climate Fund will amount to $9.3 billion, including nearly $1 billion from France. Local and regional initiatives developed by local governments, civil society organizations and businesses will bring their positive contribution, increasing the contributions made by states. In 2014 governments and private companies have invested $ 270 billion in renewable energies, 17% more than in 2013.While China and Japan have focused on photovoltaic parks, investing $74.9 billion in this field, European Union has invested $18.6 billion in wind parks. Maybe that is why the GHG emissions have not increased in the last years, attaining 32.3 billion tons in 2014.

For **Martin Schultz,** president of European Parliament, Energy Union is a historic project and EU has to do more to diversify the oil and gas suppliers and act united when dealing with third parties. Martin Schultz believes that the dependence on a few suppliers, some of them dominant or unreliable, like Russia, makes EU vulnerable to divide-and rule tactics and threats of blocking energy supply routes. In the short-term EU has to connect to as many different suppliers as possible, in particular in south-eastern Europe while in the long-term EU should reduce the energy imports because is the largest energy importer in the world with more than half primary energy coming from third countries and costing € 400 billion per year.

EU must reduce the energy needs by prioritizing energy efficiency and must increase and diversify its own energy production in a smart and climate friendly way. Solidarity is important for a EU common energy policy because only by fully connecting the internal pipelines and grids, one can be ensured that the energy may flow freely within Europe, and reach the places where it is most needed at fair prices. Affordable and accessible energy is vital for keeping European industry in business and for keeping European citizens safe. Many people in Europe are not able to pay their electricity bill or cannot afford to heat their houses in winter so the national governments must tackle the energy poverty. Instead of paying billions for energy coming from outside the EU it is preferable to create jobs and growth by investing this money into an energy union: into merging EU fragmented market into a fully integrated energy market, also by fully implementing what has already been agreed: the Third Internal Energy Market Package; into research and innovation, in available and new technologies, in particular in the area of renewable energy and energy efficiency, as well as storage and transport of renewable energy. European renewable energy businesses have a combined annual turnover of € 129 billion, and employ over a million people; and making the houses and buildings more energy efficient is a must, as three quarters of the houses are not yet energy efficient, and this will create many more jobs and save a lot of money for the consumers.

The European Commission estimates that one trillion Euro will be needed for investing in the EU energy sector by 2020 and the money should be spent in a smart way for reaching the goals of creating jobs and growth. President Juncker's 315 billion Euro Investment Plan may play an important role in mobilising the required investments in energy infrastructure and innovation and obviously a part of these investments must be allocated to small and big infrastructure projects to create jobs, to reduce energy consumption and to lower energy prices.

EU energy policy impacts on climate change and EU wants to be a global leader in the fight against climate change and to be a positive example for other states. That is why the European Parliament will continue to put pressure on the EU to be more ambitious with regard to its own targets, including in relation to energy efficiency. In addition, the Parliament will continue to push for climate diplomacy. Ahead of this year's Paris Climate Conference the key challenge for the EU is to act as a leader and a common EU position is needed for a substantial progress. For reaching an agreement in Paris, one which will put the world on track to achieving the "below 2°C" objective one should address the issue of climate change in all relevant meetings with third countries. The energy union is about big questions, big figures, big interests and big ambitions and it will require many legislative proposals and it will need full support and implementation at all levels. The European Parliament believes in the objectives of the Energy Union, but will assess very carefully the required legislative proposals and the way the Parliament will be involved in the governance of this project that touches upon the key interests of the European Union and its citizens. Martin Schulz understands that some people are considering following the model of the European Semester for the governance of the Energy Union but he thinks that the European Semester has various aspects which can certainly be bettered. European Commission is currently planning to streamline the whole process and it is necessary to learn from previous experience and to develop an efficient approach from the start. Energy is a core business of EU and therefore must be dealt properly by the community institutions in a transparent, democratic and effective manner.

7. Political Union

On September, 12, 2012 the former president of European Commission José Manuel Durão Barroso delivered a speech in front of European Parliament pleading for launching a wide-ranging public debate for a major transformation of the European Union into a federation of nation states**.** He stressed that in order to survive, the Union should evolve and agree on "*a decisive deal for Europe*" that would establish a "contract of confidence" between member countries, EU institutions, social partners, and the Union's citizens "*We will need to move towards a federation of nation states. This is what we need. This is our political horizon*," he said. Barroso's vision for a federation of member states was by no means a "superstate", similar to the USA, as he wanted a democratic federation of nation states that can tackle the common problems, through the sharing of sovereignty in a way that each country and each citizen are better equipped to control their own destiny. Barroso was aware that the creation of such a federation would require a change of the EU treaties. Having in mind the Lisbon Treaty negotiations, which took three years to conclude after French and Dutch voters rejected a proposed EU constitution in 2005, he said the Commission didn't take it "lightly" and realized how difficult it was to change the treaty.As a matter of fact Lisbon Treaty was finally signed under strong political pressure of German Chancellor Angela Merkel. Barroso said that a broad debate should start in Europe on treaty change, before a convention or an intergovernmental conference is called, and pleaded for a new kind of debate." *I would like to see the development of a European public space, where European issues are discussed and debated from a European standpoint. We cannot continue trying to solve European problems just with national solutions*," he said. Barroso appealed to the European Parliament to contribute, but also to "European thinkers", to "*men and women of culture, to join this debate on the future of Europe".*

Also in September 2012 the Future of Europe Group, composed of Foreign Ministers from 11 European countries(Austria, Belgium, Denmark, France, Italy, Germany, Luxembourg, the Netherlands, Poland, Portugal and Spain), led by Germany, has proposed a European Federation through a common army, a common police force and a European Foreign Minister. There were envisaged two solutions for the future of the EU: a federation or a confederation. In the field of EU's Foreign and Defense Policy the decisions would not be taken unanimously in favor of a majority vote. The entire institutional architecture of the EU would have to be revised, and the European Commission and EC President should be elected directly by the citizens and lead a true European Government and the European Council and the Council of Ministers would be both replaced by a secondary parliamentary chamber of the states (a kind of Senate, if we consider the actual European Parliament an equivalent of the US House of Representatives) and this would contain a smaller chamber for the eurozone member countries.

8. Conclusions

Sovereign debt crisis has highlighted the fragility of the Monetary Union against the backdrop of a failure to achieve a complete and powerful Economic Union due to an incomplete single market and an ineffective coordination of macro-economic policies at EU level. Besides the reforms undertaken immediately after the crisis in the field of

economic governance on the basis of the provisions of the Lisbon Treaty, European Commission has drawn the conclusion that it is needed a deep integration of the financial and banking markets for creating an ever closer Union in this domain. The process has began with the creation of the Banking Union with three pillars, the first of which is already in operation, since November 2014, the Single Supervisory Mechanism, while the second one and third one are in need of a longer period in order to become functional. It must be mentioned the replacement of the bail-out procedure, involving public money, with the bail-in procedure for saving banks, in which the burden of restructuring and revitalization of a bank in a difficult situation falls on the account of shareholders and big depositors/creditors.

Capital Markets Union (CMU) is a plan/project of the European Commission presented in a recent the Green Paper*:* Building A Capital Markets Union with the aim to boost financing for all businesses and investments across Europe, to diversify the sources of funding and to improve the operation of capital market in EU. Capital market in Europe has a great potential for further development if its dimension is compared with that from U.S.A. Now we have rather fragmenting markets, not enough flows and institutional investors (like mutual funds, pensions and insurance funds), not enough instruments and SME's financing.

As concerns Fiscal Union some small steps forward were made after the crisis like Macroeconomic Imbalances Procedure, Fiscal Compact and Barroso's proposals from June 2012. There are strong arguments for and against fiscal union, but this project is very difficult to achieve due to large transfer of sovereignty to the community level, hard to be accepted, especially by the British. As it involves real federal bodies for a centralized fiscal policy this project represents a giant step forward towards political federating of Europe.

Energy Union is meant to diversify energy resources, to provide energy security for all MS, to better protect the environment, to foster the economic competitiveness. A fully integrated European energy market must be based on solidarity, trust, cooperation and common positions in the relation with foreign suppliers, like Russia. Besides developing their resources, including green energies, MS may establish strategic energy partnerships with important suppliers, but cooperation between the European institutions and between them and MS has an essential role in the creation of this Union. EU is a global leader in the fight against climate change and a common EU position will be needed for a substantial progress in Paris at COP 21(United Nations Climate Change Conference).

Political Union has the goal to transform European Union into a federation of nation states, an ambitious project supported by the former president of European Commission José Manuel Durao Barroso and by Angela Merkel, Germany's prime minister. It involves a radical change in the Treaties and a lot of political will, both difficult to materialize under the circumstances created by the crises and economic stagnation. Only a quick, sustainable and substantial economic progress may create a favorable framework for starting a true and profound political integration.

In our opinion, at present the EU's future is full of uncertainties and traps, created by both internal and external factors. Internally, we have now some political parties, like UKIP and Front National, which are anti-European and anti-immigration seeing EU as an entity that undermines the national economy, sovereignty and well-being. European nationalism is based on specific history, language and culture and usually rejects other ethnic groups. It was the recent financial and economic crisis that has led to the current economic difficulties and social pressures which paved the way to anti-European parties affecting the political system and also the process of European integration. Now there is a

strong and growing anti-immigration feeling in Western Europe, driven by the fear of Islamist terrorism and also by the influx of immigrants from Eastern Europe, Northern Africa and Middle East and other regions creating an extra pressure on the labor market. Mainstream parties, with neoliberal/right or neokeynesist/left ideology, are attached to European values and to the European Community membership but they are now facing strong nationalist and separatist movements difficult to counteract.

Under these adverse circumstances any hastening of the integration process by means of fiscal and political unions presents major political risks related to the possible dissolution of European Community, while financial and energy unions may provide some certain advantages for the financial stability and economic growth of EU.

Externally, the warlike attitude of Russia, the rise of China and other BRICS countries, the explosive situation in the Middle East, the uncertainties in the field of energy and climate will create other important geopolitical risks for the integration process and hence the need for working out a proper strategic vision and some reliable scenarios on medium and long term.

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Romania's Agriculture and its Role in the Convergence Process

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Abstract: *The importance of agriculture in Romania is linked to the fact that 45% of its population is in the rural area, mostly dependent on agricultural activities. This paper aims to determine in what extent agriculture influences the convergence process of Romania with the euro area. The structural convergence index is computed in order to assess the degree in which the structure of the Romanian economy resembles the one of the euro area in terms of both gross value added and employment. Research indicates that Romania has the lowest score in terms of structural convergence with the euro area. The main reason is the oversized agricultural sector which employs almost a third of the active population. The productivity of the Romanian agriculture is then assessed in order to identify its possible effect on the country's overall competitiveness and on the whole convergence process.*

Key-Words: *agriculture, structural and employment convergence, productivity, economies of scale.*

1. Introduction

Economic integration in the EU of the Member States has a major impact on the structure and dynamics of macroeconomic indicators in these countries. Structural concordance between the Romanian economy and that of other EU countries is relevant for two major reasons. The structural convergence is part of the real convergence with the European economic model, a process that involves the convergence of income, productivity, occupational structure, relative prices and educational standards. First, structural convergence ensures a greater efficiency of common policies. Asymmetric shocks have a smaller impact in case of a high structural convergence (Marinas, 2006, pg.1). Countries with similar economic structure will have a high share of intra-industry trade, positively influencing the symmetry of shocks and business cycles consistency.

Second, resource allocation to sectors with low added value (eg agriculture) affects economic growth and income convergence towards the European average. As an economy

advances, a migration of the labour force is desired towards the more productive sectors (industry and services), in order to increase the country's competitiveness.

This paper starts with the evaluation of structural convergence of Romanian economy to the euro area. The results show a significant difference in terms of structure. Of all EU member states, the Romanian economy is the most divergent and the main reason is the agriculture sector that has the biggest share in national GDP among EU28 member states. Apart the structural differences and the issues it raises, agriculture has a very low added value and this affects the country's overall performance.

After analyzing the structural differences and identifying agriculture to be the main reason we then turn to assessing the productivity of Romanian agriculture in European context and what are the implications on the country's economic performance and its convergence process with the European Union.

The importance of agriculture in the Europe economies drew particular attention to economic research papers, in terms of efficient allocation of resources but also in terms of the social role of the primary sector. Schultz's theory (1964) argued about the inverse relationship between land holding size and productivity launching a long debate because of the general positive relationship belief. Since then, Rusu (2000), Aligică and Dabu (2003), Swinnen (2003) and Hartvigsen (2013) addressed the issue of area fragmentation from different angles: economic, social, political and legislative.

A similar approach had Mazoyer and Roudart (2002). They emphasized the direct link between farm size and the degree of technological endowment, using historical analyzes about the development of agricultural production systems. According to the results, productivity is determined by the ratio between the surface and workers but also by the use of fixed capital.

Swinnen and Ciaian (2008) examined the role of the agricultural sector on the economic growth process of the Romanian economy in the context of EU integration and the key issues that impede the convergence process. Similarly, Dachin (2011) evaluated empirically the oscillations of agricultural production and how they influence the GDP evolution, agricultural price volatility, and how the work of small farms have a counter-cyclical role in the economy in crisis conditions. Marinas (2006) analyzed the peculiarities of the structural adjustment process of the Romanian economy, compared to the evolution of other new Member States. Results indicate that a high degree of structural divergence may lead to a reduced impact of common policies and that structural changes can act as a source of economic growth and productivity improvement.

2. Romania's structural convergence with the euro area

One of the most used methods to measure the degree of convergence of economic structure is based on the Krugman index. Simply put, it is a comparison between the added value structure of two economies, calculated from the difference between the weights of sectors in total value added.

$$[1] \qquad \mathbf{K_{A,B} = \Sigma\, |GVA^{i}_{A}(t) - GVA^{i}_{B}(t)|}$$

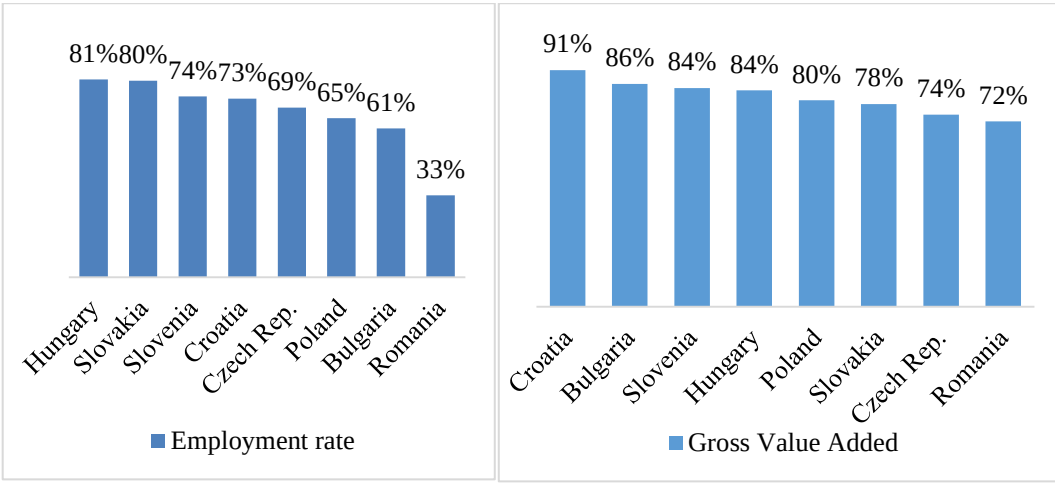
Where $K_{A,B}$ is the Krugman specialization index which shows how divergent economies of countries A and B are. GVA^{i} represents the share of gross value added of

sector *i* in total gross value added. The share of gross value added can be replaced by the percentage of people employed in sector *i* in total occupied population nationwide.

The economic structure of euro area is chosen as a benchmark as it represents the core of the European Union, producing 73% of gross value added in the EU28. In addition, the differences between the euro area and EU28 are very small, both in terms of GVA and employment rate (the difference between the weights of the three sectors analyzed is less than 0.2 pp in terms of GVA, and less than 3.7pp for employment).

Krugman index is essentially the sum of the weights differences in economic sectors of the two countries. A higher value means a higher degree of divergence between the structures of the two economies. The values it can take are between zero, in which case the two economies have identical structure and 200, an extreme case in which all economic activity in each country is concentrated in maximum (n + 1)/2 sectors where n is the total number of sectors analyzed. Due to the fact that for the countries analyzed in this study (Bulgaria, Czech Republic, Croatia, Hungary, Poland, Romania, Slovenia and Slovakia) the Krugman index of convergence with the euro area is less than 50 for all years analyzed, we calculated an index of convergence equal to 100% minus Krugman index value. The rationale is that the Krugman index value is inversely proportional to the degree of convergence, while the index we calculated is directly proportional to the degree of convergence. In other terms, as the value of the convergence index increases, so does the convergence degree.

Figure 1. Structural convergence index with the euro area in 2013



Source: own computation based on Eurostat data;

Figure 1 illustrates the values of the convergence index with the euro area for Romania and neighboring Member States that have been under communist rule. Two of them, Slovenia and Slovakia have adopted the euro in 2007 and 2009. First it can be noticed that in terms of gross value added, the countries have a higher convergence with the euro area than in terms of employment rate. Moreover, although members of the Eurozone, Slovenia and Slovakia do not have the highest degree of convergence with it. Romanian economy structure resembles the least of all the economic structure of the euro area. Regarding the GVA, the convergence score is close to that of others' states, while in terms of employment rate there are major differences.

Table 1. Comparison between Romania and EU28 economic structures in GVA and employment (2013)

	Gross Value Added			Employment rate		
	Agriculture	Industry	Services	Agriculture	Industry	Services
EU28	1.70%	24.60%	73.60%	3.30%	21.40%	75.30%
Romania	6.20%	34.40%	59.40%	30.20%	27.90%	42.00%

Source: Eurostat

Difference between the two economies totals 28 percentage points for GVA shares and 67 percentage points for employment shares. Looking at the causes of the structural difference it can be noticed that both agriculture and industry occupy a higher share in Romania than in the euro area (Table 1). The employment rate in agriculture in Romania is over nine times higher than in the euro zone, amounting to 27 percentage points in absolute terms.

Figure 2. Evolution of structural convergence index with the euro area

Source: own computation based on Eurostat data;

The evolution over time reveals that in terms of employment rate, the convergence index had a growing trend. The convergence index values in GVA followed a more complex pattern, reaching a maximum in 2007, before the onset of the financial crisis, declined until 2011 and then growing back to reach 72% in 2013.

The changes in the structure of gross added value consisted in reducing the weight of the agricultural sector, from 12% in 2000 to 6% in 2013. Industry and services have evolved around a horizontal trend.

Greater changes took place in the employment figures. The share of people employed in agriculture fell from 45% in 2000 to 30% in 2013, which in absolute terms means a reduction from 4.8 million to 2.6 million people. Services have experienced an opposite trend: the share increased from 28% in 2000 to 42% in 2013. Due to the massive decline in the total number of persons employed in total economy (from 10,8 million in 2000 to 8,6 million in 2013), in absolute terms the increase was relatively small, from 3.0 million to 3.6 million people employed in services.

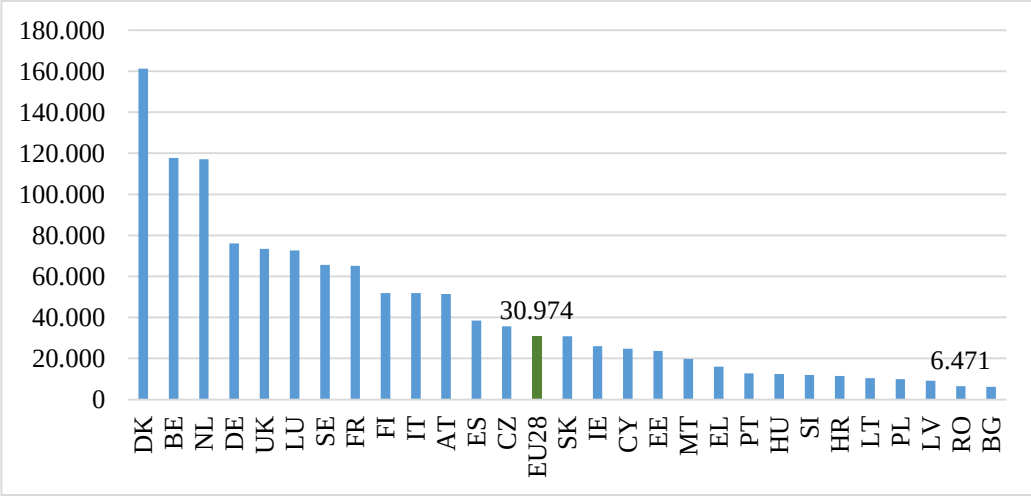
3. Productivity of Romanian agriculture

Romania has the second lowest GDP per inhabitant in Europe and this reflects the low productivity of its economy. Out of 28 member states, Romania holds the 23rd position in the Competitiveness Index made by the World Economic Forum[1]. The low competitiveness of the country compared with the euro area is due to a very low productivity of agriculture. One way to evaluate the performance of agriculture involves dividing the output to input factors.

Standard output (SO) is a measure of the production or the business size of an agricultural holding. It is based on the separate activities or 'enterprises' of a farm and their relative contribution to overall revenue. This indicator reflects the performance of a country's agriculture in absolute terms. In 2010 in the European Union, the countries with the highest standard output were France (51 bill. Euro), Italy (49 bill. Euro), Germany (41 bill. Euro), Spain (34 bill. Euro), UK (20 bill. Euro), Poland (19 bill. Euro), the Netherlands (19 bill. Euro) and Romania (10 bill. Euro).

But these numbers show the whole production of a country, which uses a specific set of inputs to generate this output. Therefore, to properly reflect the agricultural performance of a country the national output must be divided by the inputs in agriculture. The labor input is measured using annual working units (AWU), an indicator which takes account of part-time and seasonal work. One AWU corresponds to the input, measured in working time, of one person engaged in agricultural activities in an farm on a full-time basis over an entire year. Thus labor productivity is measured by the standard output (SO) divided by the annual working units (AWU).

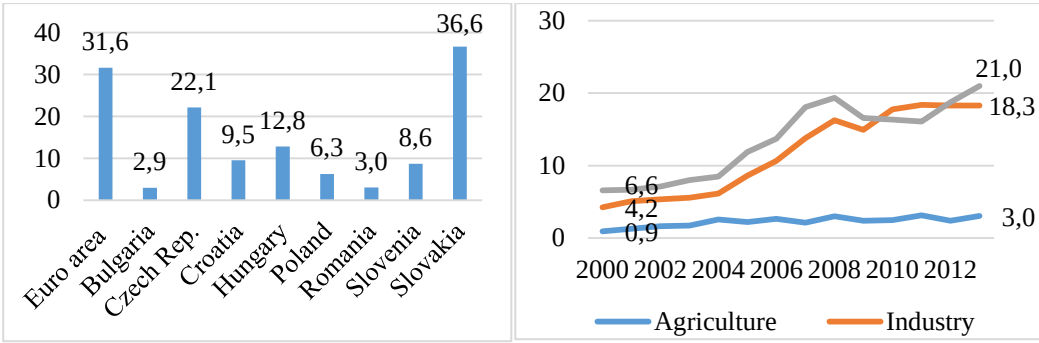
Figure 3. Standard output (euro) / Annual work unit in 2010



Source: own computation based on Eurostat data;

On average, the annual production value of a full-time worker in Romanian agriculture is 6471 euros. In the European Union it is the second most unfavorable performance after the one of Bulgaria (6,240 euros / AWU). Labor productivity in France, Sweden, UK, Germany, the Netherlands, and Belgium is over ten times higher, while the EU28 average is five times higher than the one in Romania.

Figure 4. Gross value added per person employed in agriculture (international comparison in the left chart; comparison with industry and services within Romania in the right chart)

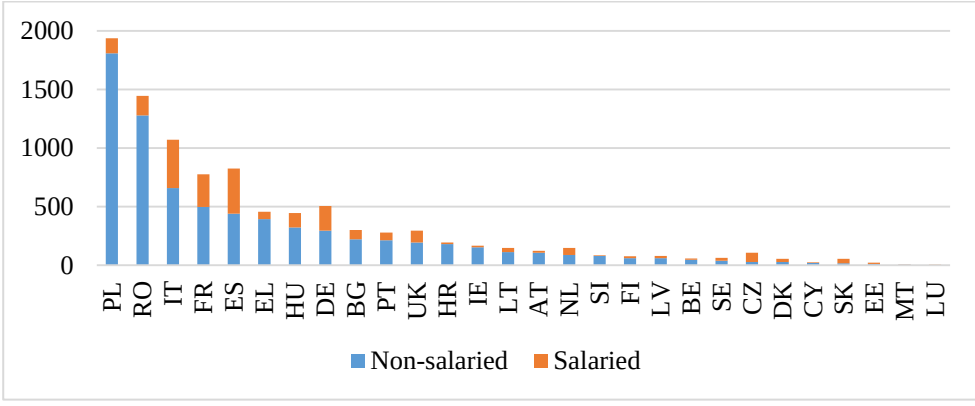


Source: own computation based on Eurostat data;

Another indicator of performance is the gross value added per employed person. Figure 4 (left chart) shows the relative GVA per employed person in Romania, the neighboring countries and the euro area average. A farmer in Romania, on average, brings an added value ten times smaller than a farmer in the euro area. This can be explained by the large numbers of auto-consumption agricultural units and by the very low agricultural mechanization. In national context agriculture productivity is also very low: 6 times lower than in industry and 7 times lower than in services (figure 4, chart on the right).

Agriculture, although employs 30% of total employment, generates only 6% of gross value added because most are working in the family farms where much of the production is used for own consumption. Only Poland engages more people in agriculture than Romania. In 2014 there were about 1.4 million people, equivalent full-time workers, in Romanian agriculture, out of which only 11% are officially employed.

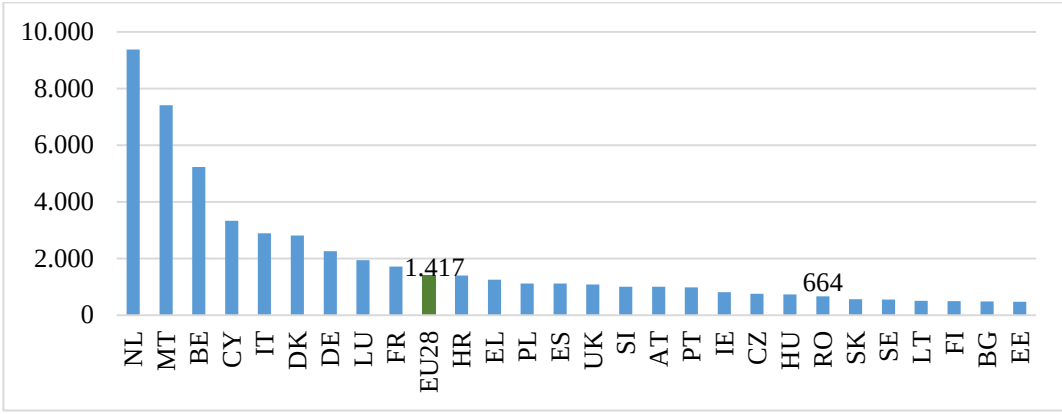
Figure 5. Labor force input in agriculture in 2014 (1000 AWU)



Source: Eurostat;

This situation also reflects the social role of agriculture in Romania. A high percentage of indigenous people in rural areas depend on auto-consumption goods resulted from agricultural activities, produced in the absence of other employment opportunities and in conditions of insufficient income. Also, over the years, on the path of transition to a market economy, subsistence agriculture mitigated unemployment amid deindustrialization of the Romanian economy. (Gibeah et. all, 2009).

Figure 6. Standard output (euro) per hectare in 2010



Source: own computation based on Eurostat data;

Agricultural productivity can be assessed in connection with the surface. Dividing the standard output by the number of hectares used in agriculture production per hectare is obtained, an indicator expressed in euros. The score obtained is better than in labor productivity. The economic value produced by a hectare in Romania is only half the EU average. Moreover, the land is more productive in Romania than in only other 6 Member States. The relative higher productivity indicates natural comparative advantages of Romania in relation to other Member States: climate, soil quality, large plain surfaces etc. At the same time, a major disadvantage is that the agricultural area is excessively fragmented, causing decreasing returns to scale. This situation has its roots in i) the application of Land Law (18/1991) that involved a process of de-collectivization of land, when former owners received no more than 10 hectares per family and ii) the excessive regulation of land transactions until 1997 (Otiman , Steriu, 2012).

According to Eurostat data, the average size of farms in Romania in 2010 is much lower than the European average (3.4 ha to 33.1 ha), which determines the non-commercial profile of local production units. Moreover, out of the total 5,955,770 European farms which uses more than 50% of production for auto-consumption, 3,589,530 are localized in Romania (approximately 60.3%). Also, according to the National Statistics Institute (Household Budget Survey), in 2013 consumption from own resources accounted for approximately 61.3% of total consumption expenditure and 165% of the expenditure for food and beverages consumed in rural households. These data reflect the fact that the high number of small farms contribute significantly to food security of the rural population (Otiman, Steriu 2012, p.27), despite the fact that excessive division of agricultural areas causes high rates of auto-consumption, low productivity and lack of real possibilities of horizontal and vertical integration in production pathways (in order to enter the markets for agricultural commodities and food).

Figure 7. *Share of holdings with more than 50% of production self-consumed by the holder*

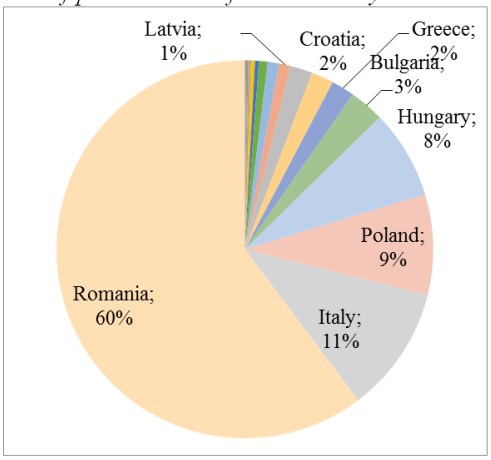
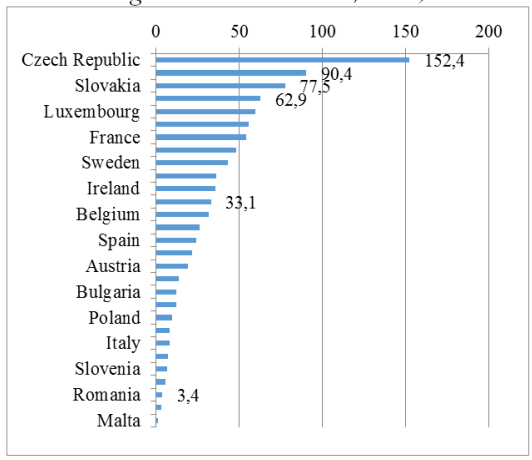


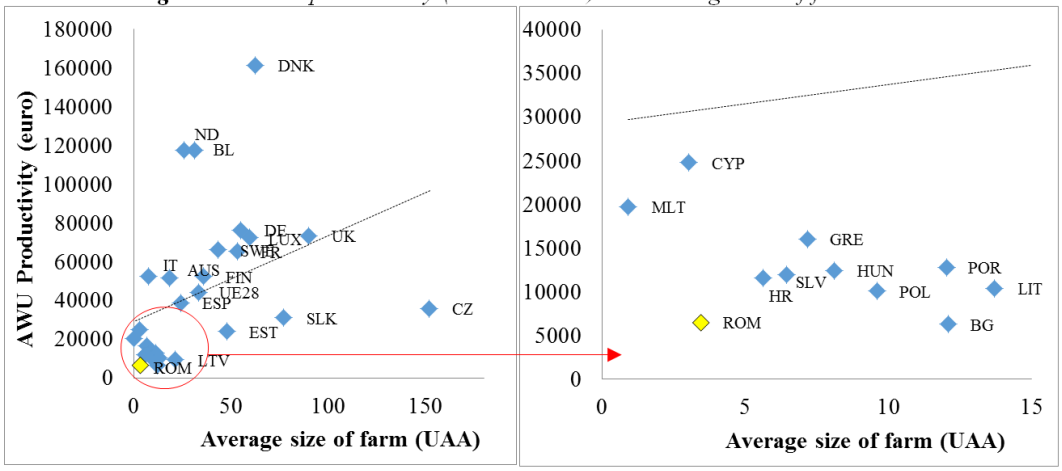
Figure 8. *Average size of farm (utilised agricultural area – ha, 2010)*



Source: own computation based on Eurostat data;

At the European level there is a direct link between farm size and productivity (shown in figure 9). As the farm is greater, the greater its productivity. This can be explained by the fact that a small farm has low financial resources, which rarely allow it to buy equipment. Then, even if they could afford to buy equipment, it would not be cost effective given the small size of the farm and its production possibilities. Thus, in these units, much of the work is done manually by workers.

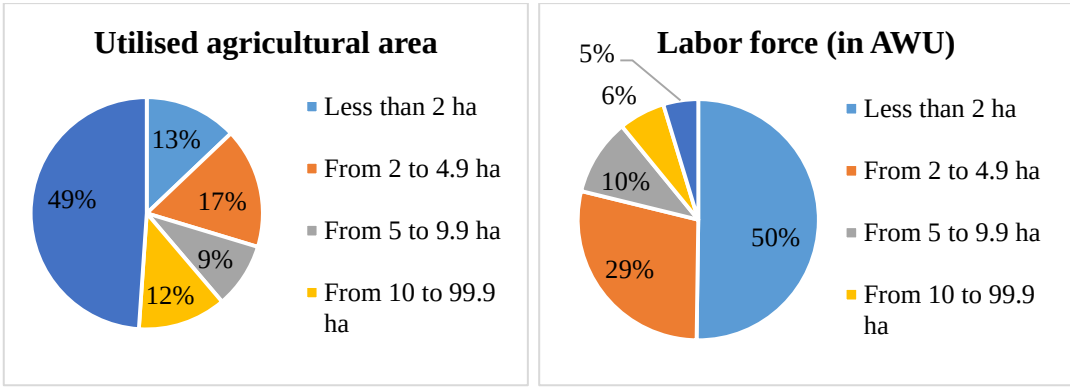
Figure 9. *Labor productivity (in euro/AWU) and average size of farm in EU28 in 2010*



Source: own computation based on Eurostat data;

The relationship between the utilized agricultural area (UAA) and the number of persons employed can be seen in figure 10. Small farms, with a size of up to 2 hectares, occupy in total only 13% of the total land used for agriculture, but employ half of all people employed in agriculture. In contrast, large farms of over 100 hectares uses half of the country's agricultural land and employs only 5% of the population employed in agriculture.

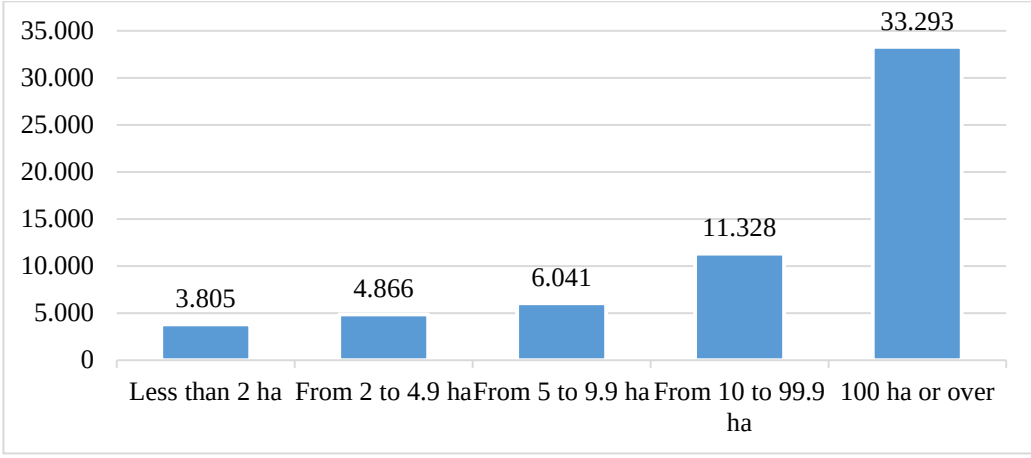
Figure 10. Utilized agricultural area and labor force input in Romania agriculture by size of farm in 2010



Source: own computation based on Eurostat data;

Figure 11 illustrates the labor productivity in agriculture according to farm size. As expected, small farms are less productive (almost nine times) than large farms of over 100 hectares. This confirms that small farms are very poorly mechanized and require additional labor. As farm size increases so does labor productivity, a sign that more machines and less work force is used as the farm size increases.

Figure 11. Standard output per annual work unit in Romania in 2010



Source: own computation based on Eurostat data;

According to results, there is a Pearson correlation coefficient of 0.382 (weak direct link) between the average size of holdings and the ratio of output and total employment in EU farms. These results indicate that there are other factors that influence labor productivity in European farms.

Another factor that determines the productivity of labor in farms in Romania is the training of managers of agricultural production units. Eurostat data shows that 97.5% of farm managers in Romania (covering over 72.4% of UAA) have only practical agricultural experience. Only 2.5% of holdings managers are graduates of agricultural education, compared to the European average of 34.2% (MARD, Raport Strategic de Monitorizare, 2014). Studies show that management skills are an important factor for generating gains in competitiveness. However the impact of schooling on agricultural productivity is higher in

economies using modern methods of production, compared to those based on a traditional structure (Luke Cionga , Giurcă 2012, p.66).

Table 2. Agricultural training of farm managers (share of total holdings and utilised agriculture area - 2010)

	Practical experience only		**Basic training**		**Full agricultural training**	
	Total number of holdings	Utilised agricultural area	Total number of holdings	Utilised agricultural area	Total number of holdings	Utilised agricultural area
Romania	97,5%	72,4%	2,1%	11,7%	0,4%	15,9%
UE28	65,8%	45,2%	21,4%	26,3%	12,8%	28,5%

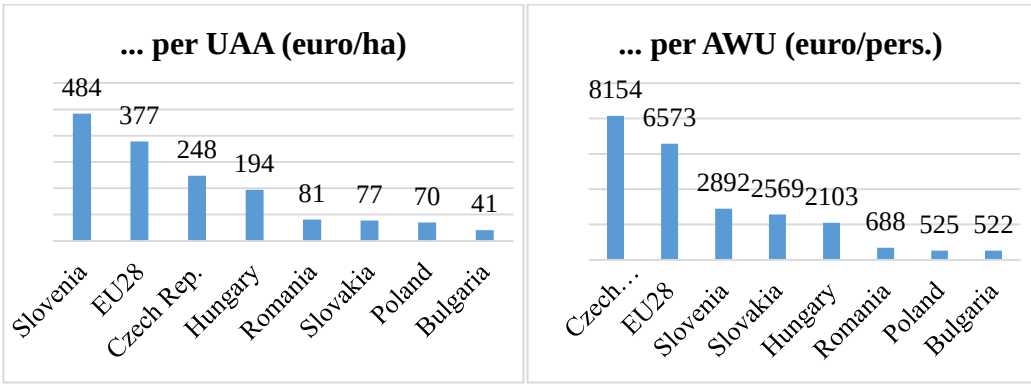
Source: Eurostat;

The lack of equipment and machinery in Romanian farms is a factor that limits the performance of the agricultural sector and the analysis of gross fixed capital formation in Romanian agriculture shows, not surprisingly, that Romania scores very low compared to other EU countries.

Although agriculture represents 6.2% of the whole economy and occupies one third of the total employed population, it receives only 2.9% of the total gross fixed capital formation (GFCF). Divided by the utilized agricultural area (UAA), the amount of GFCF amounts to 81 euros per hectare, the fifth lowest in the European Union. But the situation has been worse in the past. Real progress has been made and this is due to the highest growth rate of GFCF in Europe. The amount in 2012 is 2.5 times higher than the one in 2005, Romania speeding up the catching-up process with the core of the European Union, which, in the same period advanced only by 17%.

In terms of gross fixed capital formation per average equivalent full-time employee (annual working unit - AWU), the distance from the EU28 average is remarkable: Romania scores almost ten times lower. The main reason for the difference between the per area score and the per employee score has to do with the very high number of small, suzistence farms. As argued above, these units cannot afford to invest in fixed assets.

Figure 12. Gross fixed capital formation in agriculture in 2012



Source: own computation based on data from Eurostat and *Agriculture in the European Union, statistical and economic information report 2013*, EU, DG AGRI.

According to Otiman (2012, p.16) the structure of fixed capital stock in Romanian farms is very different (unfavorable) from the one in countries with a developed agriculture, such as France. While in France the "active" fixed capital (tractors, equipment, plantations, breeding livestock and infrastructure) accounts for 80% while the land for only 20%, in Romania the situation is almost the opposite. Although the agricultural land at market value is worth 5-6 times lower than in France, it has a share of 67% in the fixed capital stock while directly productive fixed assets represent only 33%. These large gaps in „active" capital endowment between the farms in Romania and the ones in the euro area leads not only to unequal levels of competitiveness but also to asymmetric productive structures.

One possible solution to overcome some of the problems of the Romanian agricultural sector is to build up associations of farmers. This measure would concentrate supply and increase the production capacity of farms by sharing fixed capital, it would lead to land consolidation and further integration of actors in agri-food chains, with direct effects on competitiveness and positioning on agri-food markets. According to the National Institute of Statistics the number of cooperatives in Romania increased from 127 in 2010 to 356 in 2012, an increase of about 180% in just 2 years (Barna, 2014, p.84) amid financial support from the National Rural Development Programme 2007-2013[2].

But for the agricultural sector to reduce the productivity gap with the modern European agriculture it is necessary both to implement agricultural policies aimed to restructure and consolidate small and uncompetitive farms (tax incentives, agricultural credit guarantee etc.) and to increase the absorption of structural funds for rural development. The funds have the ability to stimulate the investment process and the structural convergence of farms to European standards, since they offer support both in improving the stock of fixed capital and training activities for managers of farms.

4. Conclusions

Nowadays, Romanian agriculture is at an early stage of compatibility with the modern production methods specific to the more developed members of the European Union. Empirical analysis shows large gaps with the euro area farms in terms of productivity of inputs, mainly due to fragmentation of agricultural land, fixed capital

shortages and lack of human capital with adequate training. Moreover, agricultural loans are few and difficult to access, there are institutional bottlenecks and a large amount of bureaucracy related to the European structural funds for rural development, which further hinder the convergence process of the Romanian agricultural sector.

The slow process of restructuring the agricultural sector affects the country's competitiveness through low production levels, increased production volatility (depending on weather conditions), low productivity of resources, especially labor. The issues arising from the current structure of agriculture are also present at the microeconomic level. Low labor productivity has direct effects on the quality of life of rural population (about 45% of the total population), usually generating low income and subsistence economic activity. All this affects the entire process of convergence with the euro area. Therefore, the importance of transition to a new phase of development for the agricultural holdings is mandatory. Significant efforts are needed to restructure the agricultural sector, both in financial terms and institutionally, in order to benefit in the long term from the comparative advantages that the Romanian economy holds.

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Notes

(1) The Global Competitiveness Report 2014–2015: Full Data Edition is published by the World Economic Forum within the framework of The Global Competitiveness and Benchmarking Network.

(2) The association in groups of at least five producers of vegetables and fruits creates the opportunity of accessing the European Agricultural Guarantee Fund (EAGF) for funding of 75% of the costs to build a warehouse, as follows: 50% support and 25% national funds;

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Romania, Strategic Partner in China-CEE Relations[1]

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Abstract: *Romania and China have established diplomatic relations 65 years ago and have a long track of fruitful economic, technologic, scientific and cultural exchanges and cooperation experiences all along this time lapse. During the last few decades they both have undergone major transformations, having, on the one hand, their economic fundamentals substantially changed, and, on the other hand, facing a new international environment, in which their positioning, relations, alliances and integration into the world economy are substantially different. The present paper looks at this bilateral relationship against the backdrop of both the new 16+1 platform and the larger EU-China relations, trying to identify the comparative advantages, complementarities and commonalities which could create the premises for a new, reinforced China-Romania trade and investment relationship. The focus lays on analyzing the bilateral trade, both in terms of volumes and structure, as well as on dissecting the Chinese investment presence in Romania as compared to that in other CEE countries, leading to the conclusion that there is a lot of untapped potential, but also a favourable context to change this state of facts.*

Key-Words: *16+1 platform, China - CEE, China - Romania, China - Romania trade, Chinese investments in Romania*

JEL Classification: - *E22, F14, F21, O52, O53.*

1. Introduction: From a common past, to a common future

In October 2014, China and Romania celebrated 65 years of bilateral diplomatic relations, years of mutual understanding, cooperation and friendship. The recent decades – two and a half for Romania, about three and a half for China – have been some of tremendous and comprehensive changes for both our countries. These deep transformations of the economic fundamentals of China and Romania, their new priorities

[1] This paper was presented at the second China-CEE Forum, organized by the Institute of Russian, East European and Central Asian Studies (IREECAS), Chinese Academy of Social Sciences (CASS), 16-17 October 2014 and it applies to facts and figures previous to this date.

and alliances have not altered the solid base for win-win bilateral relations, but on the contrary, have reinforced them, through new initiatives within the new framework. The nature of the Sino-Romanian relationship before 1989 was the unique product of its own historical time, impossible to reproduce against the new internal and international background. This relationship is now governed by the EU-China strategic partnership and develops in keeping with the interests of both China and the EU member states, within this new framework.

To date, the bulk of the trade, capital movement and technology flows between China and the EU has been concentrated in the bilateral relationship with several old EU member countries (EU15) – mainly with Germany, France, the UK, and a few others. Still, recently, another group of European countries has distinguished itself in its relation with China. It is the CEE162 group of ex-communist countries, which share several common features and significant competitive advantages as compared to the EU15: a hybrid status, between that of an emerging and a developed economy, which admits a host of development opportunities; higher growth rates and lower labour costs; a considerable endowment with natural resources, educated human capital and technological know-how; sizeable demand for investments in infrastructure, energy, agriculture and certain branches of manufacturing, all of them of interest to China; direct connections with Western Europe and a remarkable potential to become a bridgehead between Europe and other continents, as well as becoming an important link in China's New Silk Road initiative (Pencea, Oehler-Şincai, 2014, Xinhuanet, 2014).

The high level meetings of Budapest (2011), Warsaw (2012) and Bucharest (2013) have opened new perspectives of cooperation between China and the 16 countries of the Central and Eastern Europe (the so-called "16+1" framework). As emphasized in the Bucharest Guidelines for Cooperation between China and the CEE16 countries, cooperation in various fields – investment, trade, finance, connectivity, science, technology, innovation, environmental protection, energy, people-to-people and cultural exchanges – as well as cooperation at sub-national levels make the priorities of the 17 partners.

The 16+1 platform is an important initiative, with a high potential of generating progress in terms of a better and more intense cooperation between China and CEE, while simultaneously acting as a development engine for the region. What is very important, in our opinion, is that it is not transformed into a framework for a "race to the bottom", where the CEE countries compete with one another for Chinese financing. We think this could ruin its whole concept while, in our view, ***it is in the interest of both CEE and China that this platform turns into a framework which propels development in the entire region and furthers the relation between China and Europe.***

Romania used to be a favoured partner of China's and, in our opinion, under the 16+1 framework it could become again an important market and a leading destination for Chinese investments, for good reasons:

- Romania is a country with a long record of good political, economic, commercial and cultural relations with China.
- In terms of its total surface, Romania is the ***2nd largest country*** in CEE16 (after Poland) and the 9th largest country in the EU.

[2] Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia.

- Romania is the 2nd most populous country among CEE16, after Poland and the 7th among EU28, it has skilled, educated and foreign-languages-speaking labour, while the wages are considerably lower than in the rest of Europe. This means that ***Romania is both a large market and a proper location for investments in export-oriented manufacturing.***
- Romania is ***very well-placed geographically***, at the intersection of the European axes connecting North to South and East to West, ***it has the largest port at the Black Sea*** (Constanța) and ***the Danube-Black Sea Channel*** which helps connect by water the Black Sea and the North Sea regions[3], offering both ***good local investment opportunities in Romania and good chances to build a bridgehead to the rest of Europe and even to other continents***. Both sides of the ***Danube-Black Sea Channel make exceptional locations for developing a large industrial park for Chinese-Romanian joint activities*** and for other cooperation projects.
- ***The Black Sea Strategy, the EU Strategy for the Danube Region and The New Silk Road strategy of China have a lot in common*** in terms of their objectives (increased interconnectedness, economic development, job creation and increased prosperity, better environment protection, etc.) and the specific ways of action (increasing regional mobility by infrastructure development, encouraging sustainable energy development, industrial and R&D cluster development, nurturing the knowledge-based society, boosting competitiveness, furthering international cooperation, etc.), therefore they may be harmonized and extended to one another, with win-win results for all the parties involved.
- Romania is relatively ***rich in various natural resources***, it has proper ***conditions to become a regional energy hub***, it has large surfaces of ***exceptionally good agriculture land*** and a high potential to produce good quality food for a population four times larger than its own.
- ***Romania and China make a good match in terms of infrastructure development***: Romania has a large demand for new highways, bridges, railways, channels, airports, electricity grid development, etc., while China has the proper technology, know-how, expertise and the financing means for such investments.
- Similarly, ***Romania and China make a good match in terms of energy facilities development***, in both conventional and renewable energy.
- Romania also has ***a significant tourism potential – which could attract both Chinese investors and tourists flows*** – and an important potential to ***cooperate and develop joint projects in other services*** (R&D&I, IT, transport and logistics, healthcare, education, etc.).

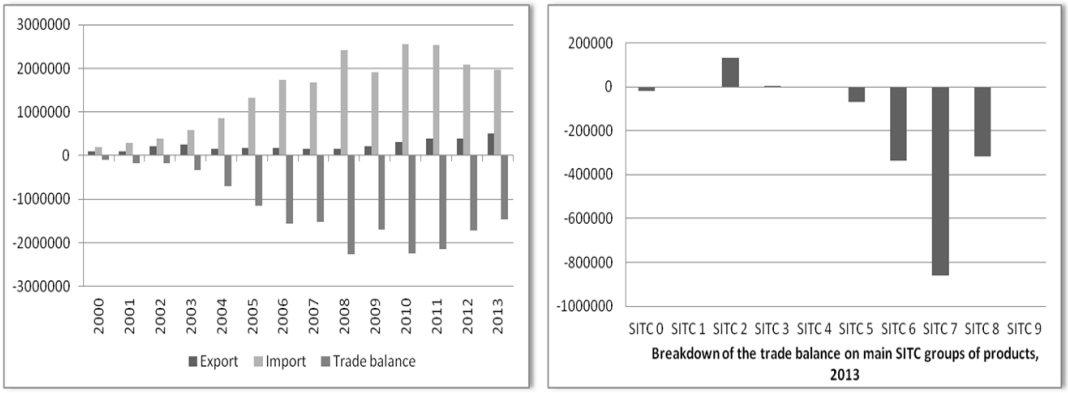
Therefore, considering all the above, under their new international, regional and domestic contexts, China and Romania have a good opportunity to further the accomplishments of their common past, building a better, deeper and more rewarding, win-win future cooperation relationship, within the EU-China strategic partnership and bringing a significant contribution to it.

[3] The Danube-Black Sea Channel at the Eastern extremity of Danube (in Romania), and the Rhine-Maine-Danube Channel at its Northern extremity (in Germany) help connect the Black Sea with the North Sea, crossing all the European continent.

2. Trade relationship between Romania and China

Trade flows in goods between Romania and China increased sharply in the last decade, reaching a record high in 2011 in spite of the economic crisis. Nevertheless, it decreased considerably during the subsequent period, mainly due to the diminishing value of imports (**Chart 1**). This trend of 2012-2013 is consistent with that recorded at the EU28 level (DG Trade, 2014). However, Romania's trade with China represents only 0.6% of the EU-China trade.

Chart 1: Romania-China trade 2000-2013 (€ thousand)



Source: Chart elaborated by the authors, based on data from the Romanian Ministry of Economy, Department of Foreign Trade and International Relations (2014).

As indicated in **Box 1**, in 2013 China was the 22nd export partner and the 9th import partner of Romania, while Romania's trade deficit with China was its third highest, considering both the intra and extra-EU trade flows.

Box 1: Synopsis of the trade flows between China and Romania, as part of Romania's total trade, 2013

Romania's foreign trade

Total €104.8 billion (+5.1% YoY); **X** €49.6 billion (+10% YoY); **M** €55.2 billion (+1% YoY);

Extra-EU (only 30% of total trade)

Total €28.5 billion (+2.4% YoY); **X** €15.1 billion (+12.8% YoY); **M** €13.4 billion (-7.2% YoY);

Romania-China

Total €2.5 billion (lower than the record high of about €3 billion in 2011);

X €0.5 billion (+29% YoY); China is Romania's 22nd export partner (1% of the total exports)

M €2 billion (-6% YoY); China is Romania's 9th import partner (3.6% of the total imports);

Trade deficit: €1.5 billion, 3rd major trade deficit of Romania's, after the ones with Hungary (€2.1 billion) and Kazakhstan (€1.7 billion).

Note: X=export, M=import, YoY=year on year.

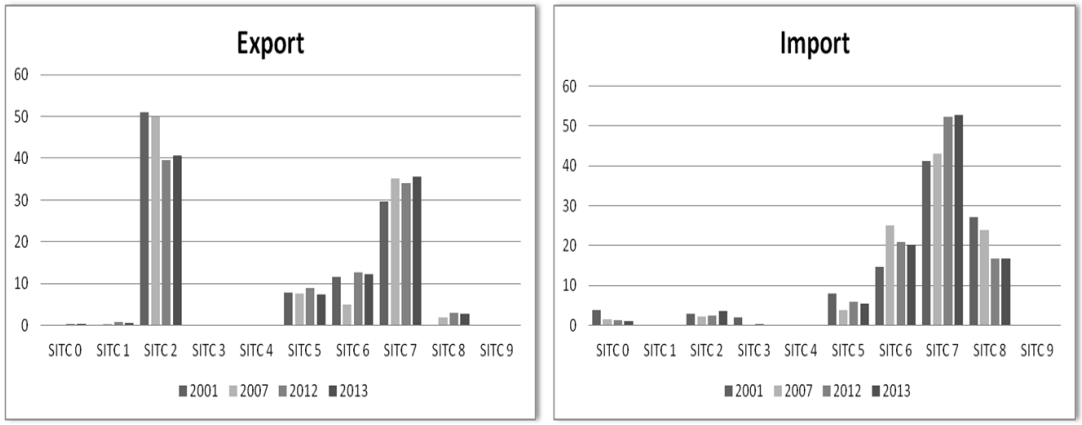
Source: Box elaborated by the authors, based on Ministry of Economy data, Department of Foreign Trade and International Relations (2014).

It is worth mentioning that the highest share of the bilateral trade flows falls into several sections of the standard international trade classification (SITC), namely SITC 2 (crude materials, inedible, except fuels) and SITC 7 (machinery and transport equipment) *in exports*, and SITC 7, SITC 6 (manufactured goods classified chiefly by material) and SITC 8 (miscellaneous manufactured products) *in imports* (**Chart 2**).

One can notice the increasing trend of trade in SITC 2 and SITC 7, both in exports and imports. This data should be compared with the EU-China trade structure, where SITC 7 dominates both export and import flows (58% and 50%, respectively), while in

Romania's trade with China, this section has a share of 36% in exports and 53% in imports.

Chart 2: Romania-China trade breakdown by main SITC sections, 2001, 2007, 2012 and 2013 (€ thousand)



Source: Chart elaborated by the authors, based on data from the Romanian Ministry of Economy, Department of Foreign Trade and International Relations (2014).

As indicated by other research papers (Pencea, Oehler-Şincai, 2013, p. 105), Romania has lost its competitive edge in many export fields, particularly those incorporating medium-complexity technologies, which explains in part the asymmetric bilateral trade structure. Moreover, goods are often channelled through intermediary countries, so that trade statistics do not reflect the real value of flows between Romania and China.

In spite of the increase of the trade in goods flows between Romania and China in the recent years as compared to the 2000-2005 time span, their values remain low as juxtaposed to other EU countries, due to the still underdeveloped connections between Romanian and Chinese companies. Besides, Romania's foreign trade is mostly managed by the multinational companies present in our country which have their own strategies and interests, not always complying with the Romanian government's endeavours of deepening and enlarging the bilateral relationship with China. Still, one way of developing bilateral trade in goods and services could be definitely that of encouraging more substantial and diverse Chinese investments in Romania, in the fields of interest of both our countries.

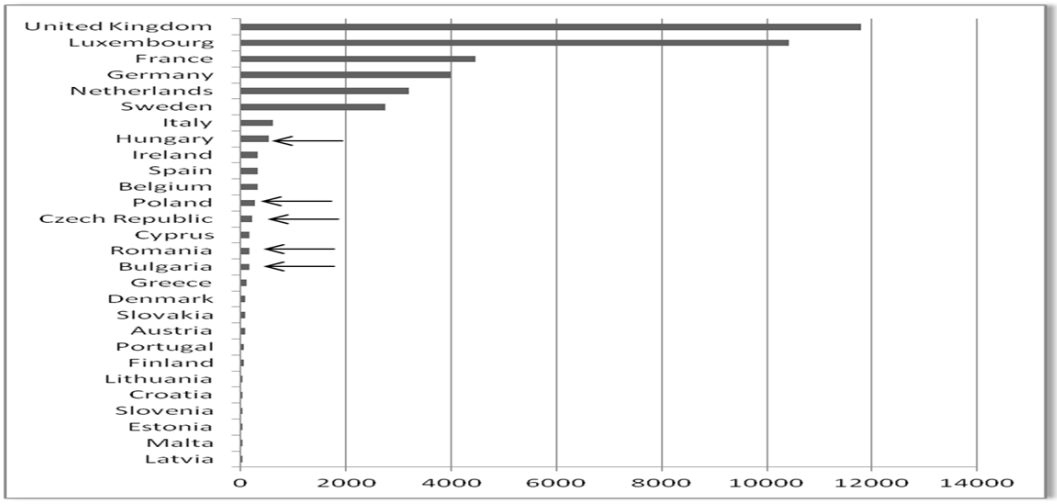
3. Chinese investments in Romania

- **A comparative perspective**

In the EU, the Chinese investments followed a "by country" pattern which resulted from the junction of Chinese interests, on the one hand, and the locally found opportunities and incentives, on the other hand. The charts below are relevant for better visualizing and understanding both the positioning of Chinese outward direct investment (ODI) to CEE within Europe, and the evolutions and change in rankings produced in recent years. **Chart 3** reveals that among the leading destinations of the Chinese ODI in Europe, besides the main beneficiaries, which were developed economies, a group of five Central and Eastern European countries (CEE5) stood out: Hungary, Poland, the Czech Republic, Romania and Bulgaria. All of them are countries where the Chinese ODI stock was larger than $100

million in 2013 (MOFCOM/NBS/SAFE, 2014), much over the levels in the rest of the CEE16. Therefore, our analysis will focus on this group of countries.

Chart 3: The hierarchy of the EU countries, 2013 by value of the Chinese ODI stocks ($ million)



Note: Data on Chinese investment stock in Romania are based on the authors' calculations.

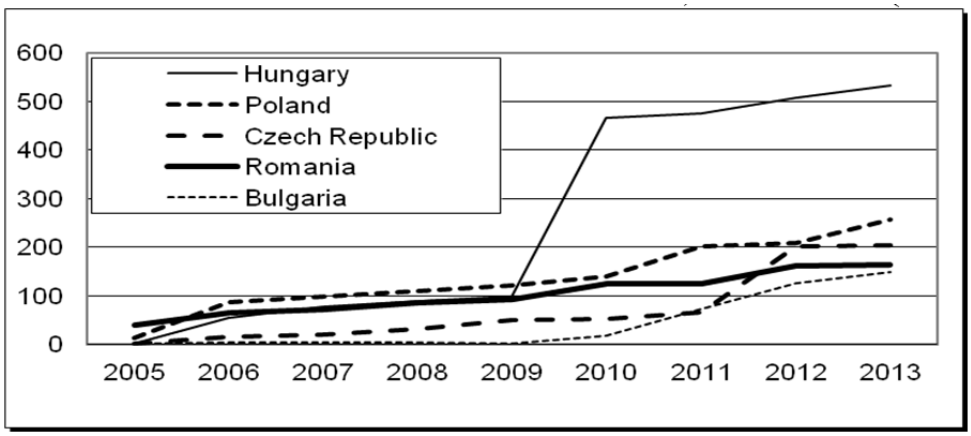
Source: Chart elaborated by authors, based on MOFCOM/NBS/SAFE (2014).

One remark is that this hierarchy reveals, at least for now, that only a reduced number of the CEE16 countries could attract significant Chinese investments. Secondly, the ones that could do that, the CEE5 group, are positioned in the middle of the ranking, with values much lower than those of the first ranked. Both these remarks seem to reveal that Chinese companies are still reticent in making significant investments in the area. Also, they are reflecting the post-crisis reality that Chinese companies have capitalized on the opportunities created by the global and local crises in Europe, striking profitable, previously unimaginable deals, in Western and Northern Europe.

Still, developments are encouraging in the CEE too, in the recent few years some larger investment agreements having been signed in chemicals (with Hungary), automotive (Bulgaria), machinery (Poland), IT&C (Hungary, Romania), infrastructure and logistics (Poland, Hungary, Serbia), electronics (Poland, the Czech Republic), energy (Poland, Romania, the Czech Republic, Serbia). Moreover, branches of the Bank of China and the Industrial and Commercial Bank of China, offices of some of the largest Chinese law companies, such as Yingke Law and Dacheng Law, are now present in Poland and Hungary (Szunomar, Biedermann, 2014, p. 26).

The way in which each of the CEE5 have managed to develop, extend and tighten their economic relations with China during the last decade, their having or not having a specific strategy in relation with this partner, the coherence of their succeeding governments in their bilateral relations with China and their obstinacy and insistence on negotiating and concluding agreements with this country have determined different evolutions in the volumes of Chinese ODI attracted and changes in rankings among the CEE5 group of countries in terms of their total Chinese ODI stock (**Chart 4**).

Chart 4: Chinese outward FDI stock in CEE5, 2005-2013 ($ million)



Note: Data regarding Chinese investment stock in Romania are based on the authors' calculations.

Source: Chart elaborated by authors, based on MOFCOM/NBS/SAFE (2014) data.

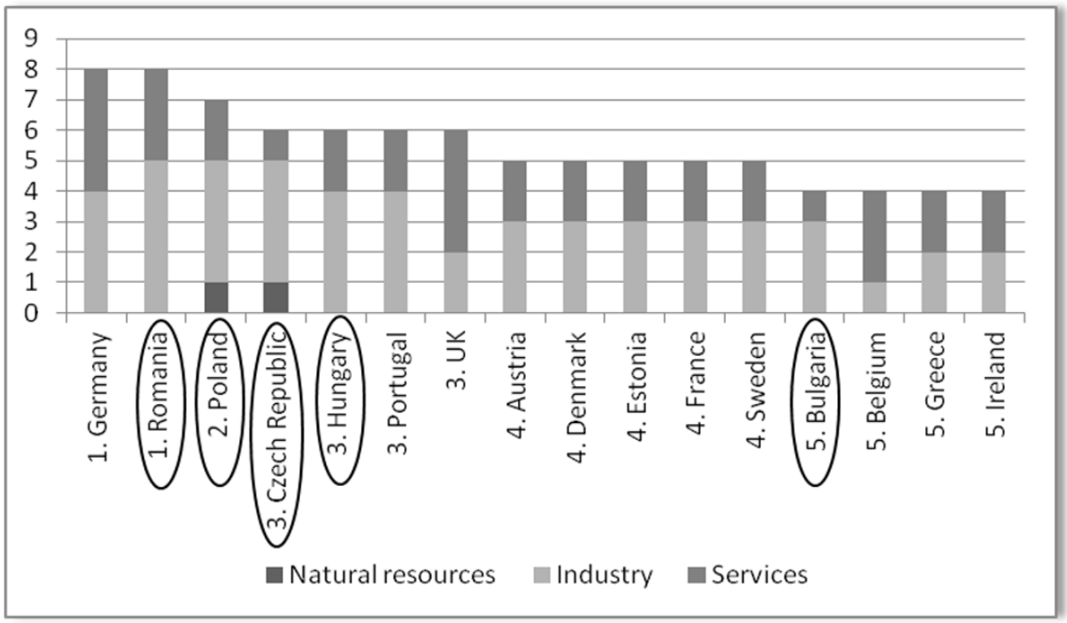
While Romania, which led the group in 2005 has registered a slow upward evolution and a successive descent in rankings to the fourth position at present, Hungary has managed a remarkable "leap forward" after 2009, taking first position in the hierarchy, followed by Poland, with a significant "jump" after 2010 and the Czech Republic also managing a leaping, subsequent to 2011.

- **The recent past**

Romania was a favourite destination for the early Chinese investments in Europe. Besides their history of friendship with China, Romania and the other CEE economies, with their geographic placement, lower costs, cheaper but skilled and educated labour, make ideal locations for investments in export-oriented manufacturing, and that is why in the early 2000s the Chinese official plan for this region was to turn it into a manufacturing base for "made in Europe" Chinese goods. Among the targeted CEE countries, Romania was the first choice, followed by Poland, the Czech Republic and Hungary (**Chart 5**).

Five industrial fields in Romania (textiles, leather goods and luggage, TV sets, computers, telecommunications and electronic equipment), plus three services sectors were recommended for Chinese investments, revealing an option for *a trade-substituting investment strategy* aiming at avoiding import barriers and preserving/extending the existing market shares of Chinese exporters to Europe.

Chart 5: OFIC* top 15 most attractive European destinations for Chinese investments in the early 2000s, by number of attractive sectors



Source: Chart elaborated by the authors, based on MOFCOM, Ministry of Foreign Affairs - **Outbound Foreign Investment Catalogue* (OFIC).

Not only the official guidelines, mainly substantiated into the "*Outbound Foreign Investment Catalogue*" (OFIC) of 2004, but also the factual Chinese investments in Europe showed a bias for Romania, at the time. While the OFIC document, which indicated the countries and sectors where Chinese companies were advised to invest, placed Romania in first position, next to Germany, the factual investments in 2005 showed too that Romania ranked first, cumulating two thirds of the overall Chinese investment stock in Central and Eastern Europe. These investments were mostly made by family small and medium size companies (SMEs), involved in trade or in low-to-medium technology manufacturing. That is why, although great in number, these SMEs had little capital and couldn't cumulate high investment values in the Romanian economy. Still, ***they indicated the existence of a comparative advantage for our country*** which could have been better capitalized on. But Romania was completely absorbed by its efforts to join the EU and didn't devise any purposeful strategy to build on this advantage. This came on top of a certain previous mismatch of policies and implementation lag between the two countries: the Chinese going-out policy, initiated in 1999, was devised at a time when the privatisation process was broadly finished in Romania, with much of the ownership already in private hands. Additionally, had there been any late opportunities, the first Chinese companies testing the going-out policy of the State Council were small and medium private ones, with low economic power and skills and, therefore, unable to manage significant take-overs.

However, both the initial dissonance of policies and the later lack of strategy on Romania's part have contributed to Romania's following decrease in ranking, in terms of the totally attracted Chinese investment stock: from ranking first in 2005, it fell to the second place in 2006, third place between 2007-2011 and, finally, to the fourth position after 2012 (**Table 1**). Correspondingly, Romania's share in the total Chinese investment

stock of the CEE5 group decreased, at first abruptly, from over two thirds of the total in 2005, to less than one third in 2006, and then gradually to only 12.7% in 2013. The downward trend was accelerated by the interruption of the TAROM Bucharest–Beijing direct flights (2004) and the maintenance of quite restrictive and lengthy visa procedures by the Romanian party, while providing little or no assistance to the Chinese investors in their difficult attempt of adjusting to an unknown and challenging Romanian business environment. Hence, Chinese investment flows to Romania grew at a slower rate, while their pace in other CEE countries picked up speed, especially in Hungary and Poland, which had already been accepted in the EU and could be more committed and more successful in developing a stronger relationship with China, attracting, consequently, increased Chinese outward direct investments. Furthermore, these two countries – and later on both the Czech Republic and Bulgaria – managed to capitalize on the second wave of Chinese ODI, performed by powerful state owned, or state-backed companies and implying considerable higher amounts invested per project.

Table 1: Chinese Investment Stock in Major CEE, 2005-2013

($ million)

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013
Hungary	2.8	53.7	78.2	88.8	97.4	465.7	475.4	507.4	533.1
Poland	12.4	87.2	98.9	109.9	120.3	140.3	201.3	208.1	226.4
Czech Republic	1.4	14. 7	19.6	32.4	49.3	52.3	66.8	202.5	220.3
Bulgaria	3.0	4.7	4.7	4.7	2.3	18.6	72. 6	126.7	147.4
Romania	39.4	65.6	72.9	85.7	93.3	124.9	125.8	161.1	163.8
Romania's rank	**1**	**2**	**3**	**3**	**3**	**3**	**3**	**4**	**4**
Total CEE5	**59.0**	**225.9**	**274.3**	**321.5**	**362.6**	**801.8**	**941.9**	**1205.8**	**1291.0**
Romania vs. CEE5 (%)	**66.8**	**29.0**	**26.6**	**26.7**	**25.7**	**15.6**	**13.4**	**13.4**	**12.7**

Note: Data regarding Chinese investment stock in Romania, Romania's rank and share at the level of CEE5 is based on the authors' calculations.

Source: The authors' calculations based on MOFCOM/NBS/SAFE data (2014).

Additionally, after the onset of the global economic crisis the whole international economic environment changed dramatically and, as a consequence, a growing discrepancy between the initial Chinese government investment guidelines (OFIC) and the actual investment decisions of the companies became increasingly apparent at the EU level, with the bulk of investments going prevailingly to the EU15 *"developed Europe"* (around 90% of the total inflow) and not to the CEE economies from the EU "*periphery"*. Similarly, against this backdrop, the factual investment pattern among the CEE5 didn't observe the initial official planning, to Romania's disadvantage.

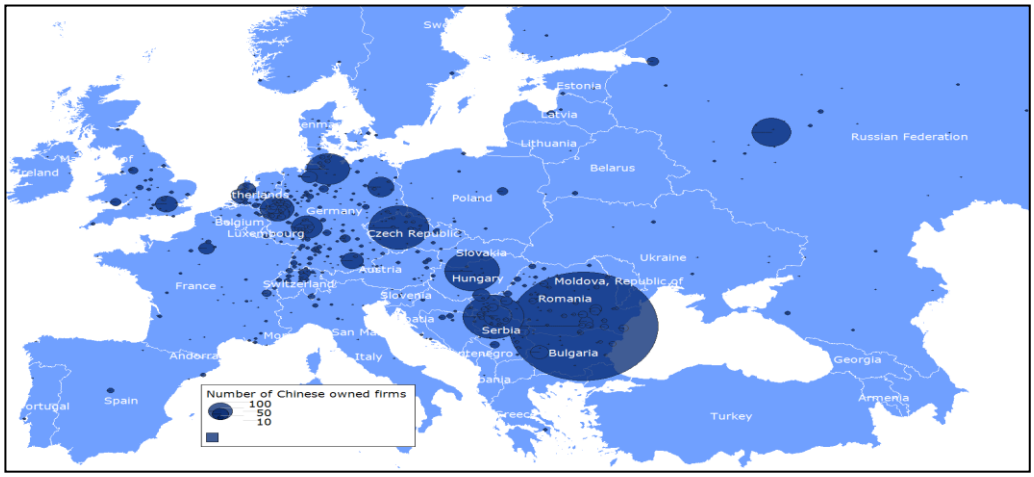
- **The present Chinese investment landscape in Romania**

China is Romania's main Asian investing partner. It ranks the 5th among the foreign investors in our country by the number of companies set up, but only the 18th by the amount invested (Ministry of Justice/National Trade Register Office, 2014), which is extremely far from the potential. Currently, there are over 11,000 Chinese companies registered in Romania, accounting for about 5% of the total number of businesses with

foreign participation, but, presumably, just about one third of them are still actually active (Wall Street, 2011).

Romania registers the highest number of Chinese companies in Europe, ranking first before Germany (2nd), Serbia (3rd), the Czech Republic (4th) and Hungary (5th), the five countries which host together about 80% of all the Chinese firms in Europe (The Antwerp Forum, 2013). Also, Chinese businesses are present in only a small number of European cities, most of them choosing Bucharest (1st), Belgrade (2nd), Prague (3rd), Budapest, Hamburg, Moscow, Düsseldorf and Frankfurt to set up companies. ***Such a high degree of geographic concentration highlights a strong propensity to clustering, so that these companies are more capable of adapting to the foreign environment, while also reaping economies of agglomeration.***

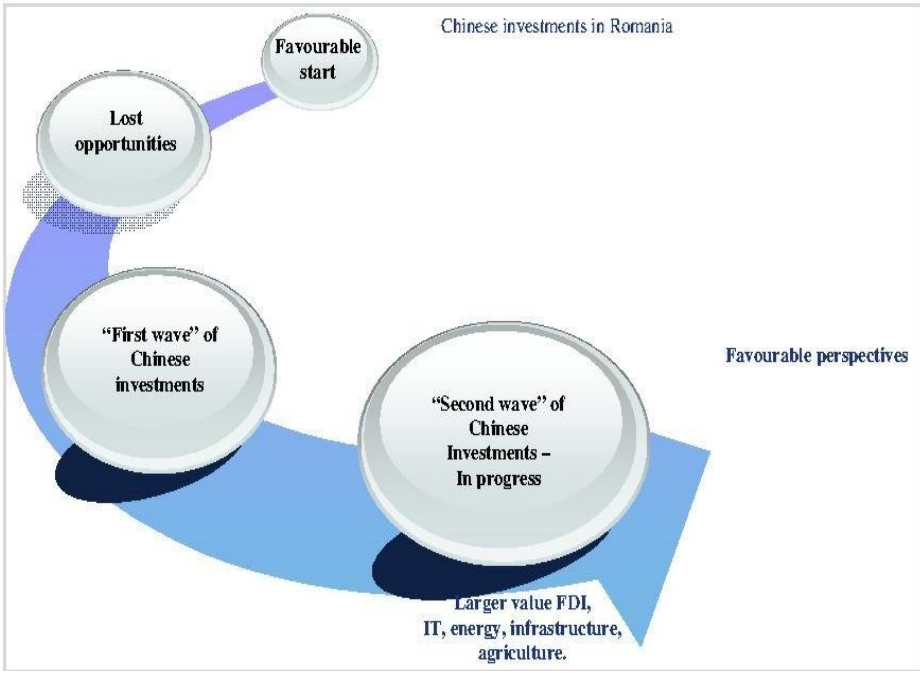
Map 1: Geographical distribution of Chinese firms in Europe, 2013 (numbers)



Source: The Heritage Foundation, 2013.

Most of the Chinese businesses in Romania are still individual, or family-owned companies from the first Chinese "going out" wave (Chart 6), fully matching the European pattern, where more than 4 out of 5 Chinese companies (82%) fall into these two categories (The Antwerp Forum, 2013). Currently, the Chinese businessmen in Romania are regionally organised in 16 federations, about 90% of them developing activities in Bucharest, the capital city (Xiaoming, 2010).

Chart 6: Successive waves of Chinese investments in Romania



Source: Chart elaborated by the authors.

Statistics are contradictory and confusing about the overall value of Chinese ODI stock in Romania, as there are certain informational shortages and large differences between the statistical methodologies and records in China, the EU and Romania. Considering, for instance, the 2012 total investment stock levels, we discover that while the Chinese statistical data (**Table 1**) recorded an investment stock in Romania of about €126 million (equivalent of $161 million),[4] the EU statistics gave less than half that amount (€69 million)[5], in striking contrast with the €420 million in the Romanian records – which were, therefore, more than triple the Chinese level and six times larger than the EU one. Moreover, according to the president of the Romania-China Trade and Industry Chamber, the €420 million was an undervaluation[6], declaration which we might be inclined to agree to, if we turn to other sources and find out that in their records the Chinese investment stock in Romania exceeds the €1 billion threshold (Heritage Foundation, 2014).Therefore, the total Chinese investments in Romania are at best somewhere between €0.5-1.0 billion, accounting for only around 2% of the total.

Anyway, whichever the level considered, the value of the Chinese ODI to Romania is obviously much under the potential. Still, although they didn't progress as they could and a lot of potential has remained untapped, there are some significant achievements of *the first wave of SME investors* worth reminding (**Chart 6**): the €200 million "Red Dragon" trade hub and its neighbouring €100 million China Town, near Bucharest; the

[4] 1 $= 0.78 Euro, at 2012 average rate, CIA World Factbook, retrieved on 30.03.2014.
[5] Eurostat, data retrived on 30.03.2014.
[6] In November 2013, the president of Romania-China Trade and Industry Chamber, Mr. G. Gelmegeanu declared*: "According to the National Bank of Romania Chinese FDI have reached €420 million. But their value is probably double. Actually, investments are much higher because not all the companies chose to increase their social capital."* (www.casarochi.ro, 5.11.2013).

€100 million Pârşcov industrial park including five factories with production, distribution and foreign trade operations in garments, wood processing, cigarettes, electronics, electric appliances, ecologic electric bulbs, fresh fruit and vegetables; other successful investments in bicycle production, recycling, construction materials, industrial printing (Pencea, 2014).

There is also a more recent, *second wave of larger and more powerful Chinese investors in Romania, dealing in high tech industries*: (i) outstanding *companies in information technology* (ZTE, Huawei) – which came in the early 2000s, but only very recently have shown their readiness to make sizeable investments (ZTE – about €100 million by the 2015 yearend, Huawei – over €300 million by 2018); (ii) *businesses in renewable energy* (RE), building and operating photovoltaic parks and wind farms. Unfortunately, the Chinese investors reacted quite late to the Romanian "green certificate" incentive programme, missing its most rewarding phase. As a result of the programme, in the recent few years Romania has experienced a tremendous RE industry growth, so that, considering its objectives met and the incentive scheme already too generous, in 2013-2014 the Romanian government curtailed the incentives granted. Consequently, late Chinese investors were discouraged, some of them choosing to partially curtail their investment plans.

- **Prospects of a "third wave" of Chinese investments**

The analysis above shows that, *as opposed to other European investment destinations, CEE5 included, Romania has not succeeded yet in attracting sizeable Chinese businesses in large investment projects.* If in Europe, considered as a whole, the proportion of Chinese corporate presence has slightly increased in recent years, mainly due to their growing investments in the Western and Northern European developed economies, in the CEE countries the trend seems quite languid and in Romania almost absent. For now, in spite of the considerable local potential and the proven Chinese interest in the available opportunities, the numerous, but somehow sporadic and inconsistent attempts to negotiate and agree on larger projects didn't lead to any substantive results in Romania.

Some of the older and most discussed projects bilaterally were either *infrastructure projects* (the Bucharest second beltway, plus other highway sectors countrywide; the Danube-Bucharest Canal; the Siret – Bărăgan Canal; the Brăila – Galaţi bridge over the Danube), or *projects in conventional energy generation, mainly to overhaul, continue unfinished units, or extend existing facilities* such as thermo-power plants (Rovinari, Mintia, Halanga, Doiceşti), hydro-power stations (Tarniţa-Lăpuşeşti, Bicaz), or the Cernavodă nuclear plant (additional reactors 3 and 4). Among these older projects, the most advanced one is Rovinari, with China Huadian Engineering Co. (CHEC) going to invest around €1 billion in a new 600 MW thermo-power station facility. Other large projects in energy which are currently being negotiated with fairly good chances of success are the 1000 MW / €1 billion hydro-power station of Tarniţa-Lăpuşeşti, with Sinohydro, and reactors 3 and 4 of the Cernavodă nuclear power plant, with China General Nuclear Power Group (Pencea, Oehler-Sincai, 2014). These two sizeable projects, which had been discussed sporadically with China for many years with no concrete results, took off after the China-CEE16 Forum in Bucharest and its numerous subsequent bilateral meetings, having increased chances of advancing to concluding an investment agreement.

In *infrastructure development*, opportunities are tremendous as Romania needs more and better highways, canals, irrigation systems, bridges, power grids and even airports and port extensions, while China has the expertise, financing availability and interest in such projects. Besides the older infrastructure projects, the newly discussed project of a *high-*

speed railway connection between Constanţa, Bucharest, Budapest and Vienna, is a very attractive one as it could play a significant role in both the intra-CEE, intra-EU cooperation, and their bilateral trade and economic cooperation with China. This new high-speed rail connecting Constanţa and Bucharest, which could cost around €11 billion, could be completed by the development of *an industrial park* in the Agigea port area and along the Danube-Black Sea Canal, with about 2000 Romanian-Chinese joint-venture companies being hosted. The Constanţa-Bucharest-Arad high-speed line crossing the country from East to West, and the industrial park near the Black Sea and along the Danube might be key pieces in the larger strategic plan of setting up a modern new Silk Road connecting Asia and Europe.

4. Conclusions

Romania and China have established diplomatic relations 65 years ago and have a long track of fruitful economic, technologic, scientific and cultural exchanges and cooperation experiences all along this time lapse. During the last few decades they both have undergone major transformations, having, on the one hand, their economic fundamentals substantially changed, and, on the other hand, facing a new international environment, in which their positioning, relations, alliances and integration into the world economy are substantially different.

China has been one of the great beneficiaries of globalization, succeeding for decades in attracting and capitalizing on sizeable foreign capital inflows and in fostering its outstanding growth and development performance. Given its changed economic fundamentals after decades of accelerated transformation, China is now committed to adjusting to its new internal and external realities by implementing comprehensive reforms, including some touching international trade and capital movement. Against this background, in the recent years of lower external demand for Chinese goods and of slowing export growth, China has swiftly raised its outward investments, becoming an increasingly important capital provider in the external markets and managing to rank third in the international investors' world hierarchy. Obviously, in its endeavour, it follows its own interests of securing access to new markets, natural resources, new technologies, sources of knowledge and innovation, distribution networks or reputed foreign brands, but simultaneously it acts as a growth driver in the economies where it invests. Consequently, the other countries, the CEE group included, strive for Chinese capital, the more so in the aftermath of the global economic crisis.

Romania has also changed substantially, becoming a market economy, with a completely different economic structure, deeply integrated into the European Union and striving to develop, modernize and catch up with the technologically and economically advanced EU members in the Western part of the continent. In its endeavour, both cooperation and exchanges inside and outside the EU are of utmost importance. Its comparative advantages, geographic placement, commonalities and complementarities with China create a host of opportunities to develop trade in goods and services, investment and cooperation, which have still remained largely untapped.

According to the European Commission's data, China and the EU are daily trading goods in value of over €1 billion. Comparatively, Romania and China are trading goods of the same amount in six months, as Romania's trade with China is still undeveloped and represents only 0.6% of the EU-China trade. Not only the direct trade volume is low, with

asymmetric import and export flows which generate a large trade deficit for Romania, but also the trade structure is unbalanced in terms of the SITC sections involved in the bilateral exchanges. However, attracting more Chinese investments could not only help create jobs, diversify industrial output and raise competitiveness in Romania, but it could also pave the way for larger and more balanced commercial exchanges between the two countries.

Although it started as a privileged destination in the early 2000s, for lack of a purposeful strategy towards China and against the international economic landscape generated by the outbreak of the global economic crisis, Romania failed to capitalize on its advantage and lost ground in "the race" for Chinese capital. This state of facts could change provided Romania manages wisely the opportunities opened by the "16+1" platform, capitalizing on China's interest to expand globally in strategic sectors – such as infrastructure, telecommunications, agriculture, or energy – taking advantage on China's need to consolidate its position as a global leader in the low-cost versions of high value-added technologies – such as high-speed railways, or renewable energy – and also deriving benefits from China's strategies aiming at building a modern Silk Road which connects Asia and Europe.

To date, the impact of Chinese ODI in Romania has been minor, but it might become significant following the 2013 China-CEE16 Forum in Bucharest, when Romania has achieved a renewed opportunity to attract significantly larger Chinese investments and accelerate both its catching up efforts, and fulfilling its wish of developing a larger and deeper trade and investment partnership with China. To this end, it needs a comprehensive, consistent and stable investment promotion strategy of its own, focussed on attracting high quality investments able to help improve Romania's industrial structure, create jobs and raise competitiveness, as prerequisites of a stronger presence in international markets and in the Romanian-Chinese bilateral exchanges and cooperation.

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Insights into the Chinese Outbound Tourism – An Empirical Analysis. Opportunities for Romania

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Abstract: *Tourism is a key component of the world economy. Its total contribution to the global growth is considerable, accounting for 9.5% of the overall world GDP in 2013, when it attracted 4.4% of the total world investments it generated one of every 11 new jobs, and about 5.4% of the overall world exports. As it has happened in almost any other industry, a superpower like China has quickly turned into one of the most important players in the international tourism market, leaving an increasingly significant footprint in the field and having an important impact on its development. In this paper the authors intend, on the one hand, to look at China's swift growth in outbound tourism, and, on the other hand, at Romania's inbound tourism, trying to identify the ways by which Romania could seize the opportunity of becoming a significant destination for Chinese tourists in Europe and increase its export of tourism services to this country.*

Key-Words: *China's outbound tourism, international tourism market, Romanian tourism market, China-Romania economic relations, 4P marketing mix.*

1. Introduction

China's economic ascent of the last three and a half decades is the most spectacular accomplishment in the history of economic development, unique in magnitude, in its lengthy and unabating high pace of growth and outstanding by many of its outcomes. With its „catching up" effort, this country has managed to compress centuries of development needed by other countries to reach their present prosperity into just a few decades, turning it into their potent competitor and replacing them in global rankings. In such a short span, China became the second largest economy in the world, the largest manufacturer and the number one commercial power globally, the holder of the most sizeable foreign exchange reserve and the dominant force in many international markets. Equally remarkable is that its economic progress pulled out of poverty some hundred million people, led to an

important - although unbalanced - growth of their incomes, lengthened their life expectancy and improved their living standards.

China's favourable economic evolution has created proper circumstances for a „catching up" drive in tourism too: better incomes, longer lifespan, a growing middle class and increasing openness to the world, have all given this activity a major impulse in both domestic and international markets. China is now one of the most visited countries in the world and one of the most promising sources of tourists for the international market.

The last decade was one of accomplishments for China, also from this point of view: as compared to other countries, its imports of tourism services grew the most, so that already one in ten international tourist is now a Chinese. Also, since 2012, China has become the largest spender on foreign tourism services, globally. If such a significant growth was possible when only about 4% of the Chinese had a passport, one can further expect an even much more spectacular jump of China's future spending in international tourism (Jackson, 2014). Under such circumstances, for the countries providing tourism services all over the world - many of which have been strongly affected by the global economic crisis - Chinese tourists have become a first rank target. This makes international competition for Chinese tourists increasingly fierce.

As a provider of tourism services itself, Romania cannot ignore such an opportunity to balance its commercial exchanges with China, to create jobs, multiply positive effects in its economy, increase value added and welfare. Therefore, Romanian tourism providers will have to adjust both their local capabilities and their commercial and marketing strategies, to succeed in attracting in Romania the Chinese tourist flows interested in visiting Europe, and in meeting an increasingly important share of this growing tourism demand.

Using recent data and analysing the latest statistics provided by the international organizations - the World Travel & Tourism Council, the World Bank, the World Economic Forum, the World Tourism Organization - but also by some national ones - China National Tourism Administration, the National Institute of Statistics in Romania – our intention is to make a brief assessment of China's outbound tourism and to give an overall view on the Romanian tourism supply and demand, trying to identify the options Romania might have of becoming a significant tourism destination for Chinese consumers.

2. China - the most important emitter country in international tourism

According to a China country report by the World Travel and Tourism Council (WTTC, 2014), in 2013, 9.2% of China's GDP was generated by tourism and its connected activities. With an annual growth rate estimated at 8.3% for 2014 and, on the average, at 7.7% for the next decade, the total weight of tourism in GDP is expected to reach 10.1% by 2024. At the same time, the current weight of 8.4% jobs created by the tourism and travel industry in the total number of jobs in China is expected to reach 11,6% in the next ten years.

Since 2012, China has become the leading emitter country in international tourism, by total outbound spending. At the time, 83 million Chinese tourists have spent around 103 billion USD abroad, which was about 40% more than in the previous year. The amount spent abroad yearly by Chinese tourists rose again by 26% in 2013, to 129 billion USD (Jackson, 2014). Although Germany is still the world leader by number of outbound

tourists, Euromonitor cited by Evisionturism (2014) estimates that in 2017 China will rank first in this top too. Additionally, various statistics by either the World Tourism Organization or by China Outbound Tourism Research Institute (COTRI) confirm the expected sustained growth of outbound Chinese tourism, both in number and spending. According to COTRI, in 2013 the total number of outbound Chinese tourists reached 97.3 million. As in the first quarter of 2014 the number of Chinese tourists travelling abroad reached 26.4 million, the institute estimates that the 100 million threshold will be surpassed this year. Additional research (Chinatourism, 2014) forecasts that in 2020 the number of outbound Chinese tourists will reach 200 million, while their expenditures abroad will triple.

Another confirmation of international tourism becoming an increasingly important activity for China is provided by the growing weight of tourism expenditure in the total imports, during the 2005-2012 time span.

Graph no. 1. Tourism share in China's imports, %, 2012

Source: the authors, based on the World Bank statistics, http://data.worldbank.org/country/China

Statistics by China National Tourism Administration (CNTA) confirm, broadly, the same levels (Travel China Guide, 2014) and China's positioning as the largest emitter of tourism, globally. According to their data, 98.2 million Chinese[1] travelled abroad in 2013, 18% more than in the preceding year, while their expenditures reached 128.7 billion USD, following a 26.8% annual increase. The Administration also confirms the growing trend of both the tourist number, to an estimated 114 million, and their expenditures abroad, to roughly USD 140 billion, by the end of 2014.

Looking at the developments that have taken place during the last ten years as they are revealed by the statistics of the World Bank, one can notice that not only the number of tourists and their expenditures were on the rise, but also the average expenditure per tourist, an extremely valuable index for the assessment of Chinese outbound tourism potential.

[1] The accurate number is 98 190 000 tourists

Table no. 1. China – the *outbound tourism market*, 2003-2012

	Departures (tourists, million)	Expenditures (USD, billion)	Average expenditure/tourist (USD)
2003	20,2	16,7	827
2004	28,9	21,4	740
2005	31	24,7	797
2006	34,5	28,2	817
2007	41	33,3	812
2008	45,8	41	895
2009	47,7	47,1	987
2010	57,4	59,8	1042
2011	70,3	79	1124
2012	83,2	109,9	1321

Source: World Bank, http://data.worldbank.org/country/China, *the authors' calculations*

Noticing that these statistics don't cater for destinations or travel lengths, we underscore that the above values should be strictly regarded in terms of their trend and not for their proper values. From this respect, the undeniable finding is that since 2007 the Chinese tourists have kept increasing their travel budgets and we think there are grounds to assume this trend will go on further.

As statistics, especially the international ones, might not be so accurate in revealing and helping measure international tourism movement, we think that using the registered data of the travel agencies we might get a more precise image on the most popular destinations among the Chinese tourists travelling abroad. As such, we find out that in 2013 the number of Chinese tourists who used the services of travel agencies and tour operators raised to 33.6 million and their main 20 destinations were those included in the table below.

Table no. 2. Top 20 foreign destinations of Chinese tourists, as registered by travel agencies

No.	Destination	Tourists	No.	Destination	Tourists
1	Hong Kong	6752781	11	United States	560055
2	Thailand	4997216	12	Indonesia	539853
3	South Korea	3440969	13	Italy	514540
4	Macau	3132728	14	Australia	479557
5	Taiwan	2815741	15	Switzerland	464238
6	Singapore	1563044	16	Germany	409232
7	Malaysia	1476636	17	Russia	346500
8	Japan	889847	18	New Zealand	288097
9	Vietnam	682053	19	Philippines	277680
10	France	648376	20	United Kingdom	242275

Source: China National Tourism Administration, 2013

One can easily notice the high weight of the Asian destinations and the still unfavourable positioning of Europe in the hierarchy above. Only France and Italy managed to attract more than half a million Chinese tourists in 2013, followed, with lower numbers, by Switzerland, Germany, Russia and the UK.

But which are, besides statistics, the motivations and peculiarities of the Chinese tourist?

From the perspective of a consumer behaviour research, the Chinese tourist seems to favour group travels with long stays, which allow for visiting more places, even more countries, on the occasion of a single trip abroad (Dailybusiness, 2014). He seems to be attracted by the material issues of travelling, spending important amounts on keepsakes from the visited places. Additionally, he is concerned with the safety of his travel and with transportation options. In this respect, a research on Chinese tourist preferences (Marketing to China, 2012) reveals that the main factors influencing choices in terms of holiday destinations abroad are: the destination safety (87%), transport options (79.7%) and price (71.9%).

Another, more ample, study (Sparks & Wen Pan, 2009) looking at the Chinese tourists travelling to Australia, identifies, among other things, the tourists' main sources of information on the available tourism destinations and lists them by the importance they are granted, as it follows: 1.television, 2. reviews, travel books, news-papers, booklets and 3. web sites.

Another qualitative research paper (Wu, Adler & Day, 2011) sheds light from two different perspectives on the Chinese tourists' criteria for choosing accommodation services: on the one hand, the travel agencies perspective, which consider price as the main selection criterion of their customers, and, on the other hand, the tourist perspective, who gives priority to location and the qualitative aspects of the package offered. As such, the main fact revealed is that Chinese tourists not necessarily make rational choices (price or brand-determined), but they attach an increased importance to the services associated to the touristic product.

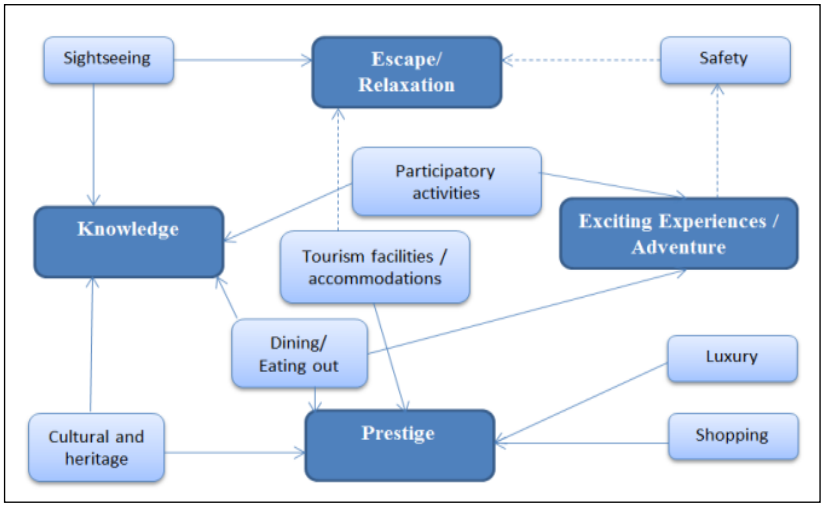
Table no.3. Two perspectives on Chinese tourists' selection criteria for hotels

The tourism agencies' perspective	The tourists' perspective
1. Price	1. Location
2. Star rating	2. Room quality
3. Brand	3. Availability of food services
4. Previous experiences	4. Information services
5. Location	5. Recreational facilities

Source: the authors, based on Wu, Adler & Day (2011) research

Finally, Petersen (2009) identifies in one of his works four motivational factors specific to the Chinese tourist - (1) knowledge, (2) escape/relaxation, (3) prestige and (4) exciting experiences/adventure – developing around them a scheme of the interconnected activities that compose the motivational background of the Chinese consumer of outbound tourism. We hereunder present our own interpretation of the connections that compose this motivational background.

Figure no.1. Motivational background of the Chinese tourist abroad



Source: the authors, based on Petersen (2009) research

3. Romania – a potential European destination for Chinese tourists

Romania is a country with rich history, diverse natural and anthropic resources and a high tourism potential. The Carpathians, the sea shore, the Danube and its delta, the bucolic and medieval villages, the monasteries, the spas, the overarching cordial hospitality of the Romanians, all combine into an unique holiday framework for tourists, especially foreigners.

For the purpose of this paper, we further make a brief assessment of the Romanian tourism industry, both in terms of tourism supply (number of accommodation units by comfort categories), and demand (arrivals by destinations and comfort categories, features of the incoming tourism).

Except for 2010, during the entire 2009-2013 time span, the number of accommodation units has been increasing in Romania, so that, in 2013, there were 914 more units with accommodation function than in 2009 (Appendix A). This has been the result of a significant growth in the number of accommodation units in spas (32% more), in the mountain area (42% more) and in Bucharest, the capital city, plus other towns. As opposed to this evolution, the seaside and the Danube Delta are on a downward slope from this point of view. In 2013, one in every four accommodation units in Romania was in the mountain area and over 22% of their overall numbers were registered in the main cities of the country.

For a qualitative assessment of the Romanian tourism supply, we hereunder present a short analysis of its structure, by comfort categories.

Table no.4. Accommodation units in Romania, classified by stars, %, 2013

	5 star	4 star	3 star	2 star	1 star
Balneary resorts	0,2	6,2	41,1	34,1	6,2
Seaside area, excluding Constanța	4,5	9,0	28,4	31,5	23,7
Resorts in the mountain area	0,8	7,5	25,7	16,4	4,1
The Danube Delta area, including Tulcea	23,0	12,6	45,9	4,4	0,0
Bucharest and county residence towns, excluding Tulcea	1,9	15,4	51,5	21,6	7,5
Other cities and tourist routes	0,2	2,4	26,7	17,8	3,7
Total	1,7	7,9	33,8	20,9	7,1

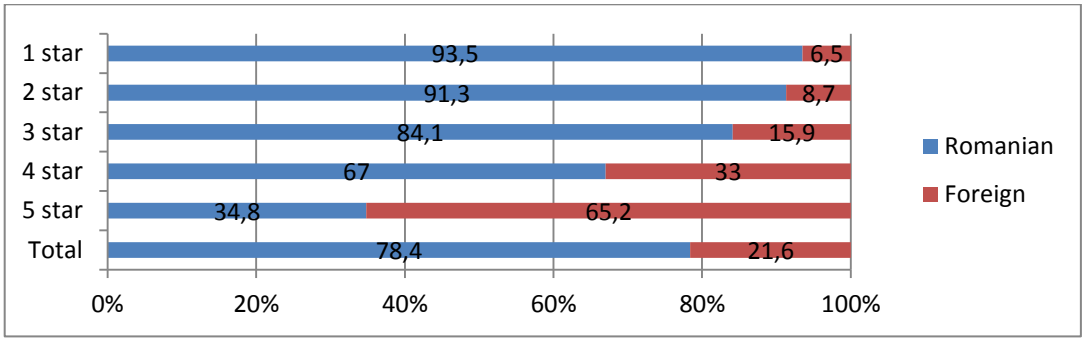
Source: the authors' calculations based on the National Institute of Statistics data, insse.ro

Note: The balance to 100% is made by completely unclassified, or unclassified by stars accommodation units

One can distinguish a superior weight of the 2 and 3 stars accommodation units in the overall capacities (21% and 33%, respectively) and a still insignificant weight of the 5 stars units. Also, an assessment by location highlights high quality units in the Danube Delta and a more balanced mix of accommodation units by comfort categories on the seaside.

In 2013, just 21.6% of the overall accommodation units were used by foreign tourists, especially those in the 4 and 5 stars categories, as it can be seen in the graph below.

Graph no. 2. Romanian and foreign tourist accommodation, by category of comfort, %, 2013



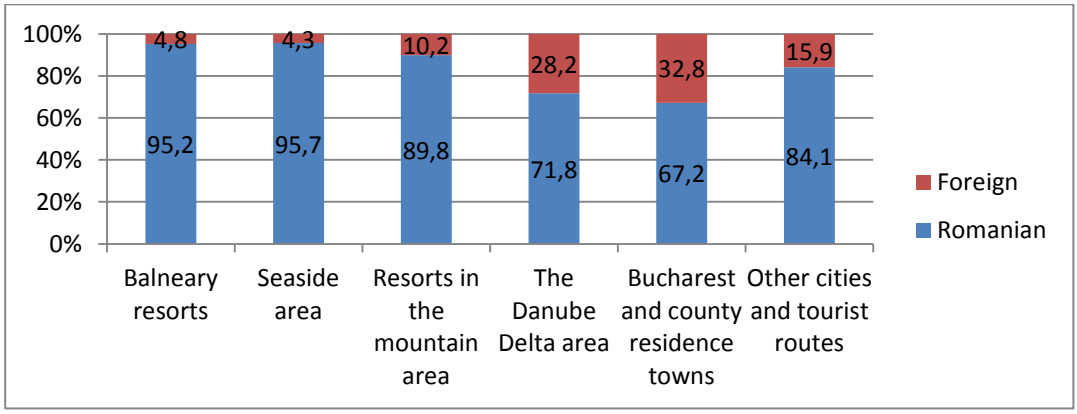
Source: the authors, based on the National Institute of Statistics data, insse.ro

It can be noticed that, although when looking at the overall number of accommodation units, one in four tourists was foreign, when looking at them by comfort categories, proportions differ substantially: foreign tourists surpassed by far the Romanians in the 5 stars category (almost 2 foreigners for every Romanian), while in the 4 stars category the proportion is reversed (two Romanian for every foreigner). The more we look down the comfort category ladder, the less foreign tourists we find and the more their weight in the category totals diminishes.

Regarding tourism demand by destination in Romania, one can note during the 2009-2013 time frame (**Appendix** B), important increases of incoming foreign tourists in the mountain area (57%), the Danube Delta (43%) and in spas (42%). The graph below highlights the most favoured foreign tourists' destinations in Romania, in 2013. We can see that if the

spa and seaside destinations do not seem to be favoured attractions, and that the weight of foreign tourists choosing mountain tourism reaches only about 10% of the overall incoming tourism, the two destinations which appeal to foreigners more, are, on the one hand Bucharest and other cities (almost 33%), and, on the other hand, the Danube Delta (about 28%).

Graph no. 3. Romania: local and foreign tourists, by destination, %, 2013



Source: by the authors, based on the National Institute of Statistics data, insse.ro

Another interesting issue regarding the inbound tourism in Romania is the geographic area where the foreign tourists come from. The data in the table below indicate that between 2009-2013 a slight incoming decrease was registered in the case of EU tourists, at the same time with an increase in the total incoming flows from Europe. This suggests a growing number of tourists coming to Romania from European, non-EU countries. Also, an important growth of the incoming flows from Africa (47%) and Asia (41%) is to be noticed, as it might be a signal that Romania could become a holiday destination for these tourists.

Table no. 5. Tourist arrivals in Romania by by continents of origin, thousands

Total	2009	2010	2011	2012	2013
Total	7575	7498	7611	7937	8019
Europe*	7203	7098	7180	7473	7526
European Union*	4799	4456	4391	4673	4719
Africa	17	21	22	24	25
North America	169	171	182	207	209
Asia	171	195	211	216	241
Australia, Oceania and other territories	14	13	15	16	17
Countries and not specified territories	1	:	1	1	1

Source: the authors, based on the National Institute of Statistics data, insse.ro

Note: including Romanian tourists*

We have to note the still low weight, of just 3% in 2013, of the Asian tourists visiting Romania, but also its relatively slow upward trend (from 2,2% in 2009). In the same context, looking at the transport means by which foreign tourists come to Romania, we also highlight the slow growth of air transportation (by only 5% yearly, inferior to the overall rise in tourist numbers) as it is the main transport means for faraway source

countries, such as China. Noteworthy, the air transport still covers only about 17% of the total incoming tourism to Romania.

Table no. 6. Tourist arrivals in Romania by means of transport, thousands

	2009	2010	2011	2012	2013
Total	7575	7498	7611	7937	8019
Road transport	5926	5906	5676	6027	6244
Railway transport	208	222	258	255	232
Air transport	1277	1216	1509	1469	1347
Shipping	164	154	168	186	196

Source: the authors, based on the National Institute of Statistics data, insse.ro

A clearer image of Romania's presence in the international tourism market may be given by the Travel and Tourism Competitiveness Index calculated by The World Economic Forum. For the purpose of this paper we will make a brief comparative analysis with the evaluations carried out for China's tourism competitiveness.

Hence, we notice that according to world rankings Romania lags behind China, but some criteria are in its favour and may become opportunities in attracting Chinese tourists to it. It stands out that the first competitiveness pillar (pillar A: regulatory framework) is in stark contrast with the third one (pillar C: human, cultural and natural resources). Within pillar A, Romania is superior to China in terms of environmental sustainability, safety and security, health and hygiene. On the other hand, a major issue standing out in its case is the insufficient attention paid to its tourism industry, i.e. the prioritization criterion. Also, within pillar C, Romania is superior in terms of the specific tourism infrastructure, the criterion by which Romania's global relative positioning is the best (rank 34).

4. Opportunities to attract Chinese tourists in Romania

The relationship between Romania as an incoming country and China as an emitter country can be statistically described by the number of Chinese tourists registered in the Romanian accommodation units.

Table no.7. Romanian tourism: Indices of demand from China, 2008-2013

Indicator	Arrivals		Overnights		Average
Year	Tourists	Change (%)	Number	Change (%)	stay
2008	7632	-	46761	-	6,13
2009	6946	-8,99	21246	-54,56	3,06
2010	5952	-14,31	18088	-14,86	3,04
2011	9071	52,40	21399	18,30	2,36
2012	11412	25,81	22061	3,09	1,93
2013	13331	16,82	28039	27,10	2,10

Source: the authors' calculations based on the National Institute of Statistics data, insse.ro

Between 2008-2010, the number of Chinese tourists in Romania has declined, but since 2011 the trend has been reversed, so that, in 2013, their total number was almost double the 2008 level. A similar trend has taken place in terms of number of accommodation nights, but in this case the sharp plunge of 2009 (of almost 55%) could not be corrected by the successive incoming increases following the 2011 reversal of trend.

This can be explained by the fact that the average stay has been cut by half in 2009 (from 6, to just 3 days) and the downward trend has continued until 2013, when it has finally reversed, leading to the average stay increasing slightly to 2.1 days.

How could Romania capitalize on China's huge outbound tourism potential?

A strategy for attracting Chinese tourists in Romania should be built based on a macroeconomic approach of the four main marketing mix components (4Ps): Product (the tourism destination Romania), Price (of the tourism services offered in our country), Place (trade and distribution of Romanian services) and Promotion (the touristic brand Romania).

Product. The product is Romania as a tourism destination. The first step would be that of identifying the main components of this product, intended to be promoted and sold to China.

Romania has a large variety of tourism forms to offer – cultural, spa and health, rural and eco-tourism, etc. - and also first rank, unique destinations such as the Danube Delta, Bucovina, or Maramureș regions. An important option could be to initially concentrate efforts on attracting tourists to destinations where Romania can compete by its uniqueness. In this case, mountain or seaside destinations could not be a priority, given the strong European competition. That is why Romania's initial positioning as a niche tourism market for Chinese visitors could be a valid solution for increasing incoming flows from China. The tourism packages offered could be integrated, as touring is a way of increasing both the average stay and receipts.

Generally speaking, considering the Chinese tourists' bias towards lengthy holidays in larger groups and for trips which cover more than one destination, the travel and tourism agencies in the European countries should cooperate, designing together packages which offer multiple countries tours, either following certain themes (such as "castles and citadels", "vineyards and wineries", "country life and traditions", etc.), or by simply combining unique destinations from different neighbouring countries, with a view to offering both variety and a multifaceted perception and understanding of Romania amid its surrounding countries. An opportunity which might be worth exploring is the one generated by Romania's recent past - as well as by that of the other central and eastern European countries' (CEE) - coupled with Chinese affinity with the theme of communism: the so-called "*red tourism*" could be an interesting business idea for tourism agencies (Frontpress, 2014) in CEE countries.

Price. Considering the profile of the Chinese tourist – as *„having money and thirst of knowledge"* (Grosu, 2010) – the price level is not so important as it is the quality of the services received in return. Mass tourism could be promoted at lower prices, while niche destinations – the Danube Delta, Bucovina, Maramures, rural and eco-tourism, etc. - could be charged more. Tourism services - food and recreation - but also the connected (medical, safety) or complementary services (rent-a-car) are essential. Besides, the competitiveness of the touristic product should be backed by measures such as reduced VAT for tour-operators bringing Chinese tourists in Romania and other fiscal incentives able to stimulate the business environment, promote and export Romanian tourism to China.

Place. Distributing touristic products requires special attention. Romania is short of distribution channels. Larger Romanian tour-operators predominantly choose the easier path of importing tourism/sending Romanian tourists abroad, but neglect trying to attract foreign tourists to Romania, which is a more challenging undertaking. They consequently generate a negative balance of payments from tourism.

To attract incoming tourism from China, Romania is not only short of the proper triggers, but it also faces a host of barriers: a minimum guarantee per tourist, red tape affecting the tour-operators' accreditation process (Wall-street, 2013), lengthy visa formalities, no direct Bucharest-Beijing (or other Chinese cities) air connection, etc. As such, decisions should be made in Romania to simplify visa procedures and re-open the direct Bucharest-Beijing air route. Transports play an essential role in the international tourism movement and air transport infrastructure is critical for tourists in selecting faraway destinations. That is why a sufficient number of direct flights to and from China could help revive Chinese tourists' interest for Romania and encourage their tourism demand for it.

To penetrate the Chinese tourism import market, Romanian tourism operators should establish joint-operations with Chinese private partners and design together packages and programmes, capitalizing on their knowledge on the peculiarities of tourists coming from different Chinese provinces.

Promotion. The main actions should focus on promoting in China the tourism brand "Romania". Chinese marketing experts recommend either on-line solutions (Marketing to China, 2012), or the simple, direct promotion. The first step would consist in opening tourism offices in China and then develop partnerships with operators from the distribution chains. Concrete options would be: to organize promotional events, take part in local and regional tourism fairs, make customized promotional spots for Chinese market, prepare and spread promotional prints and DVDs in Chinese. This might be extended to a special site promoting Romania, maybe even in the China Wide Web intranet, or on Weibo (which is similar to Facebook, or Twitter), of course provided China's opening to the world goes on further and this is legally accepted. Last, but not the least important, would be to involve international and local stars in promotional activities aiming at attracting Chinese tourists in Romania.

What could be the impact of the increasing number of Chinese tourists that visit Romania?

In case of a 10% increase in the total number of tourists, during the next two years (that is an additional number of 1333 tourists to the 13,331 totals of 2013) and admitting a hypothetical return to the average stay level of 2008 (see table 7), the total number of overnights could be:

$$OVERNIGHTS = (13331 + 10\% x 13331) x\ 6.13 = 89890\ \textbf{nights}$$

Considering further a spending level per tourist of $ 1,486, as it is forecasted for 2015, through a simple extrapolation of the data series from Table 1, we find that Romanian tourism receipts from Chinese tourists could raise to:

$$RECEIPTS = (13331 + 10\% x 13331) x\ 1486 = 21790704\ USD$$

5. Conclusions

The recent evolution of China's outbound tourism is prone to strongly continue in the future, impacting on all the other actors in the global market. Under such circumstances, our undertaking is important both for companies competing in the international tourism market and for the government, which should be striving to balance our bilateral economic relations with China.

Turning into a leading importer of tourism services in just a few years and displaying a high potential to continue growing as a tourists emitter country in the international market, China is becoming a potential target for each and every economy with tourism capabilities and endowment, whether exploited or not.

Current developments in the Romanian tourism industry require joint efforts – of both the local, regional or national decision makers and the business environment (agencies, tour operators, providers of tourism services) – to position Romania as a desired destination on the Chinese tourists' map. With its rich natural and historical endowment and high potential to develop tourism services, Romania shouldn't overlook this important prospective partner, developing appropriate strategies to attract Chinese tourists and capitalize on their newly developed thirst for travelling, entertainment and discovering the world.

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Appendices

Appendix A

Table no. 8. Accommodation units in Romania, by destination, 2009-2013

	2009	2010	2011	2012	2013
Total	5095	5222	5003	5821	6009
Balneary resorts	377	386	413	488	499
Seaside area, excluding Constanța	946	1014	625	676	689
Resorts in the mountain area	1052	1038	1154	1376	1497
The Danube Delta area, including Tulcea	141	127	110	136	135
Bucharest and county residence towns, excluding Tulcea	980	1063	1183	1295	1337
Other cities and tourist routes	1599	1594	1518	1850	1852

Source: by the authors, based on the National Institute of Statistics data, insse.ro

Appendix B

Table no. 9. Tourist arrivals in Romania, by destinations and types of tourists, 2009-2013

		2009	2010	2011	2012	2013
Total	Total	6141135	6072757	7031606	7686489	7943153
	Romanian	4865545	4726414	5514907	6030053	6225798
	Foreign	1275590	1346343	1516699	1656436	1717355
Balneary resorts	Total	639739	568257	689195	696180	678536
	Romanian	617015	546068	662466	666693	646228
	Foreign	22724	22189	26729	29487	32308
Seaside area, excluding Constanța	Total	788356	702566	735881	804198	728748
	Romanian	756749	671182	706882	767830	697208
	Foreign	31607	31384	28999	36368	31540
Resorts in the mountain area	Total	830943	814973	962415	1121238	1241133
	Romanian	749879	728320	865085	1007792	1113959
	Foreign	81064	86653	97330	113446	127174
The Danube Delta	Total	70479	68414	81567	88021	80885

area, including Tulcea	Romanian	54591	54206	58555	56722	58095
	Foreign	15888	14208	23012	31299	22790
Bucharest and county residence towns, excluding Tulcea	Total	2884121	3011688	3541409	3816873	3983497
	Romanian	1904263	1964465	2364885	2555431	2675060
	Foreign	979858	1047223	1176524	1261442	1308437
Other cities and tourist routes	Total	927497	906859	1021139	1159979	1230354
	Romanian	783048	762173	857034	975585	1035248
	Foreign	144449	144686	164105	184394	195106

Source: by the authors, based on the National Institute of Statistics data, insse.ro

Could Shale Gas Become a Reliable Energy Source for Europe and Romania?

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Abstract: *While shale gas and oil is a success story in USA and Canada where production has considerably increased in the last five years the situation is quite different in Europe where exploration and production activities are quite low and prospects are not encouraging. Even in the Eastern Europe the first results of exploration are disappointing for the American companies, which have the technical expertise for exploring and extraction shale gas. Due to global warming there is now at the world scale a fierce confrontation between environmentalists and lobbyists of producing companies regarding the negative effects of hydraulic fracturing. Shale gas development in Europe depends more on the coal substitution by gas and on the use of CCS technologies. The collapse of crude oil prices may delay many projects in the field of shale gas and oil, especially in Europe. The prospects of oil gas in Romania are linked to the energy security concept, whose implementation requires diversification of energy supply on some levels. The development of shale gas in order to diversify the energy supply cannot compensate the groundwater pollution and other negative effects, like earthquake. The temporary withdrawal of Chevron from Romania will have some positive effects, allowing to our country a necessary time-out to better substantiate public policies in the field and to producing companies some time required for carrying out new technologies, less polluting and harmful.*

Key-Words: *shale gas, fracturing, reserves, technology, environment, pollution, energy security, substitution, projects, public policies.*

JEL Classification: *Q 41, Q42, Q48, Q51, Q58.*

1. Introduction

In the last years when global warming or greenhouse effect has become the most important and pressing problem of humanity a new fossil resource has rapidly entered in energy sector, shale gas and oil. Shale gas is a resource that has come relatively late in the energy landscape, particularly in the last 10 years, with the improvement and imposing of extraction technology, hydraulic fracturing, in the US. Expectations concerning this new source of energy have been great, but so far, they have been confirmed only in the US and Canada, while in EU exploration results are not conclusive. We have two kinds of impact of this new source: a positive one, on the level of energy supply, and a negative one, on the environment. As producing companies usually keep secret their production costs, it is rather difficult to measure the profitability of shale gas extraction and to reject the opinions on the creation of a new speculative bubble with the financial support of investments banks. Estimates of shale gas reserves for various areas differ significantly and practically we do not know precisely what amount of shale gas we may count on. In addition the rate of depletion of shale fields in operation is much faster than that of traditional methane fields.

Six months after the collapse of oil prices, America's shale business based on horizontal drilling and hydraulic fracturing and causing an impressive boom of oil and gas production is not in a significant decline as it was believed by some analysts, companies and countries (Economist, 2015). In the first quarter of 2015, many independent companies had a good financial situation mirrored by the situation of their balance-sheets (the equity level compared to debt level).

2. Too much optimism for the future of shale gas?

Several studies made in the last years have concluded that even in the most optimistic case in Europe, the net benefits of shale gas are expected to be relatively limited due to several major reasons: 1) Europe disposes of shale gas reserves much lower than expected; 2) their location, in relatively deep geological layers, makes more difficult and costly their exploitation, which is technically and economically less advantageous than in the United States; 3) the population density is higher in Europe, and thus the potential collateral damages are more threatening and public opposition more fierce; 4) in some areas further investment is needed in infrastructure; 5) the legislation is inconsistent, scratchy and unpredictable. EU should accept that if it fails to provide an overall framework favorable to exploration operations (primarily the legislative stability), American companies, which exclusively detain the technical expertise to achieve this objective, will refocus on more attractive targets such as Australia or China. Forecasts made in the period 2013-2014, by several prestigious Western institutions specialized in energy, like the International Energy Agency, Energy Information Administration, assigned to shale gas a share between 6 and 14% (in a optimistic assumption) in ensuring the total gas demand of the EU by 2030, which means a relatively small contribution for increasing the security of energy supply. The transnational company British Petroleum (BP) made a more radical prediction that shale gas will have a more modest contribution of only 6% in satisfying the gas needs of Europe by 2035; as a consequence, the continent will become even more dependent on gas imports, whose share in consumption will increase from 60-65% at present to 84% at the end of the forecasted horizon.

The environmental impact of hydraulic fracturing has been a subject of heated debate between environmentalists and corporate lobbyists, the arguments of both parties being more subjective and less well scientifically based. That is why the impact could be partially assessed only for the US, given its tradition in this field, but there are no clear statistical data even about the number of wells drilled, much less on the complex impact on the environment; under these conditions we are witnessing a fierce confrontation between environmentalists and producing companies, which makes it extremely difficult to find the scientific truth. In any case, the expert opinions indicates that shale gas fracturing is not the ideal solution for densely populated areas from Europe, mainly due to high environmental risks.

Neither direct economic benefits of the shale gas in the EU, nor indirect benefits, i.e. the spillover effects on other economic sectors, will be important. Socio-economic net benefits of shale gas development in the EU Member States will be strongly influenced by the "balance" of compromises with the competing sectors involving other land uses, such as agriculture. This will be particularly important for the Member States with large agricultural sectors and/or with a large number of people employed in agriculture (as a share of total employment).The benefits related to employment of labor force will also be moderate, given that shale gas is a capital intensive segment rather than a labor intensive one, with most jobs created on short term only and especially in the early stages of development.

In an average time perspective the diversification of natural gas import options may diminish the interest in the development of domestic shale gas deposits in the EU. An essential role in this option will be played by the price at which natural gas will be available from multiple sources, including LNG, compared to shale gas and also with other competing energy sources (including renewable). An essential role in determining a pro-shale gas orientation will have the breakeven costs for alternate energy sources.

In essence, we may say that the recovery process of European shale gas is on stand-by, which on the medium term represents a relative advantage for the US and Canada, whose gas exports (LNG) to Europe seem quite unavoidable. Europe, actually the EU, needs a coherent energy policy, which currently it does not have. There is an incoherent amalgam of national programs, ranging from Germany's commitment to phase out nuclear energy to promotion of renewable energies, whose subsidies have become more burdensome for national governments, or more precisely for the whole population on whom costs are transferred.

Shale gas can not become a viable transition fuel to a low carbon economy, unless coal will be substituted on a large scale by shale gas and CCS technologies (CO2 capture and storage), which are quite underdeveloped in Europe today, will become widespread. The fact that in the US shale gas has helped to reduce GHG emissions is due shale gas substitution of large quantities of coal burnt in the power plants, and due to export of large coal amounts to Europe.

Specific responses of governments, regulators and commercial players to the needs of the emergence of shale gas industry in Europe are to be defined. These responses could significantly affect the progress pace and pattern of European shale gas industry in the coming decades. However, the opinions of several independent experts and specialized institutions converge to the idea that, even with the best practices and best political support, shale gas will not be able to change the "rules of the energy game" in Europe, not in terms of security of supply, nor to significantly cut the greenhouse emissions.

Despite these findings, not very optimistic, there is virtually no reason for EU countries not to try to explore the shale gas potential and to exploit the discovered resources later, obviously if opting for this solution by taking into accounts the limitations and difficulties of fracturing process. Options belong exclusively to national states due to insufficiently knowledge of involved risks, and this is also one of the reasons why the European Commission has not taken the responsibility of developing a common regulatory framework for the domain concerned.

The US experience shows that pollution risks can be avoided, but some environmental disturbance, although inevitable, may only be minimized thanks to technological advances. It should be mentioned that is up to the Member States and local communities to decide whether and to what extent these risks are tolerable. To do this it is necessary that operating companies to show transparency in relation to state authorities in which they are active and ensure the free access to information and a fair application of the best practices, including the assimilation of the latest technologies to ensure a reduction of environmental risks.

Shale gas should not be presented to European population as a fake project for an easy access to a cheap energy source or as an alternative to renewable sources. Presentation of shale gas in a false opposition to renewable sources would undermine the transition of Europe to a low carbon economy Shale gas will not be a panacea, but an additional solution for the growth of energy security, along with renewable and energy efficiency.

Despite the controversial issues related to the impact of hydraulic fracturing technology, the EU countries, heavily dependent on energy imports (natural gas and crude oil) from Russia in particular, will have to work towards diversifying their sources of supply, while making use of potential own resources, which include in some cases the evaluation of shale gas reserves and their exploitation, if their commercial viability is confirmed, while giving special attention to the risks attached to fracturing technology.

Worldwide, but especially in Europe, if the collapse of crude oil prices that started in the second half of 2014 will last for a longer period, there will be an increase of the risk of compromising or, at best, delaying the projects for the exploration/exploitation of shale gas. If the oil price would have remained at over $100 a barrel, shale gas and alternative energy sources would have replaced imports from OPEC area. But at the current price of conventional crude oil, which stands at around $60/barrel, and considering that one of the most lucrative areas (Bakken) of US shale gas exploitations is profitable at a price of over $65/barrel (according to Bloomberg New Energy Finance), the exploitation of shale gas and oil is not so profitable in USA and may not at all in Europe. Obviously it will be cheaper to import oil and gas, than to exploit new shale fields even in the US or Canada, using sophisticated, cutting-edge technology.

Therefore, the US energy sector itself is likely to be strongly affected, even more than European shale gas sector, where operating conditions are much more difficult and costs are significantly higher. If oil prices remain for long time around $50/ barrel, some of the negative consequences now presented as hypothetical are likely to become reality. Already, big companies such as Schlumberger and Baker Hughes announced major restructuring processes and an Ernst & Young report claims that possible bankruptcies of smaller companies followed by mergers and takeovers by bigger companies are likely to follow. The world is marking important moments in the evolution of fracturing technology in the USA and perhaps globally, which is likely to reach a ‘reset’ of the whole structure of primary energy sources balance, which is very necessary for the survival of the planet.

The role of exploration/production companies and their behavior in the new context of an oil market characterized by low prices, costs adjustment, reallocation of resources and new market strategies will be critical in determining the overall framework of the oil market over the next two years. The United States will be at the centre of re-balancing mechanisms: projects' portfolios will be re-examined, discretionary spending will be cut and in this context, strategic decisions will slow down and even projects considered 'robust' could be delayed as the companies are reviewing their strategies. Companies with strong financial assets will find themselves in a favorable position to acquire other companies' assets, when they feel that oil prices have stabilized. However, oil companies in the US have a relative advantage as they are able to reduce costs without affecting future projects, by freezing indefinitely certain less profitable projects, unlike competing petroleum states, whose economies are heavily dependent on oil revenues, and cannot reduce prices indefinitely without causing themselves major social and economic imbalances.

Currently, considering the low prices of conventional crude oil, the shale oil and gas revolution seems to come to an end, before it even started. Private companies have already decided to withdraw from European countries which were assessing the potential for unconventional resources (Chevron has announced in February 2015 that it's giving up on its operations in Poland after a similar decision was taken in regards with Lithuania and Ukraine). The decision is likely to be fuelled by the unattractive prospects of oil prices. Furthermore, some renowned research institutes in the energy field have decided to give up their in-depth research on the shale gas topic until drilling results show consistent evidence of viable development. Given the opposition to drilling, the low oil prices and the likely slow pace of development, this may take a few years.

The most important issue for the future exploration/exploitation of shale gas and oil is to decipher the unhidden agenda of the OPEC oil prices mess that is, whether this was a unilateral measure intended to undermine the American shale oil competition, or if it is a wider agreement with US interests. The second scenario seems more plausible, because it is bringing greater benefits to the parts involved, as it promotes climate change policies, namely renewable and energy efficiency measures. Both policies were considered 'too aggressive' for US conservatives, and by reducing fossil fuel price, the gap between the oil price as a benchmark and those of renewable energies is widening to a level that will discourage both non-conventional energies and energy efficiency programs.

However, there are opinions (even from OPEC countries) which argue that oil prices will gradually recover in 2015, in the range of $80/barrel, as resources are quite limited, most oil-exporting countries are facing large budget deficits and the demand will increase as the economic crisis will fade away. In other words, the oil price crush will likely prove to be a speculative distortion.

3. The prospects of shale gas in Romania

The security of energy supply represents a critical matter for Romania, although to an extent significantly lower than for other EU Member States, whereas Romania is among the countries with the lowest degree of dependence on energy imports within the European Community. Based on international estimates of EIA on the existence of an important potential of shale gas reserves (about 1460 bil.c.m.). Romanian authorities, through the National Agency for Mineral Resources (ANRM) has already granted exploration licenses

for around 30 oil concession agreements. Changes in the context of international oil market has led to some changes also in Romania, but despite this, it will have to continue the exploration of potential resources to determine with any degree of certainty whether or not it has enough shale gas. Romania is in a relatively unpleasing position because with the exception of a report carried by specialists from the Romanian Committee of the World Energy Council in 2013, CENTGAS, who argued that 'our country would have a great potential for shale gas discoveries in the Eastern Carpathians, the Moldavian Platform, Bârlad Depression and the Romanian Plain, with extension to the South Dobrogea', there is no definite quantitative estimate made by any Romanian scientific authority or from the gas industry or geological institutions. Furthermore, the issue of exploring the national territory potential of shale gas reserves has also a geo-strategic interest, especially in the context in which Russia is trying to achieve supremacy in the Black Sea basin and altering the old 'balance of power'.

The decision whether to continue exploration operations did not belong to the Romanian state, but to the main company holding the licenses, that is Chevron and other companies involved. From various reasons, among which the fact that relevant reserves have not been discovered so far, Chevron, decided to withdraw (more precisely to freeze its operations even if they have discovered some shale gas, because of the low price of crude oil which makes their exploitation unprofitable in Romania, arguing that the profitability of the operations is lesser than other operations from its energy portfolio.

The most important question for policy makers at all levels in Romania is whether the potential impact of fracturing (public health and environmental risks) may be offset by economic benefits. The results of exploration phase and a clearer picture of the economic viability of resources of unconventional oil and gas will clarify one of the many unknowns on the development of shale gas in Romania. Delaying the project on shale gas in Romania may have a positive side even more because at this stage there is no clear answer to the question whether and to what extent the potential impact of fracturing (public health and environmental risks) may be offset by economic benefits.

There are many uncertainties about the economic impact of shale drilling in Romania, the most important being that the risk of grounding decisions and public policies based on too optimistic or too bleak prospects, ignoring the cost of externalities or the benefits of security of supply. Also there is more uncertainty about the environmental impact of hydraulic fracturing. The possible increase in natural gas supply and the reduction of imports cannot compensate for groundwater pollution, soil degradation, small surface earthquakes, affecting agriculture and tourism, massive pollution of the environment, damage to scarce water resource, especially in the Eastern part of the country. The earthquakes in Vrancea may lead to the production of micro-faults in areas where intense exploitation of shale gas is made or where wastewater is placed. Therefore, a cost/benefit analysis should be based on evidence, not based on exaggerations (Starting from data on resources, which according to several Romanian specialists, especially in mining activities, should be taken with reservation, and ending to the pollution of groundwater).Unfortunately, the Romanian government seems to have a positive answer for investors and for the opening of exploitation in any circumstances, before proposing any amendments to the current legislation and without having thorough studies on pollution in any prospective area before starting production operations.

Given the high costs of geophysical exploration and by wells, there have been chosen for the concession of respective perimeters the specialized foreign companies with technological and financial potential. Among the advantages of this option one can

mention facilitating the technology transfer, superior project management skills, flexible logistic chains, access to capital in the global financial markets, etc.

Without falling into the trap of the concept of *hard nationalism* for natural resources, Romania should follow the examples of countries that have successfully exploited oil and gas resources and to act on the principle that international companies are meant to provide financial and technological support in exploitation of natural resources, without forgetting that hydrocarbon resources belong to our nation and must be exploited for the benefit of it. However, given the low experience in shale gas, significant investment costs and high geological risks, especially in Europe, Romania, as other states, which started earlier exploration operations of the national potential, will have to consider the flexibility of the legal and fiscal regime for the shale gas in the sense of giving some tax breaks for companies interested in participating in the process of knowledge and technology transfer in the preliminary phase of exploration.

Tax regime in the oil and gas field is already a delicate matter and also a controversial problem having in view that for almost ten years the state has been accused of favoring foreign oil companies involved in the exploitation of subsoil resources by imposing reduced fees and charges; charging of a low tax currently would more feed the idea of political and economic favors granted to these companies Announced as imminent to the end of 2014, a new tax system is expected to come into force in 2015. It has been shown that new royalties are applicable only for the new concession agreements, as for the concession agreements in force concluded for 30 years their level cannot be changed. Oil and gas companies are interested in clarity and predictability in the fiscal and regulating regime, generally they are keen to see the issue of royalties decided and stabilized for at least 20 years.

Our main operator in Romania, OMV, the majority shareholder of OMV-Petrom, reacted quite aggressively at the prospect of any increase in taxation. Although it said it wanted "to turn Romania from a gas importer to a gas exporter to Europe", OMV has warned that if the fees will increase, it will cut the investments, spreading the idea of ceasing exploration activities in the Black Sea: *"The first step that we shall do when we discover hydrocarbons in the Black Sea will be to directed them to the local market. We are talking about replacing gas imports from Russia, for which the price is very high, but it depends on the charging system and price. There are two important components in any business. We can not do investments if we are not profitable.* "

We believe that, for the concession of natural resources it would be necessary/possible the imposing of an "offset" type condition by which companies try to put something in place, possibly in economy, the requirement of a technology transfer to the local mining and energy industries, if not participating in the growth of the adjacent industries (possible reference to the case of Petrom-Arpechim-Oltchim).In terms of improving the regulation framework**,** Romania should to adopt the model of *reactive responses* to the risks associated with technology by changing domestic regulations in order to cope with the likely impact and impose stricter regulations, especially with regard to water resources. In this sense Romania must extend the evidence base in order to take the right decisions. For this it is necessary to involve several state authorities, universities, research institutes, civil society, environmental organizations, consulting firms to evaluate the possible effects of shale gas. The regulatory framework should find the balance between the economic viability of shale gas protection of the environment and security of supply.

In Europe, where shale gas activities in the field are in an infancy stage, only Poland and the UK have adopted specific regulations for this sector, other European countries applying general rules valid for the oil sector. Romania does not have specific provisions for unconventional gas, aspect related to the applicable technical rules and instructions for the exploration and exploitation of these resources. Richard Davis, an expert at the "Shale Gas Europe" suggested that Romania has to assess the information on the quality of technology, after the model set for regulations in other countries, to refer to the best practices used in the United States, to the mode how was developed this sector in the UK, where the Environment Agency is working with the Department for Energy and Climate Change and industrial companies to ensure that regulations are effective in terms of environmental protection.

In Romania gas price liberalization for small industrial consumers was postponed (originally scheduled and assumed for the end of 2014), the same in the case of households (originally scheduled for 2018 but postponed to 2021). There is no reason to assume that the market price of natural gas in Romania would not converge in time to the European gas prices having regard the Commission's efforts to complete the establishment of a single gas market in Europe (see Regulation no. 312/2014 of 26 March establishing a network code for balancing transport networks in the gas sector). We believe that the wholesale price of natural gas supplied in Romania will come closer to the prices of the nearest geographically hub- CEGH (Baumgarten, Austria). Thus, we are supposing that by the time of starting the production of unconventional gas resources and their trading market in Romania, the alignment of wholesale supply prices will be complete for both the households and the industrial customers in Romania. But the level of future prices will depend on the competition between different sources of natural gas, a great potential there is in the Black Sea, where Romania may produce almost 6.5 billion c.m. in 2020 (Exxon/Petrom, Lukoil and Carlyle are involved) and additional gas may come by means of AGRI project (LNG from Georgia but produced and exported by Azerbaijan).

In the years ahead, gas price liberalization of the domestic price of natural gas will significantly increase the revenues of the producing companies, which would also be a good reason for an additional taxation of the profits of foreign companies operating in Romania that would benefit from an *undeserved gift*. Under these circumstances, the Romanian legislation has to remedy the unnatural situation in which natural resources found in the proximity of a community become rather a cost than a net gain for the respective community. Improving the legal framework should also cover some aspects of social acceptability. In fact, mistrust and even hostility of a large part of the population may be considered the most serious obstacle to the development of shale gas resources in Romania.

Moreover, in Romania, prevails a distorted public perception on the environmental and health risks related to the development operations of shale gas. Under such circumstances, the effort made to articulate the public interest only through a rational cost-benefit analysis may not give the expected results. On the other hand, distrust prevailing in society concerning the efficiency and integrity of state institutions, amid the lack of a culture of transparency and public consultation on the matter of exploiting mineral resources, induces more radical positions and reduces the chances of social consensus.

Government should consider creating financial incentive mechanisms for local communities, as did other European countries that are more advanced in the exploration and exploitation of unconventional resources (UK, Poland). If the Romanian state - the rightful owner of mineral subsoil resources of any real land from Romania – decides to

exploit them, the owner of the land located above those mineral resources is entitled to some compensations agreed together with the State. Changing the tax system for operating shale gas deposits will have a vital importance for the social acceptability. In the case that it is diminished the prospect of collecting some revenues from shale gas exploitation and allocation of them to the local communities, social acceptability would be severely affected. In Britain, for example, to promote the development of shale gas, the government decided that local councils which allow the development of shale gas may fully keep all the fees and charges collected by them from exploiting this resource. Such a solution would be both fair and would reduce the risk of social protests and dissents.

According to Law no. 255/2010 on expropriation for utility public interest, necessary to achieve some objectives of national, county and local interest, shale gas exploitation (though not explicitly named in the law) may be considered a national interest objective since these resources belong to the state. Any company that takes over concessions in Romania should be aware of the fact that any transaction may be affected by the ambiguous nature of the rules which enshrined the owners of land property. In Romania, the order of private property was not fully restored, as such hidden costs of investment - generated by the conflicts between institutions, between state and citizens and further between companies and the owners often wronged - may go beyond the strict legal framework, also having a strictly economic determination. It is an economic one, because the return on any investment depends on sound regulatory and clear property rights and guarantees provided by the parties involved in transaction.

European Commission recommends baseline studies before starting the operations of high-volume hydraulic fracturing, Member States will ensure that the state of the reference *(baseline)* is described in an appropriate way and reported to the competent authority before commencing operations. There are also monitoring requirements that recommend to the Member States to ensure that the operator regularly monitors the production facility and the surrounding area, on the surface and underground. Institutional capacity is very important in the development of shale gas, and especially the available resources for strengthening the administrative capacity. Thus, Member States should ensure that competent authorities have adequate human, technical and financial resources to perform their duties. Member States should prevent conflicts of interest between the regulatory function of competent authorities and the function related to economic development of resources carried on by these.

Since the Romanian government is in the process of developing the national energy strategy, we consider that evaluating energy policy options between coal and gas is an essential aspect for the future decisions on electricity production. Investments may be directed to change the energy mix and technology support – by subsidies or/ state aid (according to European regulations) or public policy measures (for example, by means of certificate trading schemes for CO2 or full liberalization of fuel prices for electricity production). The development of shale gas in Romania is unlikely to have the same effect of substitution between coal and gas as in North America, but higher prices for certificates for carbon dioxide emissions may have a significant impact.

Security of supply may be improved not only by diversifying the country's natural gas sources, but also by diversifying interconnections with neighboring countries. But without the exploitation of new sources of natural gas, in particular those from Black Sea, import dependence could soon become a burden. Ukrainian crisis has radicalized European policymakers that seem more determined as always to act in a more effective and cohesive manner to enhance EU energy security by promoting an Energy Union which tends to offer

concrete and valuable solutions and ways to reduce dependence on oil and gas imports from Russia, through diversification of gas supply sources, but also by turning to account a greater part of its own energy resources.

4. Some final conclusions

Romania would need shale gas production amid the depletion of conventional gas reserves due to high dependence on imports from Russia, but there are not known the environmental risks and the technology of hydraulic fracturing should be replaced by "friendly" environmental ones. Exploitation of natural resources in line with the national interest would mean in the case of shale gas also an effective environmental protection, as well as maintaining ecological balance and rising of living standards, not its depreciation. The possible increase in the supply of natural gas and decrease in imports cannot compensate the groundwater pollution and other negative effects like earthquakes. The negative externalities are not usually mentioned by producing companies and are not compared with economic and social benefits. In addition, Romania can not claim a right of first beneficiary in having access to new extracted gas, so producers will be able to export the gas without being forced to firstly provide consumers needs in Romania, and prices will be aligned over several years at the level of those liberalized and close to import price from Russia.

As worldwide numerous methods of clean fracking are in the process to be developed and will be launched on the market in the next few years, and because the low price of crude oil on the international market already freezed a number of projects in the field of unconventional hydrocarbons, the delay imposed by Chevron to shale gas operations in Romania is welcomed, because it will allow our country a necessary time-out to better substantiate public policies and to oblige the concession companies to make use of the latest and nondestructive operating technologies.

Meanwhile, Romania will have to focus on other solutions for enhancing energy security, including the gas deposits exploitation in the Black Sea, continuing nuclear energy projects, completion of pipeline interconnections with neighboring states, implementing measures for energy efficiency. The future, at least in the short term horizon of renewable sources (RES) and their legal support system -Law 220/2008 -must also be clarified. Since 2013 the number of green certificates awarded for each type of technology for RES was reduced by a Government Ordinance, while the remaining subsidy is to be paid from 1 April 2017 on. Combined with a drastic decrease of prices of green certificates and with the reduced capacity of National Power Transmission System to take increasing amounts of intermittent energy the future of renewable energies seems uncertain. The problem is aggravated by the low level of international oil price, which discourages the investments in relatively expensive equipments for RES production. However, the raising costs of implementing energy efficiency measures are becoming increasingly hard to justify from an economic perspective. Thus, the current context does not really favor the actions for climate protection by means of the RES, energy efficiency and capped carbon emissions.

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Globalization – Chances or Risks

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Abstract: *There are for and against arguments as regards the process of globalization. But what is globalization: a concept, a reality or a state as such? We can consider that globalization reflects the natural continuity of a process that appeared a long time ago and that has evolved ever since or a new phenomenon that was generated by the speed with which new technology and information flow. Milton Friedman, a fervent supporter of globalization, gives an answer to the question "what is globalization"; according to him, "globalization is not a simple tendency or phantasy but rather an international system. It is the new system that has replaced the Cold War system and that, like the former one, has its own laws and logic, being able to directly or indirectly influence today's politics, the environment, geopolitics and the economy of every country in the world." (Friedman, 2000). Globalization represents: the unlimited ascend of technology, the free flow of information, the annihilation of territorial limits, the uniformity of economy, the free flow of capital, the mobility of the person, as well as a political form of organization that aims at a future global government.*

Key-Words: *monetary policy, financial policy, sudden-stop, sovereign debts crisis, sudden formation of fixed capital, aggregated offer, aggregated demand.*

1. Introduction

According to Lester Thurrow (2003), globalization - which is a phenomenon specific for the last two decades of the 20th century - comprises two stages. The former one covers the '50s, '60s, '70s of the last century. It was mainly characterized by the fact that it was run by governments and directed by political decisions. Commercial agreements were at the basis of the globalization process and they were meant to cut taxes and, in consequence, the costs of traded products. The General Agreement on Tariffs and Trade (GATT), launched in the '60s, aimed at ensuring a free and global commercial regime for capitalist states. Important measures were taken at the time for liberalizing commerce; they

were steps in accomplishing a form of "integrated capitalism". The second wave of globalization, specific for the '90s, is different because it relies on various technologies (microelectronics, computers, robots, telecommunication, new materials and biotechnology) that have generated a new form of economy, i.e. "knowledge-based economy". Corporations, which perform their activity at global level, have understood the force of new technology and have promoted them as new vectors of progress. Detractors of contemporary financial globalization insist on the inconvenient aspects which globalization poses, especially on the most visible ones: variable exchange taxes and financial instability. Thus, at the end of the 19th century, the intensification of international financial relations was accompanied by a progressive generalization of fixed exchanges: gold started to be used as a hallmark between 1880-1913 in most of the countries; contemporary financial globalization started to develop in 1971, i.e. once the fixed rate exchanges, which were set up in 1944, ceased to exist subsequent to the agreements concluded at Bretton Woods. To Milton Friedman and Harry Johnson, who praised the qualities of stability, monetary flotation did not have the beneficial effects which they wished it could have. First of all, if - within an international context of strong capital mobility - the flexibility of exchange taxes is compatible with the perpetuation of important external unbalance, the very nature of this unbalance represents a problem. Secondly, the differences existing between the exchange rates of different currencies are obviously excessive. After the second half of the '80s, "excessive" volatility was explained either by maintaining the ordinary hypotheses of rational forecasting and homogeneity or by explicitly taking into consideration informational imperfections of financial markets and, particularly, of exchange markets. Modern economic analysis allows us to draw conclusions on the beneficial nature of financial globalization. Thus, apart from the frequent hypotheses of informational efficiency that characterizes financial markets international free capital movement favours an optimum distribution of financial resources at global level. Countries which have high national revenue do not invest this profit in national economy. In consequence, capital will flow from countries which have high capital towards countries whose capital is low; the law of diminishing returns will ensure a polarization of international financial flows from developed towards less developed countries. Apart from these "static" theoretical advantages posed by international financial liberalization (understood as resources allotment), several recent analyses have revealed the existence of "dynamic" advantages for contemporary international capital transfers. Even if these transfers are accomplished through direct foreign investments, they may also be accompanied by technological transfers that favour the spread of technological progress (Steinherr, 1992).

From a theoretical point of view, globalization offers the key for progress since it implies transparency, high quality standards and environmental protection. Briefly speaking, globalization refers to all that contributes to the improvement of living conditions at global level. However, globalization does not bring benefits to all states in a similar way. In the 20th century, the global average of personal income grew for some countries and it decreased for others. Although incomes grew, inequalities were more prominent than they had used to be at the beginning of the century.

The World Development Report 1999-2000: Entering the 21st century had as a main topic the impact of globalization over the poor people. The report shows that, on the basis of the present analyses, the number of poor people is going to increase. In 2015 it is estimated that the global number of poor people could amount at 1.9 billion. Moreover, considering the recent tendencies, inequality existing between industrialized countries and

developing countries is going to become more acute. Consequently, reality contradicts the concept of globalization.

However, globalization offers a chance to poor and developing countries to grow economically. Due to globalization, developed countries export not only capital and workplaces but also new technologies and higher working standards.

2. Globalization and economic governance in Europe[1]

The process of globalization and the economic and financial crisis have required the urgent adopting of new economic decision-making procedures and new instruments for the application of these procedures. Governance has acquired an economic dimension once the financial crisis emerged; the EU was obliged to react in order to protect its unique market and the Economic and Monetary Union. Lately the EU and its member states have taken important decisions that will lead to a better economic and budgetary coordination of the EU as a whole and of the Euro zone in particular. As a result, EU interdependent economies will find themselves in a better position so that they would be able to find a path towards economic growth and the creation of workplaces.

In 2010 a new approach to economic surveillance and a new policy making calendar were agreed upon. The goal of this agreement is to ensure that policies are analysed and evaluated at the same time and that those policy areas which were not previously and systematically covered by economic surveillance – i.e. macroeconomic unbalance and financial sector issues – will also be considered.

The new approach was firstly put into practice in 2011 through the first "European Semester". The European Semester, one of the two main components of the new governance economic and financial European mechanism, creates a means of exchanging information and coordination between member states as regards fiscal policy, macroeconomic unbalance, financial sector issues and structural reforms that are meant to enhance economic growth at EU level. All these issues will be dealt with before governments start to devise their budgetary projects and to present them for being debated upon by national parliaments during the second half of the year ("the national semester").

This preliminary coordination of policies should bring more efficiency to the implementation of political orientation and help EU dimension be incorporated within the elaboration of national policies. The annual cycle starts with the annual growth enquiry elaborated by the Commission, which comes with a general approach to priority actions that are to be adopted at EU and national level. Member states present stability and converging programs for the fiscal and national reform programs as regards structural reforms and growth and employment stimulation measures. The Commission evaluates these reports on the basis of an integrated analysis that covers fiscal, macroeconomic and structural policies and makes recommendations for the policies that are to be developed by each country.

The second component of the above mentioned governance, i.e. the procedure devised for excessive unbalance, is meant to institutionalize a monitoring mechanism, which brings early alarm signals and which requires the intervention for preventing the repetition of those situations in which EU member states accrued unsustainable deficits or

[1] Dochia Aurelian, "Reflectii privind noul mecanism de guvernanta economica europeana", *Revista Economistul*, 22 (10-16 June 2013), p. 122.

lost competitiveness due to economic policies that are inadequate for the process of globalization. This procedure devised for excessive unbalance is meant to impose 11 economic indicators that are included in the so-called "scoreboard". These indicators are: deficit/surplus of the current account (the average for 3 years) expressed as percentage of the GDP; net international investment position expressed as a percentage of the GDP; the decrease recorded for the last 5 years of the export market share and expressed as a percentage; the increase recorded for the last 3 years of the unitary cost of the workforce and expressed as a percentage; the variation recorded for the last 3 years for the effective exchange rate in relation to a number of 35 countries and expressed as a percentage; the debt recorded by the private sector and expressed as a percentage of the GDP; annual increase of the volume of credits granted to the private sector; annual variation of the real estate goods in relation to the deflation factor for the consumption as calculated by the EUROSTAT; governmental sector debt expressed as a percentage of the GDP; the average for the last three years of unemployment; annual variation of liabilities within the financial sector. For each of these indicators thresholds are established; if these thresholds are surpassed, this is a signal alarm. One should mention that countries which accrue surpasses of these thresholds are subjected to a thorough analysis of the economic situation; the conclusions that are drawn comprise either recommendations for deficits correction or the initiation of procedures to be applied for the excessive deficits which require for a corrective plan to be thought out, assumed, monitored and evaluated. Non-observance of the plan of action leads to the application of financial sanctions for the country that finds itself in this situation.

Under the present conditions of an accelerated globalization process, the effectiveness of economic governance must be reflected in the forecast, prevention and correction of the macroeconomic situations which pose a high risk and which exist in certain states.

Elisa Parisi Capone (2012) has made a test for 11 countries which are members of the Monetary Union and calculated the indicators included in the "scoreboard" for every year starting with 2000 and up to 2011, including the level of the threshold surpasses; this test adequately signals situations that pose a high macroeconomic risk. By adding the situations in which threshold surpasses occurred and by expressing them as a percentage for every indicator, she obtained an aggregated value of the macroeconomic unbalance instances for a country and for a certain year. The result revealed that in the last decade critical thresholds have been surpassed; thus, none of the 11 countries - which were part of this analysis - managed to permanently maintain itself within the prescribed limits. For instance, at the beginning of 2000 the aggregated indicator for Germany pointed out a percentage of over 250% of the recommended level; in Austria the aggregated surpass amounted at 160%, while in Finland the aggregated surpass was higher than 450%. These initial surpasses generated no consequences; countries managed to correct unbalance instances to a good extent. For countries like Greece, Portugal, Ireland or Spain indicators were permanently surpassed throughout the decade.

We should mention a weak point of these indicators, namely the insufficiently developed critical thresholds, a fact which makes them easily challengeable; thus, in the next period, these thresholds should be adjusted but not as an attempt to adapt to the present needs because this would not make the system credible. Another weak point of the system is represented by the fact that, for some instances in which there was an excessive surpassing of the thresholds, no sanctions were inflicted on several countries (e.g.: Germany, France, Greece, Italy, etc.).

As regards Romania, in the last decade our country has constantly and significantly surpassed the critical threshold, especially for the following indicators: the deficit of the current account; the liabilities of the financial sector and the variation of the actual exchange rate. In consequence, after the crisis broke out it was necessary for us to adopt the adjustment strategy; in 2012 this made it possible for Romania to have the best indicators on the scoreboard within the economic governance mechanism.

3. Conclusions

The illustration of globalization phenomena in the great economic and financial crisis led in 2009-2011 to a deterioration of Romania's economic potential. The growth rhythm of the GDP dropped from 4.5% in 2008 to 2.3% in 2009 and to 2% 2010-2011. This evolution was determined by the effects generated by the Great Recession: the sudden stop phenomenon of international financial flows affected Romania (e.g. the sudden stop phenomenon of the international capital flows, determined by the bankruptcy of the Lehman Brothers, has triggered the re-orientation of capital towards developed countries, which pose a lower risk); the crisis of the sovereign debts in Europe; the lack of domestic capital.

The slump recorded in investments in 2009 (the gross formation of the fixed assets dropped 24% year after year) led to an unfavourable evolution of the total productivity of production factors (whose contribution to the dynamic of the potential GDP decreased with 0.3 percentage point in 2008 to zero percentage points in 2009 and to -0.6 percentage points in 2011).

On the other hand, starting with 2013 the Romanian economy increased with 3.5% per year; this has been the best growth rhythm since 2008; this evolution is also determined by the excellent amount of exported goods (with a positive impact on domestic industry), and also by the excellent level of the agricultural production.

Similarly, demand has become stable on the domestic market and has attained a good level, a fact which is reflected by the retailing activity. At the same time, the gross formation of fixed assets became stable in the fourth trimester of 2013, after the decline recorded in the previous trimesters; this fact is reflected by the dynamics of direct foreign investments (+155% every year).

All in all, in 2013 Romanian exports increased with 10% year after year, from 49.6 billion EUR (the highest level ever recorded): the EU component increased with 8.8% every year, amounting at 34.5 billion EUR, whereas non-EU component increased with 12.8% every year, amounting at 15.1 billion EUR. On the other hand, imports increased with 1% every year, amounting at 55.3 billion EUR, this evolution being mainly determined by the EU component (+4% every year, to 41.9 billion EUR). The non-EU component has decreased with 7.2% every year, amounting at 13.4 billion EUR.

Thus, the deficit of the commercial balance was corrected with 40.8% every year, to 5.7 billion EUR: the EU component enhanced with 13.9% every year, amounting at 7.4 billion EUR; the non-EU component recorded an excessive level of 1.7 billion EUR, which is comparative with the 1.1 billion EUR in 2012.

The dynamic of exports in 2013 reflects an amelioration of international competitiveness for Romania and a phenomenon of economic inflection within the Euro Zone or reorientation of companies towards non-EU markets. On the other hand, the

evolution of imports in 2013 illustrates the difficult atmosphere that characterizes real economy (for most of the year).

All in all, in 2013, the average unemployment rate amounted at 7.3%, from the level of 7%; this evolution was determined by the difficult investment environment.

Given the evolution of the macroeconomic and financial indicators at global, European and domestic level, the Romanian GDP is estimated to increase with 3.3% per annum in 2015; this evolution is reinforced by the re-launching of productive investments, a process which is signalled by the dynamic of several recent macroeconomic and financial indicators (this process is also illustrated by the curve of returns): decrease of financing costs in economy; gradual amelioration for the banking sector; macroeconomic and financial stability as illustrated by the low level of current account and budget deficits and by banking solvability; decrease of the financial deficit within the banking sector or of the inflection signals for non-performing credit rate; amelioration of the absorption rate for European funds.

Macro-econometric provisions illustrate that productive investments could increase with 9% per year in 2015.

Re-launching investments in real economy will determine the amelioration of the situation existing on the labour market (the annual average rate for unemployment could be reduced to 6.4% in 2015), generating a positive impact for private consumption. In this macroeconomic scenario, the main component of the GDP could speed up to 1.1% per annum for 2015.

As to the net level of the external demand exports are expected to develop, whereas imports are expected to be sped up. According to this macroeconomic scenario for 2015 exports will increase with 7.4% per annum, while imports are expected to increase with 5.8% per year.

At present, domestic economy seems to be ready to receive productive investment flows (both from the outer and the inner spheres).

It is important for the mix of domestic economic policies to preserve and ameliorate this macroeconomic scenario for Romania, contributing to the sustainable re-launching of economy.

The National Bank has implemented a set of measures that are meant to ensure a normalization of the monetary policy for the last months: reference interest has gradually dropped to the lowest level ever recorded: 2.25%; a process of gradual convergence has been initiated for the rates of the minimum obligatory reserves that are applicable to liabilities expressed in RON and in currency for credit institutions, which were directed towards the levels recorded in the Euro Zone; financial stability has been ensured for Romania.

As regards accession to the Euro Zone, the process of convergence (nominal and real convergence towards the Euro Zone) is dependent on an adequate mix of medium-term and long-term economic policies that will basically rely on: avoiding economic departures; reducing dependence on external financing by generating capital at domestic level; a sustainable level for fiscality; creation of public and/or public-private investment funds that should correspond to the present economic issues at stake: infrastructure, pensions, healthcare and education (World Macroeconomic Report, 2014).

In the absence of an adequate long-term mix of economic policies, Romania's economy risks to follow the same path that it has followed in the last decades, i.e. a short period of economic growth, followed by a longer period of adjustment.

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The Accuracy Analysis of Inflation Rate Forecasts in Euro Area

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Abstract: *The main objective of this study is to provide a comparative analysis of the accuracy associated to the inflation forecasts for euro area made by International Monetary Fund (IMF) and Organisation for Economic Co-operation and Development (OECD). On the horizon from 2000 to 2013, IMF provided significantly more accurate inflation rate forecasts compared to OECD, according to Diebold-Mariano test and U1 Theil's statistic value. Moreover, the predictions provided by the two institutions are better than the naïve ones. All the predictions do not provide valuable information for future decisional process.*

Key-Words: *forecasts, accuracy, directional accuracy, U Theil's statistic, Diebold-Mariano test, inflation rate.*

JEL Classification: *C52, C53, E27, E37*

1. Introduction

The general public is very interested in macroeconomic predictions made for a future time, but the degree of interest decreases when the horizon became a period in the past. However, we should know the past performance of the forecasts in order to anticipate the quality of the next predictions.

The main aim of this study is to assess the accuracy of inflation rate forecasts for euro area by making a comparative analysis of predictions provided by two international providers: International Monetary Fund (IMF) and Organisation for Economic Co-operation and Development (OECD). Therefore, the U Theil's statistics are computed and the Diebold Mariano test is applied. Moreover, the directional accuracy was assessed, using only the predictions' signs, and the final values. The errors' magnitude has been neglected. In order to make the predictions robust to the presence of outliers, the high and the low errors received the same importance.

The paper is structured as it follows. After this brief introduction, a short literature review is provided. After the description of the methodology, the assessment and comparison of forecasts' accuracy are made for inflation rate predictions in euro area. The last section concludes.

2. The accuracy of forecasts provided by international institutions

Granger (1996) considered that the point predictions should be followed by forecast intervals based on the past performance of the point predictions. Many international institutions provided own predictions of the macroeconomic variables, among these being International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), World Bank (WB), Survey of Professional Forecasters (SPF). Important studies regarding IMF and OECD predictions' accuracy are made by Artis (1996), Ash et al. (1998), McNees (1992), Mills and Pepper (1999), Abreu (2011), Allan (2012), Heilemann and Stekler (2013). Pons (2000) compared in terms of accuracy the OECD's predictions for 13 European countries and the national predictions of each country.

Heilemann and Stekler (2007) concluded that there is a low accuracy of G7's forecasts, the causes beingthe improper forecasting methods and non-realistic assumptions regarding the accuracy of the forecasts. Abreu (2011) evaluated various macroeconomic forecasts made by different institutions like: European Commission, Consensus Economics, OECD, IMF, and The Economist.

Allan (2012) proposed the combination technique as method for improving the OECD forecasts made for GDP in the G7 countries. The accuracy assessment of these predictions supposed the application of qualitative and quantitative techniques.

González Cabanillas and Terzi (2012) studied the forecasts accuracy of the predictions provided by European Commission before and during the recent economic crisis. They compared these forecasts with those provided by Consensus Economics, IMF and OECD. The Commission's forecasts errors have increased because of the low accuracy from 2009 for variables as GDP, inflation rate, government budget balance, and investment.

Heilemann and Stekler (2013) analyzed the forecasts' accuracy for inflation and real GDP growth rate in case of the Germany predictions made by OECD and 3 professional forecasters from Germany. In the last 10 years, the accuracy forecasts for Germany's inflation and GDP did not improved too much.

Frenkel, Rülke and Zimmermann (2013) described the strategic behavior of the private forecasters that placed their expectations away from OECD's and IMF's ones, this duration of this event being 3 months.

Liu and Smith (2014) concluded that that Greenbook inflation forecasts are more accurate than those of the private forecasts, the authors making comparisons between the predictions provided by Survey of Professional Forecasters, Greenbook and other private forecasters.

Freedman (2014) analyzed the IMF forecasts' accuracy, concluding that there is a qualitative statistical analysis, but the researches were not too documented in some fields like: reference period, comparisons with previous studies, the review of changes, management response.

3. Methodology

For making comparisons between forecasts in terms of accuracy the U theil's statistic is used in two variants: U1 and U2.

U1Theil's coefficient is utilized to compare two predictions made for the same variable or for different variables.

$$U_1 = \frac{\sqrt{\sum_{t=1}^{n}(a_t - p_t)^2}}{\sqrt{\sum_{t=1}^{n} a_t^2} + \sqrt{\sum_{t=1}^{n} p_t^2}} \quad (1)$$

a- actual values
p- predicted values
t- time index
e- error (e=a-p)
n- horizon lenght
The forecast for which U1 is closer to zero it is more accurate.

U2 Theil's coefficient allows the comparison with the naïve forecast based on random walk. If U2 is less than zero the forecast is more accurate than the naïve one.

$$U_2 = \sqrt{\frac{\sum_{t=1}^{n-1}(\frac{p_{t+1} - a_{t+1}}{a_t})^2}{\sum_{t=1}^{n-1}(\frac{a_{t+1} - a_t}{a_t})^2}} \quad (2)$$

The comparison between forecasts can also be made using accuracy tests, the Diebold-Mariano test (DM test) being the most used approach in literature. If the two competing predictions are denoted as $y^1_{t+h/t}$and $y^2_{t+h/t}$, the forecasts' errors are computed as:

$$\varepsilon^1_{t+h/t} = y_{t+h} - y^1_{t+h/t} \quad (3)$$
$$\varepsilon^2_{t+h/t} = y_{t+h} - y^2_{t+h/t}$$

The following loss function is computed for measuring the predictions' accuracy:

$$L(y_{t+h}, y^i_{t+h/t}) = L(\varepsilon^i_{t+h/t}),\ i=1,2 \quad (4)$$

The null hypothesis of DM test states that there are not significant differences between the two forecasts regarding the degree of accuracy.

The DM test uses the loss differential: $d_t = L(\varepsilon^1_{t+h/t}) - L(\varepsilon^2_{t+h/t})$

The null hypothesis is equivalent to $E(d_t) = 0$. The statistic of the test is:

$$S = \frac{\bar{d}}{\sqrt{\frac{\widehat{LRV}_{\bar{d}}}{T}}} \quad (5)$$

where

$$\bar{d} = \frac{1}{T_0}\sum_{t=t_0}^{T} d_t$$

$$LRV_{\bar{d}} = cov(d_t, d_{t-j})$$

$\widehat{LRV}$- consistent estimate of the long-run variance of $\sqrt{T}d$

At 5% level of significance the null hypothesis of accuracy equality is rejected for a value grater than 1,96 of the absolute value of S.

In order to check if the predictions are 'valuable' the comparison is made with the naïve forecast that supposes that the value in the actual period will remain the same in the next period. Schnader and Stekler (1990) and Stekler (1994) used the contingency table approach in order to check the probabilistically independence between the sign of the predicted, respectively actual change. The null hypothesis of this directional accuracy test assumes the independence between the actual and the predicted value. The forecasts are valuable if the independence hypothesis is rejected. The real and the forecast values of the variable changes are presented in a 2×2 contingency table. Different tests are use in this case: Fisher's exact test, chi-square test, and the test proposed by Pesaran and Timmermann (1992).

Table 1: Contingency Table for macroeconomic forecasts

Actual (A) / Forecasted (F)	negative change	positive change	Subtotal
negative change	n_{00}	n_{01}	$n_{0\cdot}$
positive change	n_{10}	n_{11}	$n_{1\cdot}$
Subtotal	$n_{\cdot 0}$	$n_{\cdot 1}$	N

Source: author's construction

Note: there is a total number of N observations, subscript i for n_{ij} shows the forecasted outcome, subscript j for n_{ij} shows the actual result, $i(j)=0$ implies negative change, and $i(j)=1$ implies positive change.

The most used test is based on the contingency tables (chi-square test). The statistic of this test is:

$$\hat{\chi}^2 = \sum_{i=0}^{1}\sum_{j=0}^{1}\frac{(n_{ij} - n_{i\cdot}n_{\cdot j}/N)^2}{n_{i\cdot}n_{\cdot j}/N} \tag{6}$$

Wickens (1989) concluded that this test can become too conservative because the independence assumption can be wrongly accepted. Therefore, it is recommended the use of Yates' (1934) continuity correction based on the following statistic:

$$\chi^2_{\text{Yates}} = \frac{N(|\, n_{00}n_{11} - n_{01}n_{10}\,| - N/2)^2}{n_{0\cdot}n_{1\cdot}n_{\cdot 0}n_{\cdot 1}} \tag{7}$$

Another problem of the chi-square test is the continuous distribution hypothesis for the chi-square, but the computation uses discrete categories. The discrete frequencies approximation can generate an inaccurate approximation of the test statistic in case of very low expected frequencies. For an accurate test requires no more than 20% of the cells should have frequencies less than 5 and all cells should have frequencies greater than 1 .

In order to solve the problem of low expected frequencies, the Fisher's exact test for contingency tables is employed. This test is based on a hyper-geometric repartition for directly computing the independence probability. This probability for a 2×2 contingency table is computed as:

$$p = \frac{\binom{n_{0\square}}{n_{00}}\binom{n_{1\square}}{n_{10}}}{\binom{N}{n_{\square 0}}} = \frac{n_{0\square}!n_{1\square}!n_{\square 0}!n_{\square 1}!}{n_{00}!n_{01}!n_{10}!n_{11}!N!} \quad (8)$$

Pesaran and Timmermann (1992) proposed a non-parametric test on the correct forecast of the directional accuracy. It supposes the estimation of the probability of independence between results and predictions. This statistic of this test follows a chi-square distribution with one degree of freedom. The general standardized test statistic for assessing the predictive performance has the following form:

$$S_n^2 = \frac{(\hat{p} - \hat{p}^*)^2}{\mathrm{Var}(\hat{p}) - \mathrm{Var}(\hat{p}^*)} \square \chi^2(1) \quad (9)$$

$\hat{p} = (n_{00} + n_{11})/N$: Sample's estimate of the probability of a correctly signed prediction

$$\mathrm{Var}(\hat{p}) = [\hat{p}^*(1-\hat{p}^*)]/N$$

$\hat{p}_f = n_{1\square}/N$: probability of positive change in predicted outcomes

$\hat{p}_a = n_{\square 1}/N$: probability of positive change in actual results

$\hat{p}^* = \hat{p}_f \hat{p}_a + (1-\hat{p}_f)(1-\hat{p}_a)$: estimator under the null hypothesis

$\mathrm{Var}(\hat{p}^*) = [(2\hat{p}_f - 1)^2 \hat{p}_a(1-\hat{p}_a) + (2\hat{p}_a - 1)^2 \hat{p}_f(1-\hat{p}_f) + 4\hat{p}_a\hat{p}_f(1-\hat{p}_a)(1-\hat{p}_f)/N]/N$.

Pesaran and Timmermann (1994) provied also the generalization of their test when actual values and predictions are grouped in more than two classes. The test is useful when a joint assessment of two predictions is made, no requirement being necessary regarding the forecasts' independence.

4. The evaluation of forecasts' accuracy for inflation rate in euro area

The annual inflation rate forecasts provided by International Monetary Fund (IMF) and Organisation for Economic Co-operation and Development (OECD) for euro area (changing composition) are compared in terms of accuracy. The forecasts' horizon is: 2000-2013.

The World Economic Outlook (WEO) database presents the IMF projections regarding the evolution of different variables at the global level, in some groups of countries and in a lot of individual countries. OECD also provides The Economic Outlook Annex Tables with the main projections on macroeconomic variables in individual countries and in certain regions.

Some statistics are computed for the predictions of inflation rate in euro area: U1 and U2 statistics. The value of DM test is 2.03, which is greater than 1.96. This implies that the null hypothesis is rejected and the differencies between forecasts' accuracy are statistically significant. From Table 2 we can conclude that the forecasts provided by IMF

are more accurate than those of the OECD. Moreover, the predictions of the two international institutions are superior to naïve forecasts, the U2 statistic values being less than 1.

Table 2: Accuracy Measures

Statistic	IMF	OECD
U1 Theil's statistic	0,153371	0,186492
U2 Theil's statistic	0,481601	0,663481

Source: author's computations

The directional accuracy approach is based on the acceleration (deceleration) of growth forecast. The directional predictions usually consider no change in government policies, nominal exchange rates, and dollar-denominated oil prices.

The data are organized in a contingency table.

n_{00} - negative change in registered values and negative change in predictions

n_{01} - negative change in registered values and positive change in predictions

n_{10} - positive change in registered values and negative change in predictions

n_{11} - positive change in registered values and positive change in predictions

It was computed the number of correct (n_{00} and n_{11}) and incorrect (n_{01} and n_{10}) direction forecasts that were predicted by the two institutions. According to contingency tables made for all the institutions, the cells frequencies are very low, this method being unsuitable for this particular case.

Table 3: Contingency tables

Forecasts' provider	n_{00}	n_{01}	n_{10}	n_{11}
IMF	6	1	2	4
OECD	4	4	4	2

Source: author's computations

If the sum of inputs in the two cells of the leading diagonal ($n_{00} + n_{11}$) is high, four statistics could be computed, the null assumption of the tests stating that the prediction change is independent from probabilistic point of view of the actual change .

Table 4: Tests for directional accuracy

Forecasts' provider	$\hat{\chi}^2_{\text{Yates}}$	p	S_n^2	Chi-square
IMF	0,029167	0,005828	0,00346	0,343812
OECD	0,027778	0,34965	0,00573	0,633629

Source: author's computations

The four statistics were computed to study the directional accuracy of inflation prediction. The results show that for all forecasts the null hypothesis was not rejected, which means that the forecasts are not valuable in the directional predictions.

5. Conclusion

The results of the comparisons between forecasts' accuracy show that the IMF forecasts of the inflation rate in the euro area are better than those provided by OECD. The DM test and also the U coefficients confirm this assumption. According to directional accuracy tests, the predictions provided by the two institutions are not valuable.

A future direction of analysis would be the assessment of forecasts' bias and efficiency, two other dimensions of forecasts' performance. Therefore, some tests should be applied to check the presence of bias and determine the "most" efficient prediction.

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Pension System Related Public Politics

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Abstract: *This paper aims to find some answers regarding the long term sustainability of the pension system. Romania's pension system originates from the invalidity insurances and pension system designed by the German cancellor Otto Eduard Leopold von Bismark in 1889. From a European perspective, Romania has to fill an obvious gap regarding the reformation of the national public pension system. International experience, particularly of the last 130 years, indicates that, in actuality, multiple pension systems have been put into function in most of the world's countries and which are diferenciated by some elements (organizing and managing the system, defyning pension rights, method of forming the resources, the pension's level rapported to the average income etc.) and after the eficacity degree dependent on internal influences, social, economic and demographic environment, and last but not least by the political factor.*

Key-Words: *public pensions system, social securities, public politics, economic sustainability, public expenditures.*

1. Introduction

The affirmation: "I won't live to see any pension" is often encountered in Romania, as an increasing number of people are taking into consideration the probability of not being able to enjoy the advantages of a sufficient pension following a live's work.

People's fear towards the pension period originates from two equally dark perspectives: on one hand the pension's age limit seems to gradually increase and, on the other hand, many consider the pension will be insufficient to fulfil the consumption requirements. For those directly involved in studying, calculating and awarding the pensions (National House of Public Pensions, Ministry of Public Finance, Ministry of Labor, Family and Social Protection, The National Prognosis Comission and even the Presidential Comission for the Social and Demographical Risks' Analysis) – the pension system implies a huge volume of material, technical and humanly-trained resources. In addition, the pensions are always a favorite topic in the political campaigns in which the politicians' continously promise higher pensions to an electorate that they reward or buy. Although everywhere in the world the pension problem and especially that of the high number of pensioners scares the authorities, in Romania the situation is really dramatic due

to the multiple conditions that fragment the population that is able to work. Unfortunately, the politics' intervention in the economy's life and structure decisively influences this fragmentation of the population. Due to the precarious life conditions, the lack of working places and the diminished wages, many young people able to work prefer to leave the country and work abroad.

Not all Romanians that leave contribute to the pension's system and social securities, although the incomes earned abroad enter the Romanian banks. Once every four years, the politicians speculate this fact by manipulating the electorate through modifying the pensions in accordance with their own interest. Consequently, the following have been modified: the retirement age, the age differences between men and women, the pension point size and the pension's taxing level. It is very difficult in these conditions to have an equitable and sustainable pension's reform in Romania. Such a reform is a sensitive subject for politicians (especially when only think as far as electoral cycles and we need politics that produce their effects after 3-5 electoral cycles) as well as for society. The pension-regarding public politics need to reconcile the interest for reducing expenditures with pensions from the public budget with the right of a decent pension for citizens.

Let us instead begin with defyning the fact that the pensions represent[1] a certain monetary sum (a financial product), and obtaining it and paying the beneficiaries (pensioners) imposes the organization of a specific system which would allow procurement.

2. Theoretical background

Romania's "step by step" pension system, similar to those in the majority of European countries, is a type that originates in the system designed by Bismarck approximately 125 years ago.

The most important observation for this system is that it has a mandatory character, associated to the individual labor contracts. The system is supported by three parts: employer, employee and state.

Western Europe has taken on Bismarck's system, thus becoming the model alternative for the beveridgean or anglo-saxon insurance system. It is used in many countries members of the EU, such as France, Germany, Austria, Belgium, Holland and Romania.

The characteristics of this model are:

- the financial resources are mainly represented by the mandatory contributions payed by employees and employers;
- there are also resources originating from the state budget's subventions (local or national) or other types of subventions;
- the institutions that administrate the insurance funds are nonprofit; managing and using the insurance funds are realized on a national level and trough local fiscal administration directions.

A short historic of Romania's social insurances reveals[2] the fact that the pension system originates as far back as 1895, when the mines law and legalization of the first

[1] Reform politics in pensions domain, Ion Marginean, Life quality, XVIII, no. 3-4, 2007, p. 321-338

[2] www.filbuc-caa.ro Short history of social securities in Romania, The emergence of the social security sytem in Romania. The end of the XIXth century – The first world war.

social assistance norms appeared. The workers' rights were awarded in a first phase by mutual support between them. However, mandatory social insurances were instituted for miners and workers in the petroleum industry when the mine laws emerged. With this occasion the pension right as well as the one to obtain compensation in case of work accidents were institutionalized, assistance and pension house was established, having their funds assured by the equal contribution of patrons and workers. Later on, in 1902 and due to the jobs' organization, a system of social insurances is established through the Missir law for several categories of workmen. Subsequently, the Nitescu law places on legal grounds the principle of mandatory insurances for accidents, diseases and eldereness for all employees of a corporation. The first private social security systems emerge in the interbleci period and function in parallel with the mandatory state social securities. While the state system belonged only to the labor contracts' titulars and to the workers, the private system attracts different social categories such as the Romanian Orthodox Church and the creation union's members. Following the great crisis from 1929-1933, the Ioanitescu law unifies social securities on the entire national territory. The law brings the principle of contribution and solidarity, establishes the contribution rate of 6% of the salary and guarantess the pension system by the state. Before the Second World War world outburst, in 1938, a new law is adopted that aims at supervising the insured people.

From a legislative point of view, the communist system concentrated on modifying the previous law, through the 409 decree from 1945 that stipulated the increase and indexing of pensions. The last law from the social security domain that was adopted by the communist power in 1977 imposed restrictions for the insurants' rights.

After 1989 a hard and troublesome period of legislative modifications started in the social securities domain, among which we remind:

- Law Decreet no. 70/08.02.1990 – through which modifications were brought to the age pensions regyme;
- The modified and republished no. 118/1190 Law Decreet – regarding the award of rights to the people persecuted out of political motivs by the dictatorship that began to be installed on March, the 6th 1945, as well as to those deported or imprisoned;
- The no. 42/1990 law – for honouring the martire-heroes and awarding some right to their followers, to the injured as well as to those that faught for the December 1989 Revolution's victory;
- The no. 73/1991 Law – regarding the establishment of some social security rights, as well as modifying and completing some regulations from the social security and pensions legilastion;
- The modified and republsished no. 1/1991 Law – regarding the social protection of unemployed people and their professional reintegration.

The effects of all these contradictory evolutions can be sintetized in this manner:

- the total number of pensioners increased from 3,58 million in 1990 to 5,401 million in November 2013 (+50,8%) under the condiions of a decreased number of employees from 8,156 million in 1990 to 4,378 million employees in September 2013 (-46,32%);
- the dependency rate3 has decreased from 3.43 in 1990 to 0,92 in 2001 and 0,93 in 2013;

3 The rate of dependency is the rapport between the medium number of employees and the medium number of pensioners.

- effective retiremenet ages well under the standard retirement age: in 2009 the differences were between 5 and 7 years[4];
- the dramatic decrease of real net average pension (1990 – 100%) for the 1990-2000 period (minimum of 44,3% in 2000), its slow increase for the 2001-2006 period (57-58% in 2006), followed by the spectacular rise from the years 2007-2009 (the maximum point of 123,8% being reached in 2010) and the relative stabilization in the years 2011-2012 situated around the value of 117%;
- the replacement rate[5] calculated on the base of average pension for an age limit and the average net income evolved from 48,6% in 2000, to 65,3% in 2010 and 58,2% in 2013 (based on the ground of the year's first 9 months average net income).

Average net pension of state social securities - REAL

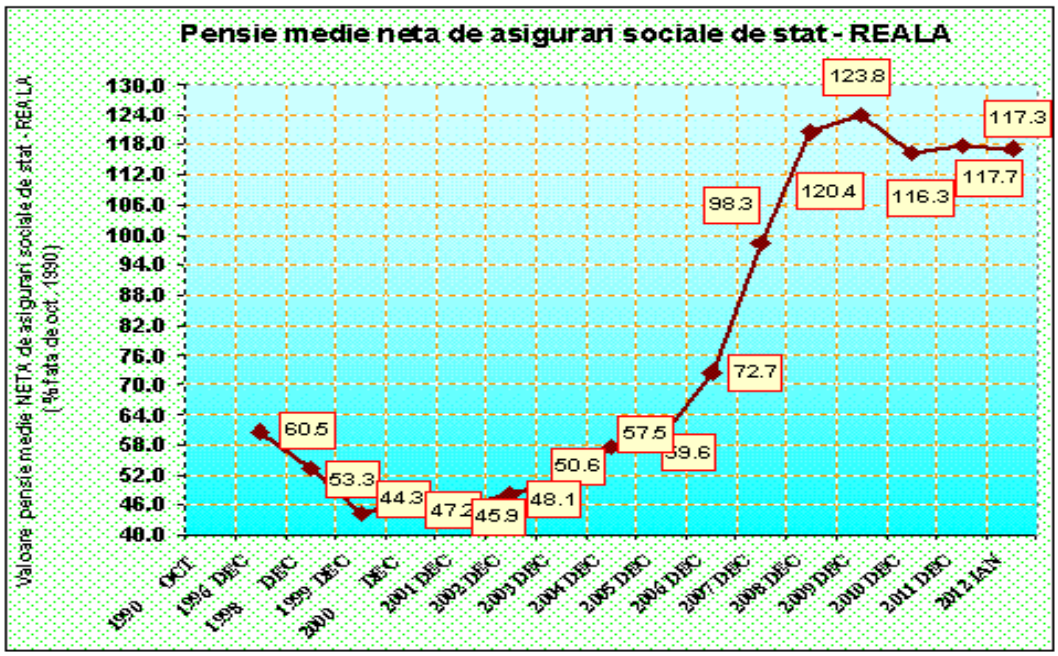


Fig. 1. Net pension evolution

Source: National House of Public Pensions

In spite of this we can consider that the real reform of state social securities begins with the no. 19 law from 2000, which determines the possibility of the social security system being accesed by all people who produce income, without only limiting to the labor contracts titulars.

At EuropeanUnion level, including in countries situated in Central and Eastern Europe, the pensions systems are mainly organized[6] as state pensions systems, financed

[4] Mihai Şeitan, Mihaela Arteni, Adriana Nedu, Long term demographic evolution and the pension system's sustainability, Economic Publishing House Bucharest, 2012, page 28

[5] The replacement rate represents the rapport between the pension's value (simple values, values for age limit and complete period of subscription) and the average income value (gross or net), in other words how much of the average net/gross income is replaced by the average pension

[6] PROJECT Improving institutional capacity of evaluating and formulating macroeconomic politics in the economic divergente domain with the European Union's National Prognosis Comission, codde SMIS 27153

and sustained by the state budget, organization mode which has special implications on the public finances. Simoultaneously, when we speak of the method of organizing and financing different types of public pensions systems that exist at the level of European Union's member states but especially whenwe speak of their financial sustainability, we need to take into account the more accentuated tendency of the population to age along with being consolidated with the financial constraints. Determined elements such as the ones below must be taken into account in order to classify the pension systems:

1. Firstly after the financing mode we distinguish a) pay as to go type systems (PAYG) which function on the principle of social solidarity, meaning that the employee pays, as long as he is active, a contribution that will become the future generations' pension and b) systems privately financed or administrated by the employee or employer's contribution;
2. Based on legal ground and method of establishment, there are systems established by law or by collective labor contract;
3. Based on the mode of participating to the system they can be mandatory or volunteer;
4. After the type of benefits there are systems in which the obtained benefits vary in accordance with the results of investing the participants' fund actions and systems in which a certain benefit is being established and the contributions are being calculated in order to reach that cetain benefit. Most of the majority of European countries is included in this last type of defined benefits, with the exception of Germany, Slovakia and Romania which have a point's system[8].

The pension system is sustained in the European Union by three pillars: the first pillar belongs to the pensions regulated by law, totally financed by third shares – social security contributions from participants to the public pensions system. It is a pay as to go (PAYG) type of system in which countries such as Bulgaria, Estonia, Latvia, Livonia, Hungary, Poland, Slovakia and Romania. The second pillar is formed by pensions established by the labor contract (through collective or individual stipulations) named occupational pensions, strictly connected to the working place in countries such as Bulgaria, Polland, Hungary, Romania or Slovenia. The third pillar of individual stipulations, unrelated to the occupation. The members are mainly, and not mandatory, employees with the possibility of collectively adhering (through sindicates or associations). The participation is not required by law, the employers or state can contribute to this system.

Table 1. Comparison between the private pension systems in Poland, Hungary and Romania (at the second pillon level)

POLAND		
PRIVATE PENSION'S SYSTEM ORGANIZATION	**THE SYSTEM'S GUARANTEES**	**DEVELOPING THE MARKET ON THE 2ND PILLAR LEVEL***
Pilon I- Mandatory • Pay as You Go, Definite contributions, virtual accounts - conturi virtuale -reformed in	**Performance minimum relative assurance** Minimum rate of productivity – the smallest value between:	14,36 mil. participants - Pillar II 14 administrators 43,76 active gross billion

1999 •Ocupational public pensions schemes **Pillar II -** Mandatory Defined contributions, individual accounts, 7,3% from the gross income contributions Mandatory for those under 30 years Optional for those with ages between 31 and 50 Introduced in 1999 **Pillar III**-Optional •Definite contributions, optional ocupational plans introduced in 1999 •Personal optional schemes introduced in 2004 •Rezerve fund, on demographic grounds •RETIREMENT 65 men / 60 woman	--the market's average capacity for the last 3 years minus 4 percentage points and -50% of the balanced capacity rate annualized for the last 3 years The administrator's funds must cover any potential deficits The national guarantee fund's resources are used in case the administrator enters bankrupcy That which cannot be covered by this fund is assured by the state's treasury.	euros 14,11% balance in the GDP **MAXIMUM LIMITS FOR PLACEMENTS** 40 % actions 40% mortgage, municipal or corporate obligations, 20% depozited Statistically – 31 % of assets are placed in actions **MAXIMUM PERMITED COMISSIONS** 3,5% of contributions, in 2010 Comissions in terms of fund size. 0,54%/year of the small funds actives and 0,06%/year of the net actives, in terms of capacity Transfer of 23 – 42 de euros (<2 years)

HUNGARY		
THE PRIVATE PENSION'S SYSTEM ORGANIZATION	**SYSTEM GUARANTEES**	
Pillar I- Mandotary •Pay as You Go, reformed in 1995 **Pillar II** - Mandatory 1998 Defined contributions, individual accounts, Contributions of 8% out of the gross income (possibility of an additional 2%) Mandatory for those under the age of 35 Optional for the rest of employees **Pillar III**- Optional 1994 •Defined contributions, individual accounts **Pillar IV**- Optional 2007 Launched for occupational pensions •**RETIREMENT** 62 men / 62 women	•**No performance guarantees,** only indirect guarantees •**Hungary has a special fund** for protecting the capital ccumulation, financed through mandatory trimestrial contributions, between 0,3 and 0,5% of contributions •The special fund protects the retirements' total benefit and the contributors' accumulated capital in case of insolvency. Capacity objectives need to be established, however failure has no consequences.	3,02 mil. participants – Pillar II 19 administrators Gross assets of 9,63 billion euros 10, **DEVELOPING THE MARKET ON THE 2ND PILLAR LEVEL** 34 % of the GDP **MAXIMUM LIMITS FOR PLACEMENTS** 50 % stocks, 30% obligations, 25% mortgage obligations, 10% in mortgage funds, 5 % in hedging funds **MAXIMUM PERMITED COMISSIONS** 4,5% of contributions 0,,66% a month for gross

		stocks – management comission
ROMANIA		
THE PRIVATE PENSION'S SYSTEM ORGANIZATION	**SYSTEM GUARANTEES**	**DEVELOPING THE MARKET ON THE 2ND PILLAR* LEVEL**
Pillar I PAYG type – the pension points system **Pillar II**-Mandatory/Optional 2007 Defined contributions, individual acoounts, Contributions of 2,5 % (10,5% out of the gross income) – 6% since 2016 Mandatory for those under the age of 35 Optional pentru employees with ages between 35 -45 Separation exist between administrator and fund. **Pillar III**-Optional •Optional pensions, contributions of max 15% from income, individual accounts •**RETIREMENT** 65 men / 60 women (2015)	**Relative guarantee of performance** **Minimum level of profitability,** calculated on risk **Absolute guarantee** The total rightful sum for the private pension cannot be smaller the value of payed contributions, diminished with transfer penalties and legal comissions. **Other safety elements** Romania disposes of the largest range of risk control instruments: assets separation, actuarial funds, revision through depositary, guarantee fund, audit, minimum profitable rate. **The guarantee fund** is destined for covering some risks that are umpredictable and are not covered by technical commission.	4,57 mil. participants - Pillar II 12 administrators 0,56 billion euros gross assets 0,49 % balance in the GDP **MAXIMUM LIMITS FOR PLACEMENTS** 20% in instruments monetary market 70% state titles 30% titles emited by local administrations 50% actions 5% corporative obligations 5% mutual funds **MAXIMUM PERMITED COMISSIONS** Max. 2,5% of contributions Max. 0,05% / month of the active gross

Source: Adaptation by Dan Zăvoianu – Comparison between private pensions system of type pillar II and the world's states markets – Communication Direction – CSSPP, Bucharest, july 2010

** at the level of December 2009*

In spite of these, in the evaluation of different pension plans we must also take into account what goes on in practice, since it has been observed that the sum saved by the population is relatively constant in a certain period. If a certain saving system is imposed, the sums saved through other methods will drop[7].Therefore, the economic growth shouldn't be related to the specific methods of composing the pension systems, of the existence or lack of acumulation funds, even if they constitute important sources for investments. On the other hand[8], the largest part of pension funds is placed, in order to avoid investment risk, in state titles, thus in the public duty. Indeed it is expected for the private pensions' fund managemenet to be prudential and to, thus, avoid faiure but relatively small acumulations of contributions for the system will result. The Global Bank's and European Union's notice of the differences of approaching the pensions reform

[7] Atkinson, A.B., Rein, M. Age, Work and Social Security, Macmillan, Houndmills, 1993
[8] Ioan Marginean SOCIAL AND FISCAL POLITCS. REFORM POLITICS IN THE PENSIONS DOMAIN

is very important to us, since in the treatment applied to the Global Bank (also sustained by the International Monetary Fund as the low level of incomes is generally concerned, and that of the pensions, as a method of controlling inflation by reducing cosumption).

Obviously, Romania was not the only one to suffer such an influence, but other ex-socialist european countries. We should keep in mind that the differences mentioned here between the EU and Global Bank are not disputed directly, but rather by reciprocal ignorance of the projects between each side. Therefore, in the Global Bank's studies, the public pensions schemes are considered to be inadequate, hard to reform, represent a blocage for the economic growth and are recomended for the governments of coutnries assisted to not repeat the „expensive mistakes of industrialized countries"[9]

On the other hand, in the EU, the pensions' system reform is aimed at not being realized in the detriment of actual beneficiaries, so not through diminishing the public system's role, which is the most expanded and will remain the main system, but which, however, does not represent the only solution. An equitable inter-generational balance, a satisfying level of pensions, sustainability and modernims[10] could be reached through reform measures that could also imply discounts of public pensions' quantity (which are in fact very generous in other countries).

Consequently, a pensioner can have one or more pensions, with financing from one source or many such sources. Theoretically, the more the pension sources multiply, the more the chance of covering in a larger area the requirements for an acceptable life standard is expected to grow. However, this fact does not happen automatically if the pensions' cuantum is small from each source and per total the optimum level of financial resources may not be reached.

The most disadvantaged and highly improbable situations would be those through which the target-population could not be covered, although many sources and types of pensions exist, and/or the added quantum of pensions which would have been insured by a single system/single pension could not be supplied. Natural it would be to aim at obtaining high performances of supplying incomes to the beneficiaries, within every system/source/pension. If two or several systems do not exceed the accumulated performance which could be obtained through a single one, introducing them would be unjustified if we consider the fact that this would also imply a high level of administration costs in comparison to the function of a single one.

The danger of the pension system collapsing has left Romania, for a medium and long term, but its sustainability is still discussed. On the background of occupying the labor force with negative tendencies, the population's rapid aging and that of demographic involution which is announced to be disastreous (The National Statistics Institute foresees that the population will drop until 2060 with approximately seven million people), the pensions system will not manage to offer the necessary social protection to future pensioners and will become a death rock on economy's neck (affecting investments in productive sectors and increasing fiscality). After recalculating the pension system for the year 2010, it has become more equitable, being relatively simple to apply and easier to understand. In this context, last year's measures have favorited sustainability.

In our country the actual pension system has three pillars, similar to other European Union's countries, such as:

[9]Averting the Old Age Crisis Policies to Protect the Old and Promote Growth, A World Bank Policy Report 1994, p. XIII and the album's 4th cover

[10] Adequate and Sustainable Pensions. Synthesis report 2006, European Commission, 2006

Pillar I public pay as you go pensions budget with defined benefits, reglementat by the law 263 from 2010 according to which the employee's contribution is of 10,5% of the gross income salary and the employer's contribution is of 20,8% in rapport with the employee's gross salary.

Pillar II the mandatory pensions fund, reglemented by the law 411 from 2004 and characterized by mandatory participation for employees under 35 years and optional for those with ages between 35 and 45; the contribution (in 2013) of 4% out of the employer's gross income is in fact a part of the contribution owned in Pillar I; minimum investing guarantees – the real sum of all contributions from which administration comissions are deducted.

Pillar III optional pensions fund, reglemented by the 204 law of 2006, in which participating is optional, it is privately admnistrated and the profit cannot guaranteed. In this pillar the contribution is of 15% maximum in rapport to the gross income, it is a contribution unitively suported by the employee and employer and is encouraged through fiscal deductability.

Several studies came out in the last years with detailed refferance to the alternatives of public politics in the pensions domain. Therefore, in 2012, Expert Forum published Working Paper 3 entitled „Who will pay the pensions of the „decree people" in 2030? Romania's situation in the context comparative to the EU and 7 scenarios of evolution of the public pensions system".

Thus, according to the most plausible scenario, the pensions fund's deficit will be of max. 2,5% of the GDP in 2019 provided that the legislation will be kept in the actual form. In 2042 the fund wil reach a deficit of aproximately 1,2% of the GDP. The pension as a percentage of the gross average income, which is presently of 37% will decrease to 24% in 2031. The study's conclusion is that depending on the alternance of political parties with left or right ideology, an accent will either be put on the social component or on reducing the deficit from the GDP. In the case of social component the levels grow from contributions directed towards the 2nd pillar at 10%, the GDP deficit can grow with 0,62% as oposed to the initial scenary, but the rate of replacing incomes with pension is improving by 2%. In case the GDP's deficit reducement is required, the retirement age will grow up to 65 years and after a deficit of maximum 2% of the GDP in the year 2019, the fund will equilibrate. However, the pension system will represent the trial point of any government even 50 years from now, which is the conclusion entitled „Social risks and inequities in Romania", published in 2009 by the Presidential Comission for Social and Demographic Risks Analysis[11].

According to the said study, the retired population (with ages of 65 and higher) is in a continous growth while the number of employees is decreasing dramatically:

- a few gemerations have started to enter the labor market from 2008, and the number of employees will not rise very much even in the eventuality of a constant economic growth. As a reuslt, resorting to imigrants will become a necessitty in the next five-six years, when the labor force youth entries will be very little and reduced by the rising share of students in each cohort and by the already too few young people that will leave the country for better payed jobs in the West;
- starting with 2030-2035 the new-born children, which will probably be less numerous, of the transaction generation will enter the labor market. Only a redression of

[11] The Presidential Commission's rapport for the Analysis of Social and Demographic Risks, lead by Prof. dr. Marian Preda, entitled "Social risks and inequities in Romania", published in September 2009.

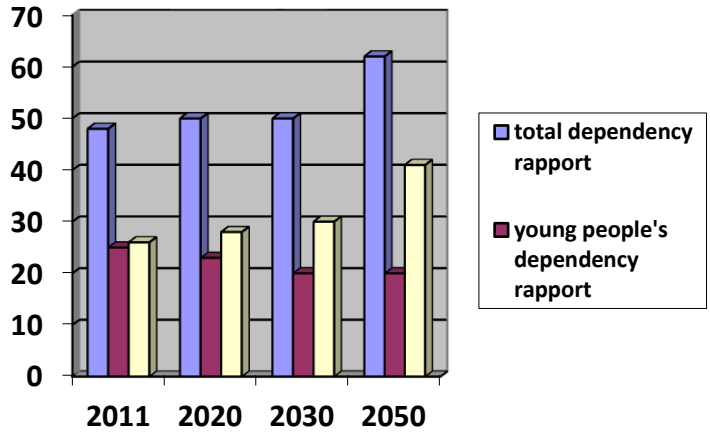
the fertility rate (which should reach from 1,3 the EU medium term average of at least 1,5 and on a long term 1,7 – 1,8), corelated with an adjustmenet of migrational inflows would reduce this process;

- the problem of elderly people that lack pension and health insurance will especially be noticeable after 2025 when the people that are curently unemployed or working on the black market will reach advanced ages without beneficiating of pensions or health insurances, and the costs of minimal services for them will have to be supported by the social assistance system.

3. Conclusions

As already shown, the tendencies of evolution for the population's structure are negative and will be followed by its accelerated aging. Presently, the population that surpasses the age of 65 is of 3,3 million people which means 16% of the total population. In 2020 the pensioners will represent 3,6 million, namely 17% of the country's total population and if it will follow the same ascending trend, by the middle of the century the pensioners will represent 30% of the total. Simoultaneous with the population's aging we are assisting to a decreasing natality and the increase of the elderly's dependecy raport. In graphic 2 we can notice the dependcy level of youth and elderly in the total of dependent people. As it can be observed, the total number of dependents tends to reach half of the country's population since imigrants and uninsured people are added to the youth and elderly. This data does not take into account the disabled population.

Fig. 2. Dependency rapport between active and retired people



Source: INS, Projecting the active population on the 2050 – 2013 horizon

We must not forget that after the year 1990 the process of gradual decrease of population began, and from 2008 a smaler number of young people started to enter the labor market. As a matter of fact the predictions regarding the country's total population are allready known. Presently we are aproximatenly 20 million people, followed in 2020 by little over 18,2 million and in 2060 we will reach aproximately 13 million inhabitants.

The public system in Romania is similar in many aspects to the one in most of the European Union's member states, which are type Bismarck systems. In this case, the

financing method is, as we have previously shown, a „pay as you go" type, which impplies that the system is based on redistribution (pensioners are payed from the actual wage earners' contribution), thus creating a dependency between retired people and active population (measured through the dependecy rapport).

Pension systems in the EU's coutnries as well as the one in Romania are influenced by the changes of demographic indicators. The population's aging is one of the most important burdens of this system, being a phenomen which leads the dependency rate's growth.

Taking in consideration this situation, we can observe that the actual level of social contributions is unsustainable on a long term. Context in which Romania proposes the folowing for the 2014-2020 period, according to the European Comission's partnership agreement: „70% of the population with ages between 20 and 64 should be employed" – in regard to the rate of occupying the labor force, a ground element in sustaining a viable pensions system; and „the number of people exposed to the poverty or exclusion risk should be 580 000 less (in comparison to the 2008 levels).[12]"

In conformity with these objectives, our country considers as oppourtune the following measures:

- combating illegal labor;
- promoting the employment of elderly workers;
- improving the participation on the labor market, as well as the level of occupancy and labor force productivity by reviewing and consolidating the active politics regarding the labor market;
- assuring training and individualized services and promoting life-long studying;
- increasing the capacity of the National Agency for Labor Force Occupation to improve the quality and degree of coverage of their services;
- combating unemployment among young people, rapidly implementing the National Plan for Young People's Employment.

Reforming the pension system is mandatory and it must represent a priority for the public politics of any government.

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Study about the Relationship between Accounting and Taxation. Proposals for Disconnection

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Abstract: *The observation that many practitioners, by virtue of strong dependence between accounting and taxation encountered in our country after years of "90, find with difficulty the way to detachment of accounting and taxation by making cautious steps, lack of courage, was the impulse for choosing this research topic. Therefore, we consider that research in accounting and taxation field must represent the combination of information obtained as a result of theoretical research with information from economic reality. By its content, this study, perform extensive research on the intersection of accounting information with tax elements, combination oriented to disconnection between the two areas.*

Key-Words: *integrated reports, neutral reports, relations between accounting and taxation, convergence, divergence.*

1 Introduction

The relationship between accounting and taxation was characterized over the time by words and phrases such as *dichotomy, subordination, convergence, divergence*, and more also, who takes imagination to see the eternal status of conflict between the two. Professor Ristea (2003) believes that "we have accepted a new formulation of the relationship between accounting and taxation, the dichotomy "**connection and disconnection**". **Connection**, because by the same system, the accounting is done two purposes, accounting and taxation. **Disconnect**, considering the differences between rules and principles of accounting and tax. "

In a regulated accounting, accounting information is built on the principles, rules and regulations intended to serve their objective. Instead, tax information, subordinated to tax interest, serves as a basis for taxation, an according to the principles, rules and standards defined by tax law. The relationship between accounting and taxation is

influenced by the objectives and principles of both areas aimed at helping to fulfilling them.

We propose, through this study, several measures to help disconnecting between accounting and taxation.

2. Relationship between accounting and taxation

Accounting is an instrument for understanding and managing of the financial position and the result obtained by an economic entity. It must provide accurate information to investors' capital, for state institutions (including tax), suppliers, and employees.

Excessive taxation and tax regulations instability leading to the choice of accounting methods that, ultimately, does not reflect a true and fair view of the financial position, but one adapted to the tax and conjectural.

The relationship between accounting and taxation is influenced by the reports between the two. Given this situation, the question what arises is demarcation and hierarchy of reports between accounting and taxation.

These reports can be grouped into two categories: *integrated reports* and *neutral reports*.

Integrated reports (employees) are connection reports, being determined by the intersection between tax and accountant interest. In case of these reports reveal differences between accounting and tax principles that must be harmonized. Employed reports are considering reconciliation of relations between accounting and taxation.

In the area of these reports are part mainly three problems:

- Depreciation of non current assets;
- Evaluating, and
- Taxation of profits.

In the area of integrated reports between accounting and taxation, falling rules on deductibility of expenses in determining taxable profit of the company. To this direction must be applied the principle of connection between expenses and income, which requires recognition in the financial statements for only those expenses which are incurred in carrying on the company's current activity. Other costs that it generates should not be recognized in the financial statements.

This point of view is more purely accounting. But, given the fiscal aspect of the problem, the company must record all documents that are prepared on its behalf, which means that some of them contain costs that are not recognized. These expenses must be accounted for, but when calculating income tax should be eliminated, thus obtaining a higher taxable income and consequently of the income tax payable to the budget.

Another consequence of application of the principle of linking expenses at the revenue is that: an expense is deductible for tax purposes only if they are generated by revenue. For example, if a company records expenses in the period when not engaged, expenses are considered nondeductible from a fiscal standpoint.

Neutral reports between accounting and taxation do not directly affect the profitability of the company. They occur when the dividend tax, income tax, social security contributions, VAT (when it has a pro-rate deductibility of 100%). The information provided by accounting is used from taxation in the calculation and settlement of taxes and contributions.

Neutral reports between accounting and taxation have in mind that accounting information is used for taxation like a support and purpose for determination and settlement support for taxes and contributions. These reports do not require conciliation of differences between accounting and taxation; do not generate usually problems on the harmonization of the two interests.

These reports can be exciting for the company's fiscal management, accounting default, only to the extent mobilize the imposed subject to a behavior recorded in fiscal effectiveness.

3. Relations resulting from the reports between accounting and taxation

The relationship between accounting and taxation must be analyzed beginning from the evidence that objective of accounting is different from the taxation one. In addition, two other factors are involved in this equation: entity, through associates or shareholders, and professional accountant, each of them with its own objective. Thus, four factors of interest are found four different objectives:

This objective sustains structures described and recognized in the financial statements.

According to financial reporting conceptual framework, the objective of general purpose financial statements is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in the decisions they take on providing resources to the entity.

Information about the financial position aims:

- economic resources controlled by the entity and that are useful for anticipating the entity's ability to generate future economic benefits;
- structure of funding sources, it is necessary to anticipate future needs credit and the possibility of obtaining such loans;
- the distribution of profits and future cash flows, liquidity, solvency of the entity and the ability to adapt to changes in the economic environment in which it operates.

The objective of taxation consists in calculating, charging, placing, tracking payment of taxes and contributions due from economic units, state.

These objectives are achieved by promoting financial policy economic and social. Taxes are a form of sampling a part of the income or property of individuals or legal entities to the state to cover its expenses. This sampling is necessarily non-refundable basis and without consideration of the state. It is necessary that fiscal rules to be known and respected as from payer and the tax authorities.

The objective of the economic entity, of the owner is to make a profit. Ownership unbundling and power within the entity favored the development and other objectives, but whose implementation remains subject to obtaining a satisfactory profit. These goals relate to increasing or maximizing sales and the quality of service rendered or goods.

Making a profit remains, therefore, the first purpose of the entity, but not only.

Accountant objective is to achieve the first three objectives respecting accounting and tax rules so that:

- To present a true and fair view of the financial position, financial performance of the entity and changes in financial position and financial performance (the objective of accounting);
- Ensure the correctness of the calculation and recording taxes owed by the economic entity (which consists of fiscal objective);
- To build the desired result as beneficial owners using tax incentives and accounting and tax treatments, when the choice (within the limits of the objectives of the two fields of accounting and taxation).

When accounting principles are in conflict with the taxation, arise the problem about the reconciliation between accounting, which represents the interests of society, and taxation, representing the interests of the State.

Relation accounting-taxation is a subject that can be analyzed in the context of optimizing fiscal management company.

Tax administration is considering tax parameter, respectively the entity's tax obligations. Effective realization of the fiscal management objectives is by fiscal policy entity as concrete manner using specific tools and techniques.

Searching and performing of fiscal security must ensure relationships between entity and taxation regarding substance and form and payment postponement imposed by tax law. Achieving this objective involves the carrying out of appropriate allocation of financial resources to avoid delay penalties, fines and tax penalties.

Searching and performing fiscal efficiency refers to the fact that the entity needs to optimize its economic and financial relations with taxation. Entity behavior in this direction is possible in the system of taxes and contributions provide ways of instigating entity taxable amount on line growth or profit use in certain destinations. For example reinvestment of profits involves tax reduction.

In a research study on normative type concerning change that occurred in the accounting regulations in Romania (Ristea et al., 2010, 188) in the last ten years, the authors concluded that "at present, in Romania, accounting and taxation is disconnected, only barrier left to overcome in custom accounting practitioner to think in terms of economic transactions tax ".

Although formally accepted, disconnecting between accounting and taxation, in the implementation process continues to face many difficulties. It can see great progress, sometimes unexpected, followed by recovery and reinterpretations, as noted Popescu (2006).

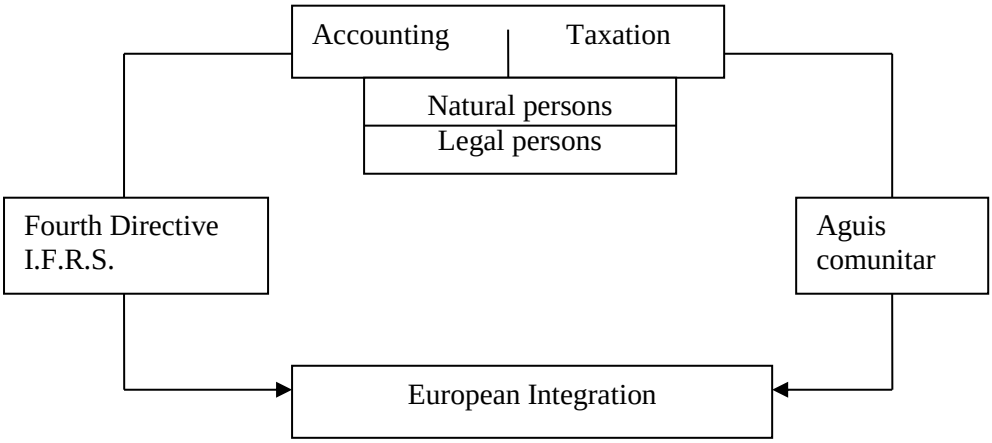
But there remains an artificial dependency between taxation and accounting, maintained by the practice. And we refer to situations in which, although there are accounting rules, it choose the taxation rule to the detriment of accounting one, for several reasons: convenience, saving time and administrative costs. An example of this is the depreciation: accounting rules may differ significantly from fiscal rules, which has the effect of keeping the two records amortization: accounting (in the accounting records) and tax records (in a special register for this purpose).

In practice it is usual to use the same method of depreciation for accounting purposes and tax purposes to avoid complications regarding double records depreciation. Most often, however, the accounting rule is deliberately circumvented in favor of the tax. Is the valuation of the inventory reflected on the balance sheet, assessing the taxation is not recognized. There are few accountants specialists who respect the accounting rule in this regard.

In general, in case of separate tax rules, different from accounting rules, must be applied two sets of rules, which may increase the bureaucratic burden on businesses. It can lead most of the time, to the failure to comply with accounting principles.

Taxation has also passed through many changes in the last twenty years. Some of the changes were dictated by state fiscal policy, by the political interests of various parties in power, and some of integrating, in 2007 the European Union. All changes related to harmonized taxation had a direct impact on each category of taxpayers, individuals and businesses, and from an accounting viewpoint changes confirms that all plans must be made for the image correlation both fiscal and accounting statements financial statements to reflect reality and to be comparable at both micro and macro level.

Briefly we can imagine the relationship between actors participate in the economic and tax in close interdependence, each generating a stimulus on the other, as shown below:



We can conclude that an important step has been made regarding the separation by the tax accounting rules on a regular, but not enough specialists as long as your account remains still victims of economic transactions habit of thinking in terms of taxation. It is imperative to achieve this separation in practice, involving the need for thorough preparation for mastery of accountants to detail the laws and accounting rules, so as to understand and to learn and to master those taxes.

But there are many problems that an accountant is forced to face and largely state they are caused by excessive bureaucracy, the greater the number of laws that come into amending the Tax Code and accountants who make trouble.

In our opinion, although difficult path from addiction to disconnect taxation accounting has been completed, there is still a hard and difficult road from theory to practice. Theorists believe that it is the duty of helping practitioners, through their work, understand and follow this path.

Our proposals which aim to disconnecting between taxation and accounting refer to the following:

1. Assurance of a stability regarding legal provisions at least at the level of a financial period, although we consider that normative acts should have effect over a greater period. Our proposal stops at the financial period in the conditions in which the legislative modifications take place in Romania with great frequency and in any period of the year. The fiscal stability represents an essential condition for the predictability of the business system.

2. Publication of legislation and modifications brought to this in an adequate period of time before the date of coming into force, so that the entities affected by the new legislation can take the required organizational measures.

3. Publication of application norms, not only at the adoption of a normative act but also at its modifications, at the same time with the regulation act. At present, in most cases there are provisions regarding the publication of norms in terms of thirty days. Since they are not published at the same time with the regulation referred to, a dysfunctionality occurs, many of the normative acts giving rise to misinterpretations for lack of application norms. Besides this, the foreseen term is not observed very often.

4. Use in the normative acts of a common terminology which does not create confusions. In this sense, the Fiscal Code uses at present the term of „provisions" meaning the adjustments for the debts depreciation.

5. A better analysis of the legislation, so that provisions contradictory to those from accounting regulation and fiscal legislation be eliminated, as it is the legislation regarding the fixed assets (corporal fixed assets in accounting regulations) or at the acquisition of non-corporal fixed assets which is considered from the VAT point of view, respectively of the Fiscal Code, as an acquisition of delivery of services, even if from an accounting point of view we have a acquisition of non-corporal fixed assets.

6. Republication of legislation in the accounting and fiscal field after the successive modifications which take place as to enable its adequate comprehension.

7. Simplification or taxes reduction (of the number of taxes) as well as of the fiscal statements which would lead to the diminution of time and resources used in this sense with a result, as it followed from the empirical study made, and upon the true and fair view presented in the financial statements.

8. For the situations in which the accounting regulations foresee more accounting treatments, leaving to economic entities the choice of one of them, we consider that it should exist some conditionings and norms in this sense which would minimize the impulse to creativity. The Romanian economic environment is not prepared to use the options with the purpose to present a true and fair view.

9. From the empirical study, we draw the conclusion that in most cases, where the taxation doesn't recognize an accounting treatment, this doesn't apply in practice. It is the case of balance sheet evaluation where adjustments of depreciation are not registered in most cases because they are not allowed by taxation. We propose in this sense the setting up of an obligation, so that the information from the accounting reports be complete and also comparable with those of the entities which observe the principle of prudence and recognize the depreciations in the financial period in which they appear.

10. We consider that the only solution to prevent the financial statements from fiscal pollution is to separate the accounting 'work' from the fiscal one, so that these two be performed by different persons. Although it requires an additional consumption of financial resources, this measure will guarantee the presentation of an image not altered by fiscal provisions by means of financial statements.

11. We consider that raising more awareness of all who contribute to the drawing up of financial statements, starting from recognition and evaluation and finishing with their elaboration, will have an impact upon the observance of accounting reports' objective. We propose in this sense the delegation of responsibilities when drawing up the financial statements starting from the regular level, the lowest on the managerial chain.

12. For a good informing of the factors implied, not only of institutions but also of those who prepare and assume the responsibility for the information comprised in financial

statements, it is necessary the setting up of **a strategy of communication** which should have in view at least the following aspects:

- communication between the institutions of the State and professional organisms on one side and the business environment on the other side;
- communication between the economic academic environment and professional organisms in view of correlation of studies programs with the demands imposed by professional organisms, demands which result as a rule from European Directives or from standards regarding education.

13. Last but not least, we believe that it is necessary the periodical evaluation of professional accountants and even of auditors and of the way in which they respond to the demands imposed by the norms and standards issued by the specialty organizations to which they belong.

4. Conclusions

As a **general conclusion** of the present work, we can consider, without reserves that **significant progress was made** i**n Romania regarding accounting and taxation as well as regarding the disconnection of taxation from accounting**. This process of perfection of the accounting and fiscal system needs a special attention in the future because on an international and European plan, the mentioned fields are very dynamic, fact which also influence the national environment in the conditions in which business doesn't know boundaries and its effects, favourable or not, spread very quickly.

The conclusions, the results of the research and the examples expressed in this work can be a source of information which can be taken into consideration by the management of entities in order to establish, apply or change their own accounting policies in the context in which we all should be aware that accounting regulations corresponding to European directives encourage the disconnection of accounting from taxation.

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The Romanian Product Innovative Enterprises - A Statistical Analysis Using "R"

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Abstract: *This paper presents the main characteristics of product innovative enterprises from Romania. Based on the literature review, the central proposal of the paper is a statistical analysis using logistic regression in R in order to show the relationship between firm sizes (number of employees), turnover and product innovative enterprises. The statistical analysis was conducted using unweight data from the "Inovarea în industrie şi servicii" (INOV) survey, wave 2010 – 2012 and it is representative at national level. The Romanian survey is harmonized with the Eurostat Community Innovation Survey.*

Key-Words: *enterprises, product innovation, Romania, logistic regression, enterprises size, turnover.*

1. Introduction

1.1. Objective

In order to have a better understand of the position of Romanian enterprises towards product innovation, this paper analyses two main characteristics: enterprises size and turnover. The analysis attempts to describe the relationship between the two main characteristics of enterprises and the introduction of new or significantly improved goods on the market. For a better comprehension of the product innovative enterprises situation, in Romania, we have chosen to use unweight data from official statistics and to inference the results based on the standard methodology of the statistical tests we have used.

1.2. Literature review

Since the evolution of technology and the general concern for a sustainable development became a topic of actuality, we hear moreover about innovation in business environment and in individuals' daily life. The interest in studying the innovation concept became popular not just in science, but also in official statistics and in practice.

Rosenberg (2004) sees that in the most fundamental sense, there are only two ways of increasing the output of the economy: (1) increasing the number of inputs that go into the productive process, or (2) finding new ways in which you can get more output from the same number of inputs. Nicholas (2014) consider that economic growth can be driven in

the short run by factor accumulation or by utilizing factors more efficiently, but permanent increases can only result from technological innovation. Regardless of circumstances, the majority of enterprises seem to have understood that the key of development and the success on the market is to innovate.

According to OECD (2014) among firms that innovate, the lack of own funds and the high perceived costs of innovating are the two factors most cited as hampering innovation across all countries. In all countries, innovation by small firms appears to be more affected by hampering factors than in medium and large firms; however, in any given country the types of factors perceived as important are the same independently of the size of the responding enterprise.

A wave of studies pointed out that, small enterprises are engines of innovation (Shefer and Frankel, 2005; Audretch and Feldman, 2003; Hoffman et al., 1998; Santarelli and Sterlacchini, 1990), while others underline that SMEs tend to be disadvantaged relative to larger firms that generally have better access to funding and other resources (Olsen et. al., 2006), which facilitates the innovation process. In Romania, more then 90% of the enterprises are SMES, but just a small part of them are innovating, and overall Romania is the less innovative country among European Union countries.

Although there are many types of innovation based on different criteria, the typology used in official statistics refers to: product innovation, process innovation, organizational and marketing innovation, but by far the most important one is the product innovation. Taking into consideration the theoretical aspects and the position of Romanian enterprises regarding innovation in international top-ranking, we choose to analyze if the firm size and the financial resource (turnover) influence the introduction of new or significantly improved goods on the market, in Romanian enterprises.

2. An overview of product innovative enterprises in Romania

In 2012, according to Eurostat online data (inn_cis8_type), Romania is the country with the lowest percentage of innovative enterprises (20.7% from total enterprises) among EU states member. Romania occupy the last places in the EU ranking also regarding the product innovation, with just 1.2% of product innovative enterprises from the total number of enterprises in the population in 2012. These data raise concerns regarding the enterprises innovation capacity in Romania.

Table 1 shows us the Romanian innovative enterprises dynamics during the last six waves of the Innovation in industry and services report. It is noticed that during the 2002 – 2008, the percentage of innovative enterprises increased, and then dropped. A significant drop occurred in 2010-2012 when the percentage of innovative enterprises dropped by 10.1%.

Table 1: Innovative enterprises in Romania (% from the total number of enterprises in the population)

	Years					
	2002	**2004**	**2006**	**2008**	**2010**	**2012**
Innovative enterprises (% from the total number of enterprises in the population)	17	19.9	21.1	33.3	30.8	20.7

Source: Romanian NIS, online code: INO101A.

Going forward to analyses the situation of product innovative enterprises in 2012, we notice that just 3.4% from the total number of enterprises in the population are enterprises with product innovative activities (see table 2), the equivalent of 16.5% from the innovative enterprises. Focusing on enterprises size, we notice that the most innovative are the companies with 250 or more employees and the innovative SMEs are having a lower percentage.

Table 2: Product innovative enterprises in Romania, in 2010 - 2012

All NACE - Total	Innovative enterprises (% from the total number of enterprises in the population)	Product innovative enterprises (% from the total number of enterprises in the population)	Product innovative enterprises (% from the innovative enterprises)
Between 10 and 49 employees	18.3	2.2	11.9
Between 50 and 249 employees	26.6	5.7	21.3
250 or more employees	40.1	16.7	41.8
Total	20.7	3.4	16.5

Source: Author's calculations based on INOV microdata, weight data, wave 2010 - 2012.

Based on the previous descriptive statistics we launch two hypotheses:

H1: the product innovativeness of enterprises is influenced by the number of employees (individuals);

H2: the product innovativeness of enterprises is influenced by firm size (class - number of employees).

In order to innovate, the company needs resources and for product development the financial resources are mandatory. We can speak about innovation without taking into consideration its cost; therefore we decide to take a closer look on companies' turnover.

Table 3: Product innovative enterprises turnover in Romania, in 2012

All NACE - Total	Total turnover of the innovative enterprises (% from the total turnover of all enterprises in the population)	Total turnover of the product innovative enterprises (% from the total turnover of all enterprises in the population)	Total turnover of the product innovative enterprises (% from the total turnover of all the innovative enterprises)
Between 10 and 49 employees	19.5	2.6	13.4
Between 50 and 249 employees	32.1	6.3	19.6
250 or more employees	51.8	25.4	49.1
Total	40.1	15.9	39.7

Source: Author's calculations based on INOV microdata, weight data, wave 2010 - 2012.

The total turnover of the innovative enterprises (see table 3) is 40.1% from the total turnover of all enterprises in the population. Regarding the companies oriented toward product innovation, the total turnover of the product innovative enterprises is 15.9% from the total turnover of all enterprises in the population. Regarding the distribution of turnover

on enterprises size, we notice that the percentage is very close to the share of product innovative enterprises, which strengthens our previous hypothesis.

Having in mind that the literature suggests that resources are an enabler of innovation (Gibbert et al, 2014) and the company's budget is very important (Hoegl et al, 2008), due to the fact that in our data set the only financial data is the companies' turnover our next hypothesis is:

H3: the product innovativeness of enterprises is influenced by turnover.

Our hypothesis assume that the cost of product innovation are deducted from company turnover, therefore we would like to see if in the Romania case, the theoretical perspective is sustained also by statistical evidence.

In order to test our three hypotheses, we have chosen to run logistic regressions using R Studio (rcmdr package). The general model is described below.

Logit regression model it is written as:

$$Y_i = \beta_o + \beta_1 X_1 + ... + \beta_i X_i \qquad (1)$$

$$\log \frac{p_i}{1-p_i} = \beta_o + \beta_1 X_1 + ... + \beta_i X_i \quad (2)$$

where Xi is a vector of explanatory variable according to each model which will be discussed, and:

Y_i is the dependent variable: *product innovative enterprises (inpdgd)* with binomial response that can take the values 1 and 0 with probabilities p, respectively 1-p:

y_i = 1 if the enterprise introduced new or significantly improved goods (excluding the simple resale of new goods and changes of a solely aesthetic nature), during the three years 2010 to 2012 (CIS, 2012).

y_i = 0 otherwise

3. Product innovation in Romanian enterprises and the number of employees – hypothesis testing

In order to test our first hypothesis, *the product innovativeness of enterprises is influenced by the number of employees (individuals),* we have chosen the logit regression model from above, where Xi is *the average number of employees in 2012* (emp12) a quantitative variable (metric) expressed by number of employees.

Model 1:

$$\text{inpdgd} = \beta_o + \beta_1 emp12$$

Table 4: Logit regression: product innovative enterprises and the average number of employees

Independent variables	*Odds Ratio*	*Confidence Interval*		
		Lower 95%	*Upper 95%*	*p-value*
emp12	1.00077	1.00033	1.00122	0.000571 ***

*Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

(Dispersion parameter for binomial family taken to be 1)

Source: Author's calculations based on INOV microdata, wave 2010 - 2012.

After computing, the logit regression model become:

$$log\frac{p_i}{1-p_i} = -3.1509062 + 0.0007656 * emp12$$

The odds ratio in the first model shows that, the probability of an enterprise to introduce innovative products is not influenced by an increase of employees by a person. In other words, a one unit increase in *number of employees* will result in an estimated logit increase of 0.00076. Even there is a large literature sustaining that innovative leadership and creativity of individuals are a key competency Carson et al. (1995) in small and medium sized enterprises and are leading to innovation, our result says that a single person doesn't make the difference.

Correlating this result with the descriptive analysis where we have identified a difference between innovative enterprises by size class (number of employees), we go forward and test the second hypothesis: *the product innovativeness of enterprises is influenced by firm size (class - number of employees).* In this regard, the next step was to transform the metric variable (*the average number of employees in 2012* - emp12) in a categorical variable (factor variable in R) encoded with *emp12f,* as follows:

- small enterprises (between 10 and 49 employees): *en_small*;
- medium enterprises (between 50 and 249 employees): *en_ medium;*
- large enterprises (250 or more employees): *en_ large.*

Given the transformation of the independent variable and due to the fact that independent (*emp12f*) and dependent *(inpdgd)* variables are discrete, a first analysis was performed was to test the association between the two variables using the chi square test (χ^2).

Null hypothesis (H0): there is no significant relationship between firm size (class - number of employees) and product innovative enterprises.

Result: $\chi^2 = 39.9253$, df = 2, p-value = 2.14e-09 => at 0.5% significance level we reject the null hypothesis. Therefore, there is a significant relationship between *firm size (class - number of employees) in 2012* and *product innovative enterprises*.

Taking into account that the chi-square test does not give us more details about the nature of the relationship between the two variables, we chose to continue our analysis with a logit regression.

Model 2:

$$\text{inpdgd} = \beta_o + \beta_1 emp12f$$

Table 5: Logit regression: product innovative enterprises and firm size

Independent variables	*Odds Ratio*	*Confidence Interval*		
		Lower 95%	*Upper 95%*	*p-value*
emp12f				
en_small	0.20862	0.12377	0.34890	2.59e-09 ***
en_ medium	0.51493	0.33639	0.80138	0.00264 **

*Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

(Dispersion parameter for binomial family taken to be 1)

Source: Author's calculations based on INOV microdata, wave 2010 - 2012.

The reference group is the group with null regressors generated by the model, in this case *en_ large* is the reference group. Therefore, most of the product innovative enterprises are large enterprises. The odds ratio shows that the probability of small enterprises to introduced new or significantly improved goods is 20% lower compared to large enterprises. The probability of medium enterprises to introduced new or significantly improved goods is 51% lower compared to large enterprises.

4. Product innovation in Romanian enterprises and the turnover – hypothesis testing

Regarding the turnover influence on product innovative enterprises, we proceed to test our third hypothesis; *the product innovativeness of enterprises is influenced by turnover*. Taking into consideration the nature of the variables, we have chosen to conduct the same type of analysis as in the previous hypothesis.

Model 3:

In this model our independent variable is metric - *enterprises turnover in 2010 (turn10)*, expressed in Romanian currency (lei), with the general form:

$$\text{inpdgd} = \beta_o + \beta_1 turn10$$

Table 6: Logit regression: *product innovative enterprises* and *enterprises turnover*

Independent variables	*Odds Ratio*	*Confidence Interval*		*p-value*
		Lower 95%	*Upper 95%*	
turn10	1.00	1.00	1.00	0.159

*Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

(Dispersion parameter for binomial family taken to be 1)

Source: Author's calculations based on INOV microdata, wave 2010 - 2012.

Analysing the odds ratio we notice that the increase of turnover by 1 leu doesn't influence the probability of an enterprises to introduce product innovation. This result doesn't surprise us due to the fact that 1 leu is equivalent of 25 eurocents; therefore it isn't a significant amount of money.

Resonating with the economic situations in companies, we consider that this result reflects the reality. Although, we have seen that an increase of turnover by 1 leu doesn't influence the product innovativeness, we are still interested to find if the financial performance of the company influence the orientation towards product innovation, in this respect we decided to divide the companies into quintiles based on turnover, as follows:

- Q1: enterprises with a turnover between [0 and 2611136] lei, in 2010;
- Q2: enterprises with a turnover between (2611136 şi 6624714] lei, in 2010;
- Q3: enterprises with a turnover between (6624714 şi 16030753] lei, in 2010;
- Q4: enterprises with a turnover between (16030753 şi 43830079] lei, in 2010;
- Q5: enterprises with a turnover *greater* than 43830079 lei, in 2010.

Our new independent variable became: *enterprises turnover (in 2010) expressed in quintiles* and it was codified with *turn10f*. Given the two variables are factorial (*turn2010f* and *inpdgd)* we first performed the chi square test (χ^2).

Null hypothesis (H0): there is no significant relationship between financial performance of enterprises (quintiles based on turnover) and product innovative enterprises.

Result: $\chi^2 = 21.4$, df = 4, p-value = 0.0002638 => at 0.5% significance level we reject the null hypothesis ($\chi^2_c > \chi^2_{tab}$; $\chi^2_{tab} = 14.860$). Therefore, there is a significant relationship between *financial performance of enterprises (quintiles based on turnover)* and *product innovative enterprises*.

In order to have more information regarding the nature of the relationship between the two variables, we chose to continue our analysis with a logit regression.

Table 7: Logit regression: product innovative enterprises and financial performance of enterprises (quintiles based on turnover)

Independent variables	*Odds Ratio*	*Confidence Interval*		
		Lower 95%	*Upper 95%*	*p-value*
turn10f				
Q2	1.44726	0.72858	2.95350	0.29602
Q3	1.59497	0.81578	3.22192	0.17883
Q4	2.05692	1.08917	4.06218	0.03032*
Q5	3.32700	1.84807	6.3634	0.00012***

*Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

(Dispersion parameter for binomial family taken to be 1)

Source: Author's calculations based on INOV microdata, wave 2010 - 2012.

The reference group is the first quintile of the independent variable *turn10f* which includes the 20% of all enterprises with the lowest values of turnover, between 0 and 2611136 lei, in 2010. According to the statistical significance of the model, the probability of an enterprise with turnover between 16030753 and 43830079 lei, to be product innovative is two times higher than the probability of the enterprises from the first quintile. If we look at the companies with the largest turnover, last quintile (greater than 43830079 lei), we see that the probability of an enterprise from the last quintile to be product innovative is three times than the probability of the enterprises from the first quintile.

5. Conclusions

In this paper we have shown that the companies with a large number of employees are more likely to introduce innovative products. Even if an increase with one single employee in companies doesn't increase the chance of an enterprise to introduce innovative products, when we consider the firm size (by the number of employees) we notice that larger companies have a higher probability to innovate products. In a certain way, this may be also an argument of explaining the place of Romania in the European Union ranking, through the fact that more than 90% of Romanian enterprises are SMEs. A future analysis should be conduct in order to identify those factors which are blocking the product innovation in small and medium enterprises.

The paper underlines also the importance of financial resources in companies when it comes to introduce innovative products. Through a logistic regression we have shown that companies with larger turnover are more probable to have innovative products. This emphasize with the large body of literature which highlights the importance of financial support in innovation process. The turnover divided the enterprises into quintile and we have observed that the majority of the enterprises with high turnover were medium and large enterprises.

Therefore, through a statistical analysis conducted in R the results shown that in Romania case the size of enterprises and the turnover are playing an important role in product innovation. Although this are important characteristics of enterprises we consider that there are also other important factors which may influence enterprises orientation towards product innovative and new research should be conduct in order to have complete overview regarding product innovative enterprises in Romania.

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NIS Romania has no responsibility for the results and conclusions of the research.

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The Common Agricultural Policy Role in Addressing External Shocks - The Case of Russian Import Ban

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Abstract: *The Common Agricultural Policy (CAP) is one of the oldest and most controversial common policies and it is financed directly from the European Union budget. Some critics of CAP argue that especially in the context of the challenges brought by the international crisis, this policy represents a "burden" for the European budget. Our research aims to responds those critics by showing that CAP may represent an important tool for addressing the external shocks impact on agricultural sector of EU. In this view, we will highlight the role of CAP in sustaining the European farmer during the crisis generated by the Russian import ban, adopted as a response to the sanctions imposed by EU to the Russian Federation in the context of Ukrainian crisis. Using a quantitative and qualitative analysis we will assess how the CAP has supported the European agricultural sector and also the future measures that could be adopted to create a more flexible response in the case of other external shocks.*

Key-Words: *Common Agricultural Policy, Ukrainian crisis, Russian import ban.*

JEL Classification: *Q, Q1, Q11, Q13, Q17, H12*

1. Introduction

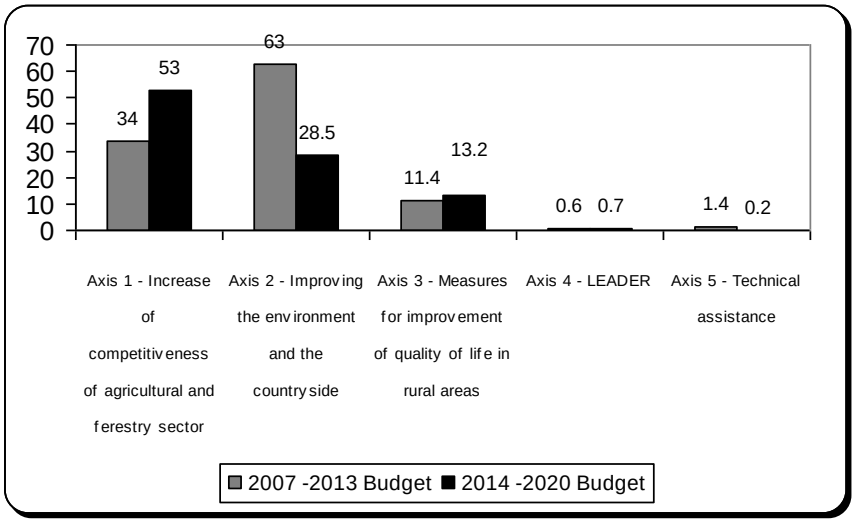
The Common Agricultural Policy (CAP) is the one of the oldest of the common policies and has been conceived as a partnership between farmers and the European Union, its objective being to increase the productivity and production of the European agricultural sector, but also to support sustainable rural development, a concept that also entailed joining the economic dimension with that of social and human welfare. Initially, the CAP overlapped national agricultural policies and the national agricultural sectors, with the European rural area being only considered an economic sector, without any focus on its social and environmental dimension. Later on, as it has been shown in certain theoretical approaches

(Sonnino et al., 2012), the CAP also incorporated the sustainable development objective (after the Reform of 2003), which implies accountability for the use of natural resources and environmental protection. In the specialised literature (Tripathy, 2000), the sustainability dimension is considered intrinsic to the objective of rural development and the sustainable future of the rural area cannot be dissociated from a series of components, such as: the development of human resources, quality of life, the environmental protection component, the issue of development gaps and of population migration in search of employment. The comparative analysis conducted in this research starts from the data provided by the Directorate General for Agriculture and Rural Development of the European Commission regarding the financial allocations broken down according to CAP Axes across EU-28. The analysis of these data focuses on the objective of outlining the way in which the CAP has answered the shock created by the Ukrainian crisis and which affected the farmers in the EU in the context of the Russian import ban. The bibliographic corpus used focuses on the studies and assessment and impact reports published on the website of the European Commission's Directorate General (DG) for Agriculture and Rural Development, but comprises also other references as well (books, studies, articles) published in the specialised literature.

2. The CAP in the perspective of 2020 – from competitiveness to sustainability

In February 2014, DG Agriculture and Rural Development published a report (DG Agriculture & Rural Development, 2014) that synthesizes the main directions of development of this common policy in the period 2014-2020, as well as the implications on national policies in the field of agricultural development in the Member States. According to the analysis published in the abovementioned report, the CAP is a bridge between the EU citizens' expectations regarding agriculture and the expectations of EU farmers who face economic and environmental challenges, requiring at the same time an investment from the EU budget in a sector that is strategic in terms of food safety, environment and economic growth in the rural areas. The comparative analysis of the distribution according to axes of the funds dedicated to rural development (see graphic 1) in the new financing framework 2014-2020 indicates an increase of funds allocated to Axis 1 (increase of competitiveness of the agriculture and forestry sector) and a decrease of funds allocated to Axis 2 (EUR 28.5 billion, compared to EUR 63 billion in the period 2007-2013).

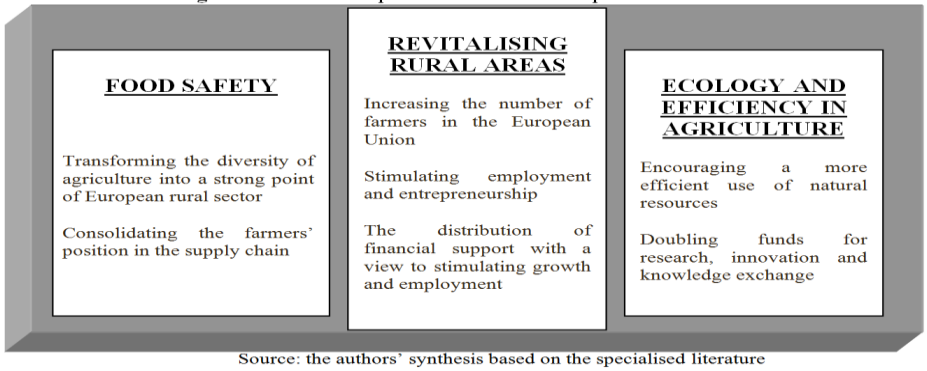
Graphic 1: The comparative analysis of the distribution according to axes of the funds for rural development, comparisons between the current financing context and the period 2007-2013 (EUR billion)



Source: the authors' synthesis based on the DG Agriculture & Rural Development data

In this context, it has to be mentioned that in June 2013, the EU institutions adopted a regulatory framework that outlines new development and reform directions for the Common Agricultural Policy. The new CAP reform was shaped by a comprehensive public debate with the EU citizens and national institutions (EC, 2013) that aimed at enabling the adaptation of the CAP to the new challenges in terms of medium and long-term development of the EU rural sector. According to the new development directions of the CAP, in the period 2014-2020, it will focus on three core pillars: ecology and efficiency in agriculture, ensuring healthy food at affordable prices and revitalising the rural areas and communities.

Figure 1: CAP development directions in the period 2014-2020



Source: the authors' synthesis based on the specialised literature

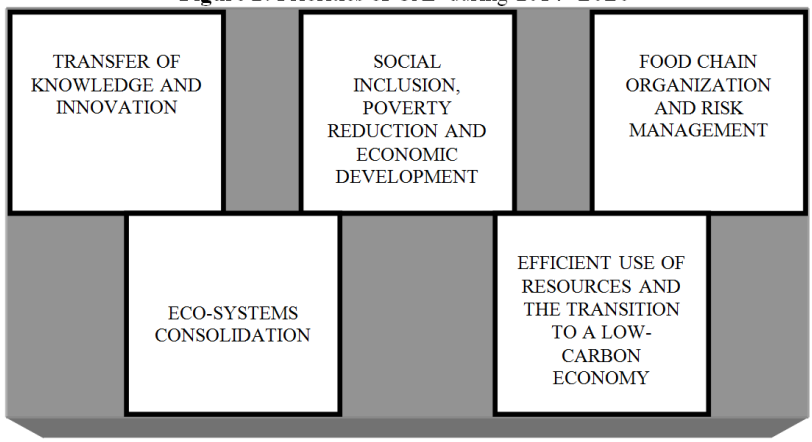
2.1. How the CAP sustains a true partnership between European Union and farmers

At present, CAP aims at maintaining the vitality of the rural environment by supporting investment, modernisation of agricultural and non-agricultural activities in the rural areas. The most important CAP reforms started in 1992 and intensified in 2003, once

the relation between subsidies and production was eliminated. In order to obtain grants, European farmers no longer have to produce food for which there is no market demand. From now on, they have to meet the market and consumer demand, searching for new profitable markets and exploring new opportunities. Farmers now receive income support on condition of preserving agricultural land and complying with food safety, environmental protection and animal welfare standards, failing which the payments are reduced. The new CAP pays more heed to the reality of an open world. Some analysts (Potter&Tilzey, 2005) consider that the recent history of CAP reform shows that policy-makers apparently have embarked on an attempt to combine elements of the neoliberal vision with continued commitment to state assistance for European farmers in various forms. Consequently, the European Commission, through DG Agriculture & Rural Development is permanently involved in the modernisation, reorganisation and simplification of this common policy. Given the fact that, at present, direct payments are no longer related to production, farmers may continue to benefit from a certain financial security, being loose at the same more free to answer market signals. Market instruments (such as public interventions) have been adapted in order to be able to operate as safety mechanisms, without blocking the normal signals of the free market. Hence, new CAP financing mechanisms help farmers to restructure their holdings and protect the environment, which favours the dynamism of rural areas. Moreover, some analysts (Lowe et al., 1993) have highlighted that the new forms of CAP regulations are linked to the new patterns of development in EU rural areas which have arisen as economic actors seek to exploit the opportunity presented by the new global markets. According to the 2013 Reform[1], although this priority concerning the revitalisation of rural areas and the reduction of interregional development gaps is pursued at EU-28 level, Member States are empowered to select measures adapted to their own needs and manage their rural development programmes according to their needs, in the context in which the EU partly finances the costs (through the co-financing process). In this context, it has to be stated that beginning with 2014, the European Agricultural Fund for Rural Development (EAFRD) is included in the new Common Strategic Framework, just as the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF) and the European Maritime and Fisheries Fund (EMFF), in order to attain the objectives of the Europe 2020 Strategy (sustainable, intelligent and inclusive growth). The budget allocated to sustainable rural development may be used in order to finance agricultural and non-agricultural activities related to six major priorities (see Figure 2.). The CAP Reform of 2013 entered into force on 1st of January 2014. The full set of reform elements is applicable from 1st of January 2014, with the exception of the new structure of direct payments, which requires that the annual direct payment cycle be taken into account: the farmers' annual statements under the CAP will be submitted during the spring. Based on these statements, the payments corresponding to the new structure of direct payments will be made in 2015, together with the green payments and the additional support for young farmers.

[1] The 2013 Reform is considered among the most important in CAP history, and in order to prepare it, the European Commission started a dialogue with the entire civil society and all the economic operator stakeholders. As a result of these ample consultations, the major CAP reform lines adopted in June 2013 were defined following a public debate organised from April to July 2010 (which led to the correction of approximately 6 000 individual and collective contributions) and an intense public debate with the Council and the European Parliament.

Figure 2: Priorities of CAP during 2014 -2020



Source: the authors' synthesis based on the specialised literature

EU regulations (EC (g), 2013) lay down the basic rules on the financing, management and monitoring of CAP and allow Member States to grant financial support through direct payments for aid to private storage, aid in fruit and vegetables sector, support measures in the wine sector. As we will highlight next in our analysis, this CAP regulation has allowed granting support measures in exceptional situations, as the one generated by the Ukrainian crisis which eventually led to Russian import ban.

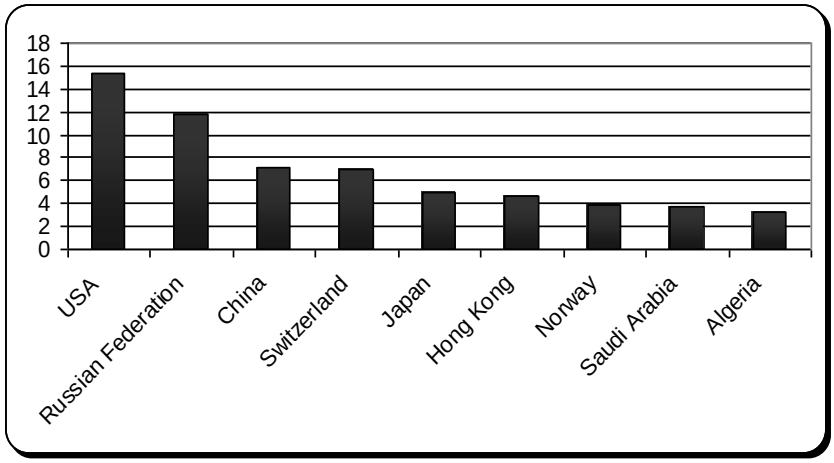
2.2. The Ukrainian crisis case and its impact on EU-Russia trade in agricultural products

As a result of the tensions generated by the Ukrainian crisis[2] in the economic relations between the European Union and the Russian Federation, a series of mutual sanctions have been imposed, whose economic impact cannot be neglected. Subsequent to the economic sanctions imposed by the EU[3], the Russian Federation decided to prohibit imports of food and agricultural products from the EU and the U.S. Below, we propose an analysis of the economic impact of Russian import ban on the European agricultural sector, but also of the exceptional support measures (European Commission (a), 2014) granted in response by the European authorities. Prior to the onset of the Ukrainian crisis, a very close commercial partnership had been in place between the European Union and the Russian Federation in the field of agricultural products, with the Russian Federation representing the second export market for EU producers (see graphic 2).

[2] Started with the annexation of Crimea to the Russian Federation, in June 2014.

[3] In July 2014, the European Union adopted economic sanctions against the Russian Federation, mainly consisting of blocking the country's access to the Union's financial market and prohibiting the sale to the Russian Federation of technologies related to energy, weapons and assets that can be used for both civilian and military purposes.

Graphic 2: The main export destinations of agricultural products of EU-28 in 2013 (EUR billion)



Source: Eurostat, 2014

As referred to above mentioned matters, after the increase of tensions between the EU and the Russian Federation, a series of mutual economic sanctions were imposed, among which the Russian ban on imports of EU agricultural and food products is estimated to have a significant impact on EU producers in the field, with the most affected sectors being fruits and vegetables, followed by dairy products and meat.

The estimates made so far by the European Commission show that the trade embargo put in place by the Russian Federation may cause on an annual basis losses evaluated at EUR 5.1 billion. Other estimates indicate a figure of only EUR 2 billion for the exports and default losses of European agricultural producers. As a result, the European Commission has decided to grant a series of exceptional support measures (see Figure 3) for the agricultural sector, through the additional flexibility mechanism adopted within the Common Agricultural Policy (European Commission (c), 2014).

Figure 3: Main regulations adopted to support European farmers in the context of Russian import ban

AGRICULTURAL SECTOR	DATE OF ADOPTION	LEGAL BASIS FOR FINANCIAL SUPPORT
Milk products	25 February 2015	Commission Implementing Regulation (EU) 2015/303 for submission of applications for private storage aid for butter and skimmed milk powder

AGRICULTURAL SECTOR	DATE OF ADOPTION	LEGAL BASIS FOR FINANCIAL SUPPORT
	19 December 2014	Commission Delegated Regulation (EU) No 1370/2014 for temporary exceptional aid for milk producers in Finland
	16 December 2014	Commission Delegated Regulation (EU) No 1336/2014 temporary exceptional measures for the milk and milk product sector
	26 November 2014	Commission Delegated Regulation (EU) No 1263/2014 for temporary exceptional aid to milk producers in Estonia, Latvia and Lithuania
Fruit and vegetables	19 December 2014	Regulation (EU) No 1371/2014 for temporary support measures for producers of certain fruit and vegetables
	29 September 2014	Regulation (EU) No. 1031/2014 for further temporary exceptional support measures for producers of certain fruit and vegetables
	21 August 2014	Regulation (EU) No. 913/2014 for temporary exceptional support measures for producers of peaches and nectarines

Source: the author's synthesis based on the specialised literature

3. CAP response in the context of Russian import ban

Presently, while ensuring that farmers produce what the markets are demanding, the CAP also provides mechanisms - safety nets - to prevent an economic, health or weather-related crisis from destroying whole swathes of production. These mechanisms include public intervention (national intervention agencies withdrawing the production surplus from the market) and private storage aid (to stabilize markets).

These tools have been modernized as part of the Reform process finished in 2013. Since lately crises are becoming more frequent and more serious than in the past, a specific reserve has therefore been set up to cope with their effects which go beyond the normal functioning of markets. An enhanced Emergency Mechanism has also been introduced. Support is also being given for the creation of mutual funds and insurance mechanisms to help farmers better anticipate and cope with crises. The importance of a safety net offered by the CAP to EU farmers was never more clearly highlighted as in the case of the crisis generated by the Russian import ban on agri-food products from EU. For EU agricultural producers, Russian Federation is the second biggest export market (see table 1).

Table 1: EU export to Russian Federation as share of production

	EU production used domestically	**Ban affected exports to Russian Federation in EU production**	**% of banned exports to Russian Federation in total EU exports**
Fruit and vegetable	90%	**3%**	29%
Cheese	92%	**2.7%**	33%
Butter	95%	**1.7%**	28%
Pork meat	90%	**2%**	20%
Beef	96%	**0.5%**	25%
Poultry meat	90%	**0.7%**	6%

Source: DG Agriculture and Rural Development (2014), Information Note on the Russian Ban on Agri-Food Products from the EU, Brussels

The Russian import ban was stipulated, as a response to EU sanctions against Russian Federation, by the President's Putin Edict No. 560 of August 2014. The Decree specifies types of banned products, which include: meat and poultry, fish and seafood, milk and milk products (including cheese), vegetables, fruits, nuts as well as some other foods and ready-made meals. The restrictive measures do not include wine and spirits, cereals, pasta, olive oil, baby food and beverages. The ban was imposed in 2014 for one year, but can be revisited earlier, if appropriate. Russian Customs commenced implementation immediately in August 2014 with no grace period for existing contracts. Some analysis (Panov et al., 2014) have shown that EU has been the most affected trading partner among all those targeted by the Russian import ban on agricultural products, as 73% of imports that are banned come from the EU. This comes as no surprise, given the fact that the EU alone represents 43% of entire Russian imports from the world.

Although, some analyses (DG Agriculture and Rural Development, 2014) remain optimistic that alternative sales outlets can be found for much of the produce affected by Russian import ban, however, it is also clear that certain products and certain regions will face serious difficulties as a result of the Russian measures, especially in the short term. The most immediate concern of the European authorities was that products previously exported could be cheaply sold on the EU market, leading to a more global price collapse – hence the swift action of the Commission to introduce emergency market measures. The Russian trade restrictions have generated serious pressure on EU agriculture and food sector because of the temporary loss of a significant commercial market share in main agricultural sectors (almost all meat products, milk and dairy products, fruits and vegetables). Given the volume involved and the quantity of perishable products banned in full harvest season, the most serious negative effect was the "cascade effect" of oversupply on the internal market. In order to mitigate the negative effect of Russian import ban, the European Commission has implemented through CAP founding mechanisms a series of support schemes providing exceptional support for European farmers.

4. Exceptional support measures adopted for European farmers through Flexibility Mechanism of CAP

The revised CAP provides for the possibility to adopt exceptional and emergency measures to address some severe market disturbances (e.g. steep price falls or other significant market disturbing events) and to resolve specific problems where a duly justified imperative ground of urgency is present. The Russian import ban was considered such an event requiring an imperative response. Hence, in order to further mitigate the consequences of the import ban on the most vulnerable EU sectors and holdings, European Commission has implemented a series of exceptional measures, as detailed in the following sections of our analysis.

4.1. Measures to support producers of peaches and nectarines

On 11 August 2014, the European Commission announced the entry into force of an aid scheme for European producers of peaches and nectarines (European Commission (a), 2014), affected by the impossibility of exporting their products to the Russian Federation. Those support measures were based on the Flexibility Mechanism[4] of the Common Agricultural Policy which can be used for promotion or free distribution of products on the European market. Support measures have increased by 5 to 10% the financial support for producer organizations in the field of free distribution and withdrawal from the market. Also, an exceptional secondary support (up to 50% of the cost of withdrawal from the market) may be granted to producers who are not members of associations along with additional measures to promote the two products (peaches and nectarines).

4.2. The support scheme for vegetables and fruits

Adopted on 14 August 2014 The Support Scheme for Producers of Perishable Fruits and Vegetables, affected by the impossibility to export their products to the Russian Federation was financed from the Emergency Fund of the Common Agricultural Policy.

The budget allocated – EUR 125 million – was considered sufficient until November 2014. Beneficiaries eligible for support under this scheme were producers of tomatoes, carrots, cabbage, cauliflower, cucumbers, peppers, mushrooms, apple, pear, red fruits (strawberries, raspberries), grapes and kiwi.

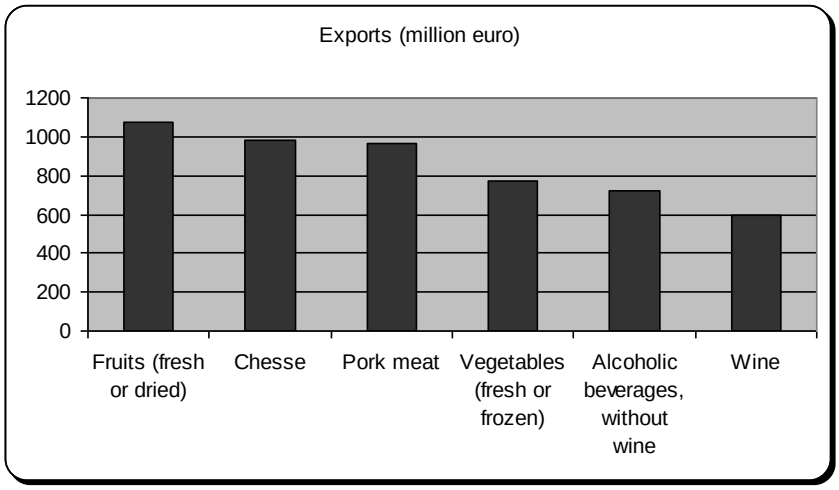
Financial assistance also covered all fruit and vegetable producers, whether or not they were organized into producer associations and support measures have been established with retroactive application from 18 August 2014. The support scheme provided assistance also through the Flexibility Mechanism of the CAP, for fruit and vegetables producers from all Member States.

Those support measures were considered very important by some analysts (European Commission (b), 2014) especially given the fact that the Russian import ban occurred during full harvest season, and by their nature, these products could not be stored for a long time.

[4] Allowing the financial transfer inter Pillar 1 (Market Payment) and Pillar 2 (Rural Development).

In the aid scheme implemented ceilings were established up to EUR 82 million for apples and pears producers (whose applications were the most numerous) and EUR 43 million for other fruits and vegetables producers. Consequently, it should be noted that, according to the Eurostat data, in 2013 the fruit and vegetable sector was holding an important place in total agricultural exports of the EU-28 to the Russian Federation (see graph 3).

Graph 3: The main types of agri-food products exported by EU-28 in the Russian Federation in 2013 (EUR million)



Source: Eurostat, 2013

Regulations of the support scheme stipulated the obligation of the Member States to notify the European Commission concerning all support requests received from national producers. Financial support was granted to the European producers for withdrawing products from the market, free distribution of those products, compensation for products not harvested or early harvesting. On 8th of September 2014, the European Commission found that the support requests notified reached the ceiling fixed in both apple and pear producers and other fruits and vegetables producers. Consequently, on 9th of September 2014, Support Scheme was suspended because of the extremely high demand for compensation, but in order to continue to support European farmers, the European Commission has established (European Commission (d), 2014) that it will adopt in the near future a new Support Scheme. In this respect, it should be mentioned that, according to CAP regulations, in the fruit and vegetable sectors Producer Organizations have the possibility to integrate crisis prevention measures within their Operational Programmes, covering actions such as market withdrawal, harvest insurance, the setting up of mutual funds etc. The maximum EU support normally limited to 4.1% of the Producer Organization's turnover is increased to 4.6% if the amount in excess of 4.1% of the turnover is used solely for the financing of the crisis management or prevention measures.

4.3. Support measures for European producers of dairy

According to data provided by Eurostat, in 2013, EU dairy exports to the Russian Federation totaled EUR 2.3 billion, mainly focused on cheese (about EUR 0.98 billion),

butter (EUR 0.14 billion), fresh dairy products (EUR 0.10 billion), skimmed milk powder (EUR 0.07 billion) and whey powder (EUR 0.03 billion). From the 25 Member States which have exported cheese to the Russian Federation in 2013, the largest European exporters are represented by the Netherlands, Lithuania, Finland, Poland, Denmark, Germany, Italy, France and Latvia. On 28 August 2014, the European Commission announced the entry into force of an Aid Scheme for Private Storage of Butter, Skimmed Milk Powder (SMP) and Certain Cheeses in order to mitigate the negative effects of Russian import ban on the domestic market. Support scheme was designed as a tool for providing financial assistance for butter and skimmed milk powder producers. The Scheme's support measures were implemented in accordance with the provisions of the Common Agricultural Policy related to prevention of significant risks on the European market. The support scheme, eligible costs were designed to cover daily costs storage for a period of 3 up to 7 months.

It should be noted that, according with current legal framework, Common Agricultural Policy, through the support for private storage, helps to finance the costs of temporary storage for at least 90 days - and not more than 210 days. Moreover, according with CAP regulations, for the dairy sector, public intervention is open each year from 1st of March until 30th of September and exceptional measures could be envisaged for the free distribution to certain organizations, such as charitable organizations and schools, but also for animal feed, biomass, processing industry, destruction, etc. (depending on the Member State) and for non-harvesting and green harvesting.

Through the Common Agricultural Policy there are funded part of the costs of temporary storage (comprising a fixed rate per tone, plus a fixed daily amount per tone). Those products remain the property of the operators, who are consequently responsible for their sale when storage period expires. Given the importance of cheese in the total value of EU exports to the Russian Federation (EUR 0.98 billion in 2013), the European Commission wants to extend this measure regarding storage cost for the cheese producers. In assessing the impact of Russian import ban, some analysts (European Commission (e), 2014) have shown, that since CAP only provide support for private storage for butter, skimmed milk powder and cheese DOP or PGI type, exceptional new measures will be needed to cover the wide variety of cheeses exported to the Russian Federation.

4.4. Additional measures to boost support for promoting agricultural products of the EU

After the adoption of Support Schemes for Fruit and Vegetable producers, the European Commission has adopted additional measures (European Commission (f), 2014) to better promote the European agricultural products. In this context, it should be noted that the EU provides annually approximately EUR 60 million for co-financing programmes for promoting European agricultural products based on proposals submitted by Member States. Presently, EU provides financial assistance up to 50% of the cost of these measures (up to 60% for programmes promoting fruit and vegetable consumption by children), the remaining costs being covered by professional and inter-professional associations. In the context of Russian import ban, additional support measures totaling EUR 60 million may be provided through the National Programme for the Promotion of Agricultural Products of the CAP. Note that the funds provided under the CAP to promote agricultural products in the EU - 28 amounted to EUR 60 million per year, according to the budget already adopted. To these measures will be added, in 2015, EUR 30 million in the first payment and the other

remaining EUR 30 million will be allocated in a second payment. To take advantage of these additional funds, the new regulations adopted by the European Commission stipulate that Member States must submit applications for Support Schemes for promoting national agricultural products until September 2014 for the first payment and until February 2015 for the second payment. It should be noted that CAP assessment will prioritize the schemes for products which, in the absence of Russian import ban could have been exported to the Russian Federation. In 2015, the European Commission intends to adopt new additional emergency market measures for perishable fruit & vegetables in response to the market disturbances resulting from the Russian import ban. These additional measures will run until the end of June 2015. The emergency schemes provide for new eligible volumes of certain fruit and vegetables in specific Member States that may be withdrawn from the market and the quantities will be based on export volumes to Russian Federation in the last 3 years.

5. Conclusions

Given that, prior to the Russian imports ban on agricultural products, the Russian market was an important receptor, it is estimated that the potential impact of economic sanctions imposed by Russian Federation will be an important one for EU. The impact assessment conducted by the European Commission concerning the effects of the Russian import ban shows that this exceptional situation requires a faster and better access to market information for each sector in order to better implement through CAP founding schemes a adequate support for EU farmers and producers. The challenges induced by the Russian import ban have highlighted the importance of creating a Consolidated Market Monitoring Mechanism in order to identify the areas most affected and to create a targeted response at EU level. The European Commission's preliminary analysis of the main sectors affected by the Russian import ban- fruits, vegetables, dairy products and meat- concluded that the most urgent measures concerns certain perishable vegetable products. These perishable products are the most affected since their harvest season has started and a key export market disappeared without any immediate alternative. Under these conditions, new exceptional measures to support EU producers of perishable fruits and vegetables could be further adopted. These types of measures designed to support the European agricultural sector may be granted under the Common Agricultural Policy Flexibility Mechanism in order to protect European farmers from the impact of external shocks such as the one produced by the Russian ban on agri-food products. We may conclude that in such critical situation CAP represents a financing tool that can allow a common, coherent response for maintaining the stability of the internal market via effective and properly calibrated crisis management at EU level.

The 2014-2020 Multiannual Financial Framework fixes the amounts available in the Common Agricultural Policy for the financing of market expenditure and direct payments. From these funds a crisis reserve is established every year by applying a reduction to direct payments through the financial discipline mechanism. The total amount of the crisis reserve for the period 2014-2020 is EUR 2 800 million with equal annual installments of EUR 400 million (at 2011 prices). However, in the case of Ukrainian crisis that led to Russian import ban, the main challenge is to implement the right measures targeting the most critical sectors or operators, at the right time, and in a cost-efficient way, since targeted efficient measures implemented at the very early stage are the most cost effective way to act. Through its Flexibility Mechanism CAP may strengthen the resilience of EU agricultural and food sector

and encourage reorientation towards new markets and opportunities, including through enhanced promotion measure. However, in our opinion, although the emergency measures have helped ease the market pressure for fruit and vegetable growers following the Russian import ban, more measures will be need for all the sectors affected (particularly meats, milk products and fruit and vegetables) and agri-food exporters must be supported including by using co-financed assistance for products promotion in order to diversify their options for export markets. Moreover, since in the buyer –supplier relationship the large share of a single buyer is always vulnerability for any vendor, in our opinion the case of Russian import ban shows that EU agriculture producers should diversify their markets and be more open to the global market.

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Regional Agriculture in Romania: A Quantitative Assessment

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Abstract: *In last decade, the Romania's regional agriculture has become the main driver of development through absorption of EU funds. According to official data of the Ministry of Agriculture and Rural Development, Romania has reached 84% (or 12.85 billion euros) in the field of EU absorption funds for agriculture and rural development programmes during 2007-2013. According to the latest EU statistics, in Romania agricultural sector has a high importance in ensuring income through self-employment, while diversification of rural economy remains challenging. Most people engaged in agriculture are self-employed and agriculture accounts for only 3.2% in the total number of the employees in the Romanian economy. The paper intends to assess the stage of development of agriculture in Romania by regions, based on a quantitative analysis, using both national and European statistics. The results of this article show regional disparities of agricultural development in Romania and the need for central authorities to diminish the differences between macro regions in the agriculture field.*

Key-Words: *Romania, agriculture, regions, arable crops, harvest, livestock sector.*

JEL Classification: *Q00, R12, R14, R58.*

1. Introduction

At the national level, agriculture is an important sector in Romania's economy, both through its contribution to the GDP growth of, as well as weight of labour force involved in the field. As mentioned in some national analyses, in the last 25 years, performances of Romanian agricultural sector remain relatively modest, compared with its potential. Its contribution (agriculture, forestry and fisheries) to national gross value added (GVA) has accounted for around 5.5% in 2013 and agriculture's share in Romania was more three times higher than in EU27 level (1.5% in 2013) Also, approximately 45.7% of the Romanian population lives in rural areas, as compared with 23.6% in the EU 27 and 30% of the population is engaged in agriculture (2% in the old Member States).

Romania's territorial area is 238,391 km^2 and includes: 61.3 % agricultural land (about 14.6 million hectares, of which 64.2% arable land, 32.9% natural pastures and meadows and 2.7% plantations of fruit trees and vines); 36.64% forests and other land with forestry vegetation (National Institute of Statistics [NIS], 2014). Geographically, rural

space in Romania is well-proportioned, including: 33% plains (down to 300 m altitude), 37% hills (from 300 to 1,000 m) and 30% mountainous (over 1,000 m altitude). In terms of regional territorial distribution, the rural space is balanced between the 7 macro regions (14.33% North-West, 14.30 % Centre, 15.46% North-East, 15% South-East, 14.45% South, 12.25% South-West, 13.44% West) and the Bucharest-Ilfov Region with only 0.76 percentage points of Romania's territory.

According to The Ministry of Agriculture and Rural Development (The Ministry of Agriculture and Rural Development [MARD], 2014b), in 2012, rural areas have a surface of 207,522 km^2 (87.1%) and 45.0% of Romania's population lives in this territory. The population living in rural areas are not evenly distributed in the territory of the country. The most populated rural areas are in South – 58.6%, North-East – 56.8% and South-West – 51.9% and North-East Region (63.24 inhabitant/km^2), while in the West Region of the country rural area is less populated (26.51 inhabitant/km^2). Such disparities have generated gaps regarding socio-economic developments of the area concerned and on the quality of life of the rural population.

Currently, rural areas are confronted with a demographic decline. Hence, in the period 2005-2012, rural population decreased by 65,646 people. According with this evolution, demographic forecasts are pessimistic until 2015 and afterwards this decline will sharply continue during 2015-2050 (MARD, 2014b).

The Common Agricultural Policy (CAP) is the most important instrument of EU to offer many opportunities for Romanian farmers. The CAP will invest nearly 20 billion euro of total allocation of Direct Payments and Rural Development for the period 2014-2020 in Romania's farming sector and rural areas. Key political priorities defined at EU level include: jobs, sustainability, modernisation, innovation and quality. In parallel, Romania has flexibility to adapt both direct payments and rural development programmes to its specific needs. For 2014-2020, Romania has been allocated around 8 billion euro for rural investments to be spent in accordance with well-defined priorities set out in its rural development programme. With nearly 12 billion euro, the budget available for direct payments in Romania will increase despite a general reduction of 3.2% at EU level. (European Commission [EC], 2014a).

Romanian farmers will take simple, proven measures to promote sustainability and combat climate change with the support of the CAP. 30% of direct payments will be linked to three environmentally-friendly farming practices: crop diversification, maintaining permanent grassland and conserving 5% of areas of ecological interest or measures considered to have at least equivalent environmental benefits. (EC, 2014b)

Drăgoi (2012, p.38) stated that distribution support for rural development will be based on objective criteria and will allow underdeveloped regions to benefit from higher co-financing rates, which will apply to certain measures of national funding on knowledge transfer, producer groups, cooperation and Leader programs.

The new Programme will focus on three main objectives: improving competitiveness of the agricultural sector, preserving ecosystems and an efficient use of natural resources and creating conditions for the economic and social revitalisation of rural areas. (EC, 2014b)

2. Regional Agriculture

For the most part of the territory, agriculture represents a strong component of economic development. In mountain areas large regions of grassland and meadows are favourable for natural rearing of animals, even if through a colder climates and specific rainfall regime those regions are less predisposed to droughts, hence being favourable for agricultural activities. However, it is not possible to work out a strict delimitation between favourable areas for various agricultural activities on the basis of the landscape, climate and the ground.

In the period 1990 - 2013, at the national level, trend of agricultural area has been kept relatively constant, recording small variations, an increase by 0.37% in 2000 followed by a drop of 0.11% in 2005 and 1.1% in 2013. According to the NIS data, in 2013, the area of farms in Romania was of about 14.6 million hectares, which represents 60% of the country's territory, from which: arable land 65%, grassland 22%, meadows 11%, vineyards 1.44% and orchards 1.35% (Table 1). In terms of the area occupied by pastures, this was 22.1% in 1990, and only 22.4% in 2013 (+0.3%).

In 2013, arable area distribution on macro regions, as provided in national statistics, was the following: macro region 1: 1.6 million ha, macro region 2: 3.1 million ha, macro region 3: nearly 2 million ha, and macro region 4: 2.1 million ha.

Surface of the *North-West Region* is 3.4 million ha and agricultural land covers 2.1 million ha, which represents 61% of the total surface area of the region. The weighting arable land/pasture and meadows in the North-West area is different than the national average; while the country average of utilized agricultural area is 64.3% arable land, in the North-West Region weighted as arable land is only 49.5%. In 2013, the North-West Region had 614 hectares of grazing land (place II by counties), favourable for the development of livestock sector. Area of pasture has decreased by 5% in the period 2005 - 2013, fact explained by changing methods extensively (grazing) of animal husbandry with intensive methods (in the stable), but also by reducing the number of cattle. The vast majority of agricultural holdings in the North-West Region consists of individual farms (98.75%) a similar situation to the one at national level (99.07%). By implementing SAPARD programs and National Agriculture and Rural Development Plan for 2007-2013 (NARD), a different category of self-employed individual has appeared among agricultural farms: individual farms and family farms, which are categories of eligible beneficiaries for a series of measures from the Common Agricultural Policy. This category is not numerous; the percentage of self employed individual and family farms in the region is 0.24%, a little more up than national average (0.13%). (Ministry of Regional Development and Public Administration [MRDPA], 2014)

Table 1: Romania's agriculture Land use by Regions, in 2013

- Hectares -

Macro regions, development regions	Fund, from which:	Arable Land	Grazing Land	Meadows	Vines	Orchards
Romania	**14,611,883**	**9,389,254**	**3,273,961**	**1,541,854**	**210,270**	**196,544**
Macro region 1	3,966,473	1,768,418	1,259,270	869,865	18,991	49,929
North-West	2,067,045	1,022,379	613,749	385,547	9,481	35,889
Centre	1,899,428	746,039	645,521	484,318	9,510	14,040
Macro region 2	4,447,262	3,210,362	818,881	263,100	115,572	39,347

Macro regions, development regions	Fund, from which:	Arable Land	Grazing Land	Meadows	Vines	Orchards
North-East	2,121,157	1,380,452	491,389	200,258	30,639	18,419
South-East	2,326,105	1,829,910	327,492	62,842	84,933	20,928
Macro region 3	2,535,791	2,068,682	287,623	108,423	29,015	42,048
South-Muntenia	2,430,712	1,967,439	285,477	108,365	28,117	41,314
Bucharest-Ilfov	105,079	101,243	2,146	58	898	734
Macro region 4	3,662,357	2,341,792	908,187	300,466	46,692	65,220
South-West Oltenia	1,795,934	1,250,617	378,323	89,221	38,024	39,749
West	1,866,423	1,091,175	529,864	211,245	8,668	25,471

Source: Author's calculations based on the NIS data (2014). TEMPO Online

Agricultural land in the *Centre Region* is 1.9 million ha, representing 48% of the total surface area of macro region and 13% of the Romania's agricultural area. By use, agricultural area structure shall be in the following format: arable land 39%, grassland 34%, meadows 26%, vines 0.5%, and orchards 0.7%. The largest weightings of land areas shall be recorded in the counties of Mures and Harghita (61.3% and 59.6% of the total surface area), the last one being the largest area covered with pastures and meadows (79% of agricultural land), while the lowest is in Covasna county (30.3%), also the county with the largest area covered by woods and forest vegetation (44.5% of the total surface area). (Centre Regional Development Agency [CRDA], 2014).

With a total area of 3.7 million ha, in 2013, in terms of the surface, the *North-East Region* (15% of national area) is the third largest region of Romania. About 2.1 million ha of the county is allocated to agricultural area (14.5% of the agricultural national area), being divided into categories of use, and in private property are about 2 million ha. (94.7% of the agricultural area).

The largest agricultural area in Romania is in *South-Muntenia Region* with 2.4 million ha, which represents 96% of the macro regions' agricultural area and 17% of the Romania's agricultural area, this situation shows the agrarian character and agricultural potential of the region.

With the exception of *Bucharest - Ilfov Region*, the narrowest agricultural area of the country is located in the *South-West Region*, of 1.8 million hectares, which representing 12.3% of the national agricultural area. By use, at the end of the year 2013, regional agricultural area was: 1.25 million hectares of arable land (53% of the surface area of arable macro region) and 12% (378 thousand ha) of the total national pasture area. (The South-West Oltenia Regional Development Agency [SWORDA], 2014)

Grassland are concentrated especially in the Centre and North-West (34% of the agricultural area and 30%), accounting for lowest national representation in the total of the areas occupied with meadows in South, except for Bucharest - Ilfov County.

In the terms of wine-growing areas, the South-East holds the largest area (40%), followed by South-West, while West and North-West are in the opposite pole with 4% or 5 % of the area.

Agricultural land in Romania is affected by a multitude of degradation processes, such as: soil erosion determined to raise the level that any discharges from depth to the surface, removing the progressive fragments of soil and rocks from the wind (erosion wind), structure damage and soil compaction (the exaggerated ascension of the mass of

soil per unit of volume), chemical pollution of the earth or land slides, etc. (MRDPA, 2013).

2.1. Arable crops

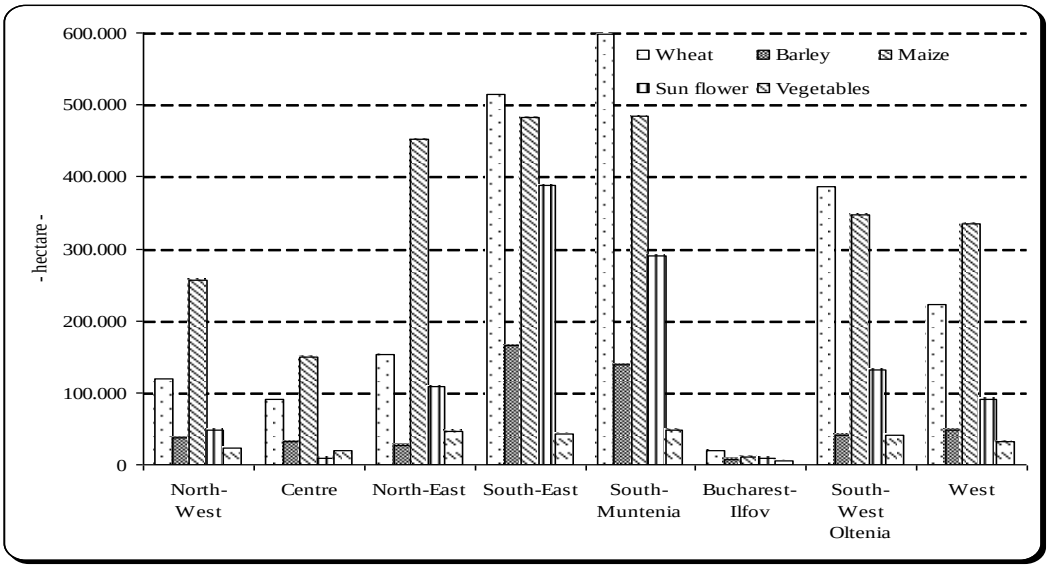
According to NIS data, in Romania the areas cultivated with arable plants have been reduced in 2013 compared with 1990 by 13%, to 8.2 million hectares, but raised of 4.6 percent as compared to 2010, as a result of the granting of funds by the programs carried out both by the Ministry of Agriculture and the European Union. However, the areas cultivated with wheat, barley and vegetables were restricted, to the detriment of those sown with maize and sunflowers.

In terms of the cultivated areas, the South-Muntenia Region is the main area in which the crops are grown extensive, mainly with the maize and wheat.

From the crops analysis point of view (graph 1), it should be noted that over 300 thousand ha areas of the extra-Carpathian zone (South-East and South) are cultivated with wheat, as a result of optimal quality of the soil for this cereal. Wheat is an important cereal for population nutrition, as well as for animal feed. In addition, the soil is appropriated for this crop, due to the climatic conditions exiting in this part of the country.

Also, maize has good conditions for the development in the North-East, South-East and South. Areas cultivated with this cereal exceed 450 thousand ha in each region referred to, which represents 56% of the area cultivated with maize at national level.

Graph 1: Harvested production of arable crops and vegetables across the Romanian regions, in 2013



Source: Author's representation based on the NIS data (2014). Online TEMPO

In the N*orth-West Region* mainly cereals for seed have been grown (61% of total area cultivated in the year 2013). According to the NIS data (NIS, 2014) (table 2), arable land cultivated with wheat is in the North-West represents a small percentage e (13.28%), compared with national level (27%) while maize crops are most widespread in the North-West (32%), compared with share of national level (24%). (MRDPA, 2014)

In 2013, in the *Centre Region* arable crops totalled only 78.1% of the whole arable land. Area harvested with cereals has the greatest weighted 55% of the total (main crops, as follows r: maize, wheat and rye, barley and barley); followed by feeds crops (27.8%), technical plants (potato with 11% of the total and sugar beet 1.6 %) and vegetables (3.2 % of areas cultivated). (CRDA, 2014)

In 2013, in the S*outh Region*, arable crops represented 95.55% of the total arable area (table 2). Plant production was centred on cereal crops for seed - on a surface of 65% of the total surface area cultivated at regional level (main crops are, in order: wheat and rye, maize), oily plants - 25% of the total, plants of fodder - 6% and vegetables - 3% of the areas cultivated. (The South-Muntenia Regional Development Agency [SMRDA], 2013).

In 2013, in the S*outh-East Region*, 4 million tonnes of cereals for seed was produced, which was equivalent to 22% of the total production at national level. Yield for maize represented 56% of the total production of cereals for seed at regional level, followed by production of wheat (34%). (The South-East Regional Development Agency [SERDA], 2013).

Table 2: Harvested area and production of arable crops and vegetables by Romanian territorial structure, in the period 2010 – 2013

	Country/Macroregions/Regions	Harvested area - hectares -				Production - tonnes -			
		2010	2011	2012	2013	2010	2011	2012	2013
Wheat	**Total**	**2,162,388**	**1,947,008**	**1,997,633**	**2,103,985**	**5,811,810**	**7,131,590**	**5,297,748**	**7,296,373**
	Macro region 1	208,941	219,204	194,519	209,560	594,648	797,152	552,883	753,717
	North-West	116,226	120,130	118,220	119,514	339,408	434,917	350,895	455,524
	Centre	92,715	99,074	76,299	90,046	255,240	362,235	201,988	298,193
	Macro region 2	684,380	558,839	649,079	667,756	1,860,413	2,035,228	1,520,894	2,145,089
	North-East	156,158	137,276	182,914	152,736	421,021	462,060	423,787	484,599
	South-East	528,222	421,563	466,165	515,020	1,439,392	1,573,168	1,097,107	1,660,490
	Macro region 3	646,074	615,375	655,858	616,988	1,700,061	2,351,723	1,753,547	2,335,210
	South-Muntenia	628,723	600,021	637,568	597,630	1,647,875	2,293,514	1,701,501	2,254,405
	Bucharest-Ilfov	17,351	15,354	18,290	19,358	52,186	58,209	52,046	80,805
	Macro region 4	622,993	553,590	498,177	609,681	1,656,688	1,947,487	1,470,424	2,062,357
	South-West Oltenia	403,705	350,049	311,349	387,170	1,000,332	1,126,897	745,916	1,096,190
	West	219,288	203,541	186,828	222,511	656,356	820,590	724,508	966,167
Barley	**Total**	**515,820**	**419,508**	**424,244**	**495,685**	**1,311,035**	**1,329,692**	**986,361**	**1,542,247**
	Macro region 1	72,546	69,433	61,233	69,158	166,338	183,265	134,543	191,622
	North-West	35,301	32,710	28,209	37,976	82,686	89,154	64,321	112,949
	Centre	37,245	36,723	33,024	31,182	83,652	94,111	70,222	78,673
	Macro region 2	236,481	174,374	182,275	191,680	595,998	528,060	370,719	525,580
	North-East	26,755	28,229	25,431	25,998	59,033	66,216	50,170	60,863
	South-East	209,726	146,145	156,844	165,682	536,965	461,844	320,549	464,717
	Macro region 3	138,091	119,362	130,889	145,323	377,820	424,353	343,376	526,350
	South-Muntenia	133,656	114,806	124,874	138,318	365,823	408,810	328,012	500,292
	Bucharest-Ilfov	4,435	4,556	6,015	7,005	11,997	15,543	15,364	26,058
	Macro region 4	68,702	56,339	49,847	89,524	170,879	194,014	137,723	298,695
	South-West Oltenia	35,363	24,671	28,241	41,393	88,758	69,651	62,530	106,256
	West	33,339	31,668	21,606	48,131	82,121	124,363	75,193	192,439
Maize	**Total**	**2,098,394**	**2,589,667**	**2,730,157**	**2,518,268**	**9,042,032**	**11,717,591**	**5,953,352**	**11,305,095**
	Macro region 1	388,029	384,445	397,559	406,347	1,678,890	1,736,655	1,055,199	1,739,098
	North-West	256,454	239,673	237,459	256,501	1,096,326	1,060,818	648,234	1,094,982
	Centre	131,575	144,772	160,100	149,846	582,564	675,837	406,965	644,116
	Macro region 2	764,751	979,718	994,695	934,710	3,121,137	4,421,042	1,817,026	4,112,284
	North-East	428,878	463,941	494,583	453,051	1,664,395	1,966,518	977,220	2,057,116
	South-East	335,873	515,777	500,112	481,659	1,456,742	2,454,524	839,806	2,055,168
	Macro region 3	404,152	488,538	551,451	495,023	1,844,610	2,420,255	1,401,247	2,568,396
	South-Muntenia	391,651	479,875	544,146	484,636	1,794,856	2,381,534	1,388,692	2,519,407
	Bucharest-Ilfov	12,501	8,663	7,305	10,387	49,754	38,721	12,555	48,989

	Country/Macroregions/Regions	Harvested area - hectares -				Production - tonnes -			
	Macro region 4	541,462	736,966	786,452	682,188	2,397,395	3,139,639	1,679,880	2,885,317
	South-West Oltenia	276,396	386,455	414,269	346,643	1,189,394	1,569,294	604,181	1,475,745
	West	265,066	350,511	372,183	335,545	1,208,001	1,570,345	1,075,699	1,409,572
Sunflowers	**Total**	**790,814**	**994,984**	**1,067,045**	**1,074,583**	**1,262,926**	**1,789,326**	**1,398,203**	**2,142,087**
	Macro region 1	45,603	52,706	44,602	55,895	60,312	98,485	60,603	109,475
	North-West	41,025	48,274	39,147	47,668	52,179	89,114	53,155	97,302
	Centre	4,578	4,432	5,455	8,227	8,133	9,371	7,448	12,173
	Macro region 2	344,527	468,283	506,524	497,502	536,210	766,687	582,315	915,482
	North-East	91,959	104,215	133,656	109,393	137,943	186,208	153,442	219,408
	South-East	252,568	364,068	372,868	388,109	398,267	580,479	428,873	696,074
	Macro region 3	250,274	318,957	326,517	298,955	415,047	631,868	488,602	664,871
	South-Muntenia	241,180	310,144	318,022	290,412	401,619	616,161	477,100	648,311
	Bucharest-Ilfov	9,094	8,813	8,495	8,543	13,428	15,707	11,502	16,560
	Macro region 4	150,410	155,038	189,402	222,231	251,357	292,286	266,683	452,259
	South-West Oltenia	92,057	102,380	115,414	132,247	160,944	178,239	137,726	237,429
	West	58,353	52,658	73,988	89,984	90,413	114,047	128,957	214,830
Vegetables	**Total**	**262,692**	**263,359**	**258,910**	**259,029**	**3,863,617**	**4,176,298**	**3,535,316**	**3,960,990**
	Macro region 1	41,069	40,605	39,469	42,751	590,156	627,034	544,389	618,788
	North-West	23,651	22,840	22,298	23,965	342,731	353,968	314,084	352,539
	Centre	17,418	17,765	17,171	18,786	247,425	273,066	230,305	266,249
	Macro region 2	89,375	90,067	88,016	89,060	1,361,293	1,456,416	1,176,977	1,392,744
	North-East	45,439	46,605	45,378	46,160	610,421	665,168	571,721	666,719
	South-East	43,936	43,462	42,638	42,900	750,872	791,248	605,256	726,025
	Macro region 3	56,501	56,626	55,828	54,228	859,592	935,294	792,900	864,157
	South-Muntenia	51,058	50,710	50,183	48,224	769,340	813,045	703,018	755,814
	Bucharest-Ilfov	5,443	5,916	5,645	6,004	90,252	122,249	89,882	108,343
	Macro region 4	75,747	76,061	75,597	72,990	1,052,576	1,157,554	1,021,050	1,085,301
	South-West Oltenia	46,565	45,439	45,181	40,318	675,766	722,782	644,341	633,454
	West	29,182	30,622	30,416	32,672	376,810	434,772	376,709	451,847

Source: NIS. (2014). TEMPO Online.

2.2 Livestock Sector

Livestock production is a considerable part in Romanian agriculture. It represents one of the most important rural sector activities. Although existing livestock are operated in an efficient mode, there is a potential for increasing production of animals, due to the area of pastures and meadows in the country.

In 2013, at the national level, the share of livestock production in the total agriculture production was 32%. At the level of all development regions, this share was well above the national average, from 26% in the South-East to 36% in Centre, the differences are very small between the other regions. (MRDPA, 2013)

NIS data (NIS, 2014) shows that, in 2013, in the N*orth-West Region* the majority of farms are growing poultry (58%), but this share is smaller, than the national average (69%). The second place is occupied by pig farming (39% of agricultural holdings in the region and 43% at the national level) and on the third place are the cattle farms (23% at the regional level and 18.83% at national level). During 2007-2013 in North-West livestock production registered differences by races; livestock numbers decreased in case of cattle (by 23 %, from 454 thousand to 352 ends), pigs (by 23%, from 885 thousand to 681 thousand) and poultry (by 3%, from 8.7 million to 8.4 million heads), and increased in case of sheep (by 17 %, from 1.2 million to 1.4 million heads). The decrease in number of cattle and substantial increase of the sheep reflect a change in the structure of agricultural production, caused by market constraints (difficulties encountered by small farmers in

making use of products, low price for the purchase of milk offered by the big companies processing and small number of slaughter houses and low price for meat, etc.), as well as regulations introduced after Romania's accession to the EU. The increase in number of goats and sheep has advantages, such as: easy maintenance, propagation faster and demand of products on the market. (MRDPA, 2014)

At the end of the year 2011, in the *Centre Region* there were 2 million sheep (22 % of total Romania sheep number), 321 thousand cattle (16% of the national cattle herd), 490 thousand swine (9% of number from the national level) and 8.5 million poultry (11% of the total national number) (Table 3). Density of livestock on 100 hectares (arable plot + pastures and meadows) in Centre Region, in the year 2011, was of 17 cattle (14% at national level) and 105 sheep and goats (60 throughout the country). 100 ha arable lands returned 74 swine, comparing with 57, at national level. A steady fall in livestock was registered in the period 1990 - 2013, such as: cattle number at the end of the year 2013 was by 60% less than the end of 1990, the number of pigs was by 55% smaller, the poultry number by 45% less and the sheep and goats number by 3% higher. (CRDA, 2014)

At the end of the year 2013, in the N*orth-East Region* were registered 525 thousand cattle (decrease by approximately 25% from 2007), 558 thousand swine (-31%), 1.3 million sheep (-7%), 13.2 million poultry (-3%) (Table.3). In the region there are many specialized livestock farms and most animals are breaded in households and used to ensure individual consumption. Distribution of livestock breeding by counties shows that the most important regions: Suceava 25% and Bacau 17%. Very small contribution (only 13%) of Vaslui county is somewhat surprising, because this province holds an important animal husbandry potential. (NRDA, 2014)

In the S*outh-East Region* livestock production accounted 15% of national production, in 2013. At the end of the year 2013 in the region there were 239 thousands of cattle (decrease by approximately 26% compared to 2007, and 12% share of national livestock), 1.4 million sheep (-6% and 15% of national livestock), 841 thousand swine (-5 %, 16% of the national livestock) and more than 13 million poultry (+0.5 % as compared to 2007 and 17 % share compared to the national level). (SERDA, 2013).

Table 3: The livestock numbers, by Romanian territorial structure, in 2007 and 2013

- Numbers -

Macroregiunea/ Region/ Types of animals	**Catlle**		**Swine**		**Sheep**		**Poultry**	
	2007	**2013**	**2007**	**2013**	**2007**	**2013**	**2007**	**2013**
Romania	**2,818,983**	**2,022,408**	**6,564,907**	**5,180,173**	**8,469,195**	**9,135,678**	**82,035,594**	**79,440,251**
Macroregion 1	843,161	672,338	1,645,566	1,170,981	2,891,584	3,454,087	17,410,074	16,956,463
North-West	453,616	351,552	885,048	680,959	1,198,889	1,406,954	8,664,768	8,420,820
Centre	389,545	320,786	760,518	490,022	1,692,695	2,047,133	8,745,306	8,535,643
Macroregion 2	1,019,060	763,198	1,691,614	1,399,011	2,922,772	2,727,664	26,702,932	26,362,804
North-East	698,521	524,521	806,138	558,426	1,432,248	1,326,483	13,625,719	13,219,922
South - East	320,539	238,677	885,476	840,585	1,490,524	1,401,181	13,077,213	13,142,882
Macroregion 3	418,963	239,035	1,323,573	986,333	846,956	893,913	20,636,592	20,442,245
South	399,709	232,359	1,131,926	913,767	822,973	864,870	19,734,904	19,917,425
Bucharest - Ilfov	19,254	6,676	191,647	72,566	23,983	29,043	901,688	524,820
Macroregion 4	537,799	347,837	1,904,154	1,623,848	1,807,883	2,060,014	17,285,996	15,678,739
South-West	315,860	194,177	936,132	652,176	671,306	633,858	11,363,787	9,807,370
West	221,939	153,660	968,022	971,672	1,136,577	1,426,156	5,922,209	5,871,369

Source: NIS (2014). TEMPO Online.

In the S*outh Muntenia Region,* structure analysis of the land and the agricultural areas illustrates a huge potential for agricultural production which may sustain livestock sector development. In 2013, South-Muntenia Region had almost 20 million poultry (25% of Romania total poultry), 914 thousand swine (18% of herd at national level), 864 thousand sheep (9.5%) and 232 thousand cattle (11.5%).

At the end of the year 2013, in the S*outh-West Oltenia Region*, 99 % of the total cattle number (about 200 thousand heads) was breaded in private ownership and represented 10% of national herds of cattle. In 2013, majority of the nearly 700 thousand heads of swine was in private property. Between 2007 and 2013, the number of swine decrease of approximately 30% in this region, because of difficulties encountered by farmers. The vast majority of sheep in the region south-west Oltenia were held in family farms, the number of animals accounted for 634 thousand (7% of existing stocks at national level). (SWORDA, 2014)

In 2013, in the *West* Region, livestock more widespread were poultry (5.9 million), then sheep (1.4 million head) and pigs (971 thousand ends).

3. Conclusions

Despite considerable potential, Romanian agriculture efficiency remains modest, indicating a small use of the production factors which is under suitable values. Operated in an appropriate manner, the potential allows existing employment farming to be much more productive, thereby contributing to the recording of real progress on the path of rural poverty reduction and eliminate the gaps related to high incomes in the urban areas. Economic growth and effective management of financial resources are needed as well as achieving a positive trade balance. Food products competitiveness should be associated with durability to obtain them. (MARD, 2014) In addition, agricultural sector must be protected against the risks associated with specific activities, by systems based on the operation. An effective system of insurance in the field of agriculture should be enforced regarding the balance between preventing calamities and the granting of financial compensation. At this moment, agricultural sector has access to technology and systems for the protection of crops with high economic value by the assistance active in the atmosphere in order to change the local climatic factors, in particular for the risk of hail (MARD, 2014b). According to mentioned national evaluation the conversion of agriculture and rural areas in a way which allows efficient utilisation of the available resources requires action and public involvement, at the same time as the strategic coordination. Recognizing the existence of a dual structure or agricultural sector, The Ministry of Agriculture and Rural Development undertakes measures to draw up and implement their packs of public policies tailored to meet specific needs of each segment, helping farms of semi-subsistence farming transition toward a market oriented and for exports.

The Ministry of Agriculture and Rural Development wants to help food producers succeed better integration on the market and on value chain. For smaller producers, the emphasis will be placed on stimulating association, and on improving access to credits for investments, while for the major actors there is a need for investment in upgrading to comply with the EU requirements, as well as for increasing the competitiveness on the international market.

Beyond these strategies, at the regional and local level there is a need for better collaboration between the regional development agencies, which shall operate under the

direct guidance of The Ministry of Agriculture and Rural Development, and local farmers, in order to assist to finding solutions for their problems, who are also faced, in order to help the guidance through to the selection of those agricultural activities (types of crops, categories of animals, etc.), to offer business opportunities, in order to increase absorption of European Funds. For example, in the case of extra-Carpathian regions an action plan for cultivation of cereals may be implemented, due to facilities offered by soil structure. Also, in these areas measures for stimulating intensive stock-farming may be adopted, as a result of large meadows and pastures areas. For the viability of such measures investments are required, both from internal and/or external sources, for the construction of warehouses and factories to produce agriculture products, etc.

Whereas current rural population is rather aging population, central officials should promote programs in order to attract young farmers to rural area, since they are presumed to be able to apply modern technologies and techniques required of range, for obtaining competitive products on the foreign markets. In this respect, The Ministry of Agriculture and Rural Development will need to facilitate farmers chance to professionalize, through better access to knowledge, education and advice, in order to ensure their better integration in the labour market and should support the development of research aimed at transferring results (applicative research) at the farm level. (MARD, 2014)

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Depreciating Indian Rupee: Trends and Issues

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Abstract: *Indian rupee has been depreciating since May 2013 creating many dimensional trends and issues to be looked at or to be examined. If a currency is depreciating it implies that the value has gone down in relation to another currency. Presently, the value of rupee has declined from nearly Rs. 55 to a dollar to nearly 69 rupees a dollar. This is because portfolio investors are now taking back their money from emerging markets causing demand for dollars (international currency for payments) to increase hence, pulling down Indian currency. The present paper analyzing the deprecating trends since independence in the context of Indian economy and also discusses issues which have come up due to depreciation of Indian rupee.*

Key-Words: *exchange rate, depreciated rupee, inflation, foreign investment, devaluation.*

1. Historical Perspective

Indian rupee has an unparallel history since the ancient times to the present rough-and tumble of a globalised economy, with each era's coinage and worth, broadly imitating the current political, social and economic environment. {Choudhry 2013}.

The history of rupee had started right from 6th and 7th centuries when for the first time punch marked coins were used as Indian currency. The 'rupiya' that has transformed into the modern day rupee, was first introduced by emperor Sher Shah Suri-the modern rupee's precursor-as a silver coin in the 16th Century. The same remained largely unchanged till the early part of 20th Century.

In 1947 when India got independence, one could exchange a rupee –worth a US $ then –into 16 annas, but in terms of value, this was no loose change. At that times, for an

anna one could buy a kilo of ghee, now priced any where between Rs. 300 and Rs. 400 which means about 2000 times increase.

Indian rupee exchange rate evolved in terms of fixed regime wherein both Government and Central Bank of the Country (Reserve Bank of India) determined the exchange rate of its currency into another currency. Similarly, China also determined its Yuan exchange rate in terms of market ruled system.

From the year 1947 to 1971, India had followed a "par value" system wherein the exchange rate of Indian rupee was fixed at 4.15 grains of fine gold. But unfortunately, the devaluation of Indian rupee in 1966 resulted into the reduction in the "par value" of Indian rupee to a lowest level of 1.83 grains of fine gold.

Devaluation of 1966:

In the monetary history of India, for the first time, Indian Government had announced the devaluation of Indian rupee through intervention in the forex market with devaluation of 37.5 per cent and the result was that US dollar was become more expensive from Rs. 4.75 to Rs. 7.50. This was not done as a matter of choice but as a matter of compulsion, in order to increase Indian exports to bring more foreign exchange to the exchequer so that development needs could be met.

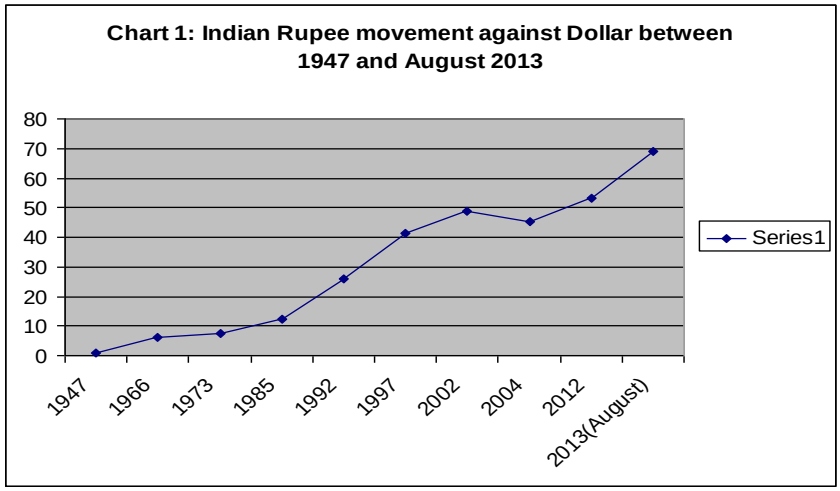
For every dollar, a devalued currency (rupee) gives them more in terms of rupees. This step encourages them to slash unit value fro their respective products in the global market so that these will remain competitive. This devaluation was inevitable as India faced two external aggressions one with China in 1962 and the other one in 1965 with Pakistan and these two wars had ruined Indian economy. Hence, there was no option before the managers of the Indian economy just to get for devaluation so that country should increase exports, liberalize imports and enhance country's chances fro receiving more foreign aid to finance its developmental needs on the other and also to show the world the devaluation as policy tool for effective currency administration.

Devaluation was not an aid in itself. It was an instrument; it was essential if freeing the market was to work. Whether formally or de facto, it had to come sooner or later; and was in purely economic terms and spirit, it made sense to get it. {Lewis 1966}.

After the elapse of 25 years, Indian economy confronted with precarious balance of payment crisis, the then Finance Minister, took another major step in the form of devaluation of Indian rupee in 1992 and 1996 in order to increase exports and earn precious foreign exchange in US dollars. Accordingly, Indian rupee's value went down from Rs. 25 a dollar to Rs. 32 to a dollar. That was the last time India used devaluation as an economic policy instrument. Thereafter the most significant thing happened was transformation from fixed –regime to fully market determined exchange rate regime

2. How Rupee has moved against dollar?

Since independence of India, rupee has been on the fall against dollar (Chart 1). From an exchange rate of 1 rupee is equal to US 1 dollar in 1947 the exchange rate has touched a value of rupees 68.80 equal to 1 US dollar in August 28, 2013.



Source: Prepared by the author from the data given RBI Bulletins; Mumbai 2013.

Over the last few weeks, the Indian Government and RBI has initiated a lot of steps to boost the currency value as well as easing out Foreign Direct Investment (FDI) rules, hence, making funds costlier fro banks and also slapping foreign exchange controls on the individuals and firms.

Indian companies are facing a grim situation now with free-falling rupee forcing consumers to check their spending. The currency blow is landing just as a consumer firms look toward a boost from their strongest annual sales period (September top December). Indian firms can not plan more than a couple of months out as a fast falling rupee value drives up the cost of imports, forcing them to raise prices even as consumer spending crumbles. India's consumers, whose spending helped the Indian economy passing through the global financial crisis in 2008, are now closing their wallets, squeezing firms from car makers to shampoo manufacturers.

Indian firms that import finished products or raw materials are the worst hit as these are crumbling to hold into margins while balancing the need to raise prices with out deterring buyers. India's total consumption expenditure which is comprised of both private and public expenditure has increased by a margin of 3.3 per cent in January-March 2013 as compared to 9.3 per cent in the same period of 2012. Total consumption expenditure as a relative share of India's Gross Domestic Product (GDP) gone down to 65.9 per cent in the IV quarter of 2012-13 from 72.1 per cent in the I quarter of the same fiscal year.

Indian firms are not only cutting back on big –ticket purchases namely- refrigerators, TVs or expensive branded apparel but even staples including soaps, ketchup and cosmetics. According to a Survey, monthly bills for the middle class (driven force of the Indian economy) went up by 15 to 20 per cent in a month across major cities as the falling rupee drove up prices of petroleum goods and edible oil {ASSOCCI June 2013}.

Another publication has opined that even deep-pocketed consumers are cutting back, with five –star hotels and fine dinning restaurants witnessing decease of 20 per cent in sales in the last three months of 2013 after unit value of imported food ingredients and sprits rose. {ASSOCCI August 2013}

3. Causes for Depreciation of Rupee

There are as many reasons for currency sinking. Some of them are more important to be mentioned below:

1. Continuous increasing current account deficit (CAD). Gap between what Indian economy earns from the rest of the globe and what Indian economy has to pay to the rest of the world is pushing up demand for the dollar. India's large fiscal deficit and current account deficit have impacted market confidence. The current situation presents a challenge, obviously, to the Indian Government, but also opportunity for the Government to continue with its policy efforts on a variety of fronts.(Rice 2013) The Indian economy is battling depreciating rupee and low investors confidence. The Indian rupee has dropped over 23 per cent since April and touched a low level of 68.80 to a dollar in the current month (Indian Express[a] 2013).

2. Policy inaction: there is a persisting voice that perception of lack of clarity on policy horizon resulting into fanning speculative demand;

3. Falling foreign exchange reserves: India's forex reserves are enough to cover imports of seven monthly only and thereafter it will become difficult for Indian Government to finance its imports which are on the rise;

4. Economic recession: India's GDP growth came down to a decade low figure of 5 per cent in 2012-13 and 4.5 per cent in January-March quarter of 2013-14, resulting into outflow of funds from the country as the foreign investors are losing confidence in Indian economy for further investment.(The Hindustan Times [a] 2013) During the last four months; the net FII inflows have turned negative (Chart 2). The recent out flows of FII was triggered by the global bond sell-off on US Federal signals that raised the prospects of interest rates hardening in the US. The rise in bond yields in the US lead to a withdrawal of capital from emerging markets economies. The US Federal Reserve has hinted at winding down the program to pump in billions of dollars amid recovery signs in the US economy. Part of this money may come to into Indian equities.

5. Dependence on foreign money: CAD was financed by foreign money for many years. Withdrawal of money by overseas investors is leading to weakness in rupee.

6. Recovery in the US: Recovery in the US economy is making the greenback stronger against other currencies of the globe.

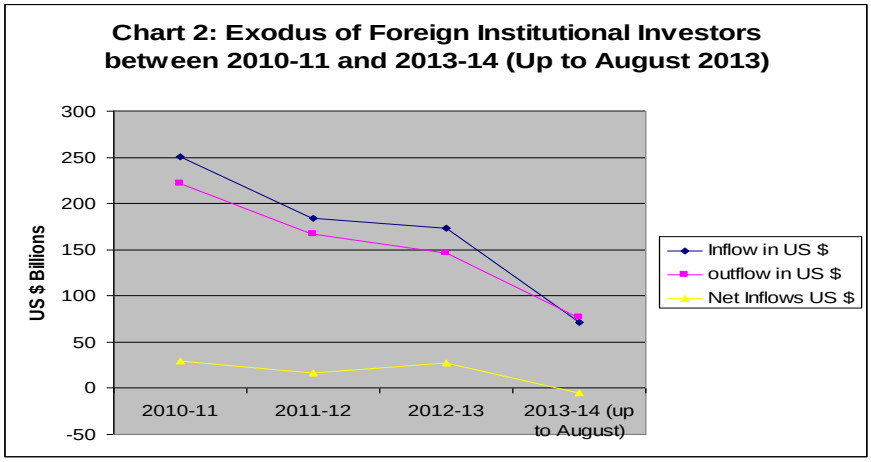
7. Stimulus withdrawal: Indications are there that the US economy may withdraw or ease fiscal stimulus package could tighten liquidity in global markets;

8. Capital controls: The decision of Indian Government to impose restrictions on capital flows has not gone down well with markets and as a result the markets did not response on expected lines.

9. Global trends: Rupee is following the trend seen in the currencies of other major emerging economies; and

10. Speculative trading: Speculative trading in the currency markets is putting further onus on Indian rupee.

11. Portfolio investors are now withdrawing money from emerging markets causing demand fro dollars to rise pulling down local currencies.



Source: Prepared by the author from the data released by Ministry of Finance; Government of India; New Delhi; 2013.

4. Chronicle of Rupee Depreciation

-In November 2011, cabinet approves decision to allow DSI in multi-brand retail but political opposition coerces to bottle it up;

-In January 2012 Reserve Bank of India cuts Cash Reserve Ratio (CRR) by a margin of 0.5 percentage points giving extra money amounted to RS. 32,000 crore fro banks to lend;

-In March 2012, Indian Government announces a proposal to retrospectively tax corporate deals resulting into spooking investors;

-In July-Oct 2012, present Finance Minister (P. Chidambaram) returns and announces fiscal consolidation roadmap; diesel prices raised; allow FDI in multi-brand retail;

-In May 2013, US Federal Reserve chief (Raghuram 2013) hints at withdrawing cheap money policy (cut in interest rates) amid signs of recovery in the US economy which has recorded more than 2 per cent in current quarter; and

-In July-August 2013, Reserve Bank of India slaps forex controls on individuals and firms; curbs gold imports; appointment of new Governor (Hindustan Times[b] 2013); and FDI policy overhauled.

5. How depreciating rupee does affect people?

The following are the major affects of rupee falling:

A falling rupee means that India needs to shell out more cash to import fuel, and this raises the prices of transporting products; resulting into higher inflation;

Higher rate of inflation means RBI will hesitate to cut interest rates;

Hence, consumers required to keep paying bigger chunk of their income every month towards repaying house loans, even as the cost of food and petrol rises and the prospect of salary hikes recede.

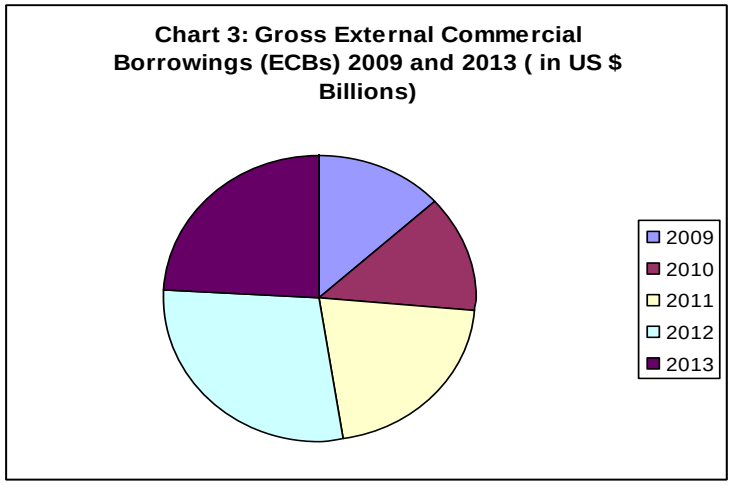
Effects on ECB:

The significance of External Commercial Borrowings has been on the rise over the years (table 1). This testified from that fact the share of this segment in India's total external debt (Chart 3). In 1990-91 when India had faced a crisis and transformed its economy into globalize economy by announcing the New Economic Policy (NEP), the relative share of this segment was just 12.1 per cent. In 2012-13, the relative share has increased enormously and touched a figure of 31.0 per cent of India's total external debt, hence, reflecting a greater reliance on private funding by Indian companies. (ICRA 2013) However, the recent increasing rupee depreciation might discourage companies to continue with this route as the debt service commitment in terms of rupee would rise sharply. This would erode the potential savings expected while availing the ECB avenue.

Table 1: Trends in Gross External Commercial Borrowings between 2009 and2013

Financial Year	Gross ECBs in US $ Billions
2009	15.2
2010	15.0
2011	24.1
2012	32.6
2013	27.6

Source: Handbook of Statistics; RBI; Mumbai 2012-13; and BOP Statement June 2013



Source: Prepared by the author from the data given in Table 1.

6. Other side of Depreciation of Rupee

Falling of rupee is a good arbitrage fro Non-Resident Indians (NRIs) as non-resident external account offers two-way fungibility which means there are no restriction for transferring money from NRE account to foreign account. The result is that NRIs raise cheaper loans abroad and remit money to India.Most NRIs are using this route to remit money

The NRIs in the Middle East region seems to have struck goldmine after the steep fall in the rupee since May 2013. The 25 per cent depreciation in the value of rupee is even tempting NRIs to take loans at cheaper rates in various Middle East countries and the remit the money to India to take advantage of the fall in the rupee value.

According to SLBC statistics, remittances to the State of Kerala, which receives the maximum NRI money in the country, have crossed the all time high figure of Rs. 75,000 crore in the first five months of the fiscal year as compared to Rs. 60,000 crore at the end of last fiscal year {SLBC 2013}.This means NRIs have two advantages at a time by the depreciation of rupee. They get interest of 9-10 per cent in India and on conversion they get more rupees in their account in India. These NRIs could be taking loans to bring to India and make more money out of it. If these trends continue, Banks in Kerala will witness a jump of 45-50 per cent in NRIs remittances in the current fiscal year. {Surendran 2013}.

Interest rates are comparatively low in the Middle East economies. The benchmark rtes in Kuwait and Saudi Arabia are 2 per cent; Qatar 4.5 per cent and UAE 1.36 per cent. Under Foreign Exchange Management Act (FEMA), there is no curb on remittances to India under the NRE to NRO account, which are maintained in Indian rupee and can accept remittances in foreign currency.

Regulatory Measures taken by RBI:

Indian Government boldest attempt yet to stem a rout in the rupee delivered only a modest lift in the currency but sent bond and stock prices tumbling, resulting into concern the unexpected measures inflict too much pain for limited gain. Here is given below a list of measures taken in respect of depreciation of rupee by Indian Government and Reserve Bank of India between January 2013 and July 2013.{Indian Express[b] 2013}

a) RBI eases rules and procedures for the exporters to access Forex Markets;

b) RBI relaxes collateral rules for foreign investors in futures and options in stock exchanges;

c) RBI eases overseas borrowing norms fro firms under investigation;

d) RBI removes restrictions on open position limits fro rupee currency pairs;

e) RBI mulls easing out hedging norms for exporters and importers;

f) RBI cuts time frame fro exporters to repatriate earnings;

g) Indian Government further tightens gold import rules;

h) RBI extends buyback time period for foreign currency convertible bonds until December 31;

i) RBI allows telcos to refinance rupee loans until March 2013;

j) RBI tightens gold lending norms for regional rural banks;

k) RBI eases out rules and procedures for low-cost builders to access overseas loans, hedge entire borrowing;

l) RBI relaxes some forex option premium payment rules and regulations;

m) RBI asks exporters to realize dollar earnings, bring them back into country within one year;

n) RBI restricts loans against gold coins by cooperative banks;

o) Indian Government asks RBI to advise banks not to sell gold coins;

q) RBI extends gold import curbs on nominated and trading agencies;

r) RBI tightens liquidity, lifts short-term rates, caps banks' funding, and announces bonds sale worth 120 million rupees;

s) RBI extends relaxation of the all-in-cost ceiling for issues of external commercial debt;

t) Indian Government tighten regulations, rules, and procedures for derivatives trading in currency markets;

u) RBI eases out rules for non-bank assets finance companies to raise debt overseas;

v) RBI introduces provisioning, capital requirements for bank exposed to corporate with unhedged FX;

7. What should be done now?

India must go for the following steps to prevent further rupee fall.

1. Reserve Bank of India could open a dollar window for oil firms to buy dollars directly from the Central Bank instead of buying from markets;

2. The RBI could hold auctions to buy bonds from oil firms, providing them dollars or other non-rupee currencies;

3. RBI should ask exporters to convert part, or entire overseas foreign currency earnings in the market immediately, providing near-term relief to the rupee;

4) RBI should also ask banks to limit net overnight open position limits, making it difficult to short the rupee and prevent speculative trading;

5) RBCI could issue rules and procedures delaying or staggering import payments, which are typically made at the end of the every fiscal/financial year;

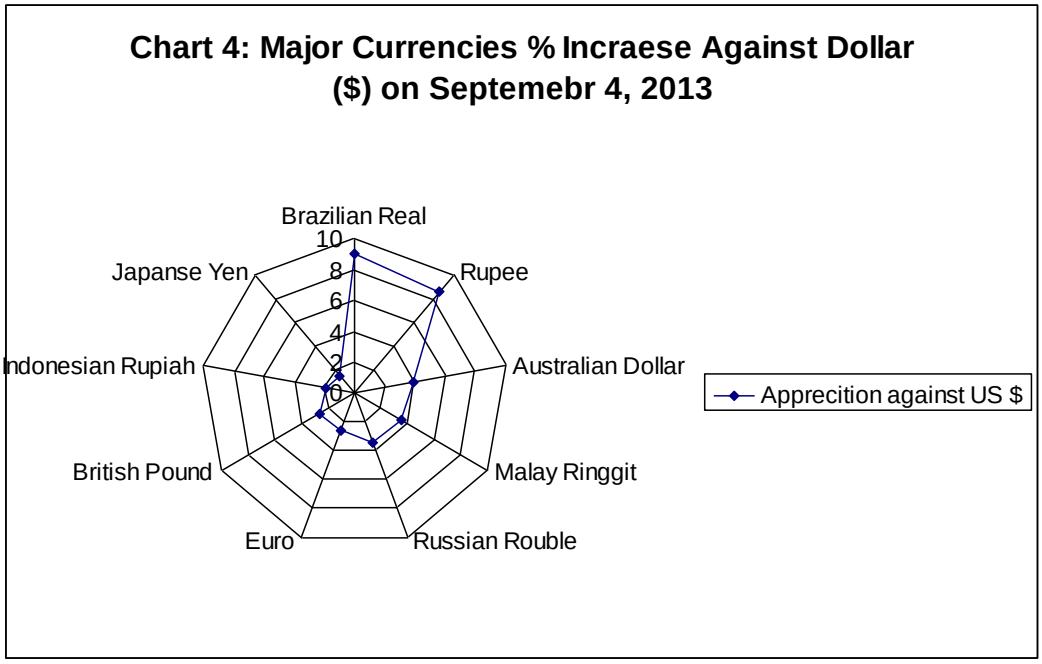
6) Indian Government should review sectors namely defense, or revive pension and insurance reforms;

7) Indian Government further could issue a sovereign bond through SBI to non-resident Indians to get more dollars.

8) Indian Government should set to float a first-of-its-kind a proxy sovereign bonds that would allow Government owned firms to dig deep into the pockets of foreign pension and institutional funds to stem the rupee slide, raise funds fro building highways and also test international investors' confidence which is on the decline. This step alone could bring an additional US $ 11 billion or RS. 60,000 crore rupees, that are crucial to strengthen the rupee that has fallen by nearly 20 per cent.

8. The Rajan Effect

The rupee has gained 9 per cent in its value in relation to dollar since September 4, 2013. The most noteworthy feature of Rajan effect is that now rupee is among the best performing currencies in the world [Chart 4]. There are two contributory factors to this trend. One the Governor of RBI has infused positivity in the market and second because of the delay in the US tapering.



Source: Prepared by the First author from the data given the Hindustan Times; New Delhi; October 18, 2013; P. 13.

There are many contributory factors for the appreciation of rupee against dollar:

1. Opening of SWAP Window for fresh dollar deposits mobilized from the NRIs;
2. Increasing the borrowing limit of banks from overseas;
3. Allowing exporters, importers to practically rebook cancelled forward exchange contracts;
4. Deferring of US Federal Reserve unwinding of its stimulus package;
5. Fall in gold and silver imports by a margin of 80 per cent to US $ 0.8 billion in September 2013.

9. An Alternative as Prevention

In order to check the volatile currency (Rupee), Indian Government is planning to pursue country's ten major trading partners to accept payments in rupee for some of their exports. This proposal is the outcome of the recommendation of the Committee appointed in August 2013 to study and suggest currency swaps. Under this alternative, Indian Government would ask its major trading partners currency swaps, especially oil exporting countries so that the trade deficit could be narrowed down. India has earlier this year also begun paying for oil imports from Iran in rupee that could help save US $ 8.5 billion in the current fiscal year. Indian Government also planning to target oil producing nations namely- Iraq, Venezuela as well as South Korea for making similar arrangements.

China has also shown keen interest in such arrangement to start trade in terms of Yuan-Rupee and Japan too is largely willing to do trade in Yen-Rupee in coming times.

10. Developments in last 8 months of 2014

World tremors shook the Indian financial market and as a result, Indian rupee tumbled from a high of 60.69 in first week of August 2014 to 61.73 in the second week of August 2014. Added to this, Indian rupee registered its largest single day decline in last 6 months of 2014 as heavy dollar outflows from the domestic share and debt markets continued as foreign investors pared their respective holdings.

The decline in rupee value by 65 paise touched a value of Rs. 61.49 against US one dollar. The Indian currency dropped 1.06 per cent in the third week of August which is being considered as the biggest fall in Indian rupee since January 24, 2014. If tension rises and crude oil prices go up, the Indian rupee could fall further.

The Indian rupee could test its psychological resistance at 61 for one dollar in current week of August 2014. If it manages to breach this level, it could strengthen further to 60.70 in coming weeks. On the other of it side, a reversal from 61 would leave the Indian rupee under pressure. In this regard, the rupee could be range-bound between 61 and 61.75 for some time with bearish bias. Declines below 61.75 for one dollar could drag it to 62 in the month of September 2014.

The medium-term view remains negative, with a bearish head-and-shoulder pattern on the existing chart. Key resistance for Indian rupee is stood at 60.50 and 60.0. A decline to 62.35 appears likely in the medium term. The present outlook for the rupee will turn bullish only of it breaks the psychological 60 level. But under the present world uncertainty, a break looks less probable at the moment.

11. Conclusion

It is evident from above analysis that Indian rupee is in crisis and no breakthrough has been possible. There will be more pain ahead as the globe settles down to a new normal state. The present scenario may need policies that result in increasing the economic misery for people in the near term. The measures taken by the new Governor of RBI has contributed for 9 per cent appreciation of Rupee. The latest initiative in terms of rupee trade with major trading partners may go a long way in easing out the pressure on Indian rupee and mat narrowed down current trade deficit (CAD).

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An Exploratory Study Regarding the Brand-Consumer Relationship in Social Media

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Abstract: *In the digital era concepts such as social networks, blogs and forums have become integrated keywords in the marketing communication strategies of brands worldwide. The old ways of building an online presence, such as simple websites, have diminished most of their relevance in front of social media tools. The ease of establishing contacts with consumers made out of these new applications propitious communication channels for more and more brands, which became present on sites like Facebook, Twitter or Google Plus, where their audience already gathered in large numbers. Social media offers the opportunity of developing close relationships with consumers and helps the brands to strengthen their awareness and image. The purpose of this paper is to present the consumers` opinions towards their relationships with brands in social media. By knowing this opinions, the brand`s communication process can be optimized and adapted to the specific consumers` needs and interests.*

Key-Words: *online marketing, online marketing communication, brand, brand-consumer relationship, online customer relationship, social media, social networks, Facebook.*

1. Introduction

The marketing communication activity was noticeably improved along with the emergence of social media. For the brand communication strategy the use of social media tools proved to offer significant advantages and contributed to the development of the brand knowledge. The brand is a valuable long-term asset for any company, which is why it implies strategic management and constant coordination regarding its marketing activity, both online and offline.

The specialized literature suggests that social media marketing can be successfully used in order to manage the brands and to create relationships with the consumers. Social media marketing has "the capacity to engage consumers with the brands in an interactive way" (Platon, 2014, p. 192) through various tools.

This paper presents some aspects regarding the brand-consumer relationship in social media, both from a theoretical point of view and from the consumers` point of view. The importance of this issue appears to be very high nowadays, since many companies are trying to enhance the consumers' engagement with their brands in social media. Building a strong social media presence of the brand it is not enough in order to sustain a long-term

customer relationship. The brands must adapt their strategies to this environment and communicate in a specific manner, taking into account that consumers are in control in social media and they select the content that they want to see. In order to clarify this matter, this paper presents an exploratory research regarding the consumers` opinions towards their relationship with brands in social media. The results of this research can be used in the brand`s communication process with its audience.

2. The brand-consumer relationship in social media

Social media applications are technologies that invite the participation of both consumers and brands and that have the ability to maintain the communication and collaboration among its users (Barefoot & Szabo, 2010). Gunelius (2011) defines social media as "the online publishing and communications tools, sites, and destinations of Web 2.0 that are rooted in conversations, engagement, and participation" (p. 10).

It deserves to be mentioned that although the two concepts, social media and Web 2.0, share common features, their relationship does not imply synonymy. The term Web 2.0 is used generically for describing a "fundamental social way of using the Internet technologies" (McHaney, 2013, p. 10). On the other hand, social media represents a precise set of tools, applications and services that facilitates social interactions among different Internet users. The most important aspect to mention regarding social media is that a complete understanding of this concept is possible by integrating its two basic elements: the *social* element and the *media* element. Basically, by combining social processes, derived from the users` interactions, with the technical facilities, offered by this new media channels, results a continuous process of content creation, globally accessible to diverse groups of Internet users.

The concept of social media is used as an umbrella term, which brings together different types of online communication tools and applications. To eliminate any confusion about the tools that may be included under the umbrella of social media, it is necessary to classify and systematize them into precise categories.

One of the most interesting classifications belongs to Kaplan and Haenlein (2010). The authors consider that the classification of social media tools can be performed taking into account its two key elements, namely: "media research (social presence, media richness) and social processes (self-presentation, self-disclosure)" (Kaplan and Haenlein, 2010, p. 61). In other words, social media applications can be classified according to the technical and creative opportunities offered by the media channel and the degree of social participation allowed by it. According to these criteria, the social media tools can be grouped in six categories (Kaplan and Haenlein, 2010, p. 62):

- collaborative projects;
- blogs;
- content communities;
- social networking sites;
- virtual game worlds;
- virtual social worlds.

The specialized literature offers a variety of approaches regarding the typology of social media tools. For example, Gunelius (2011), structures the variety of social media tools into six categories, namely: blogs; microblogs; social networking; content sharing

and social bookmarking; audio and video, and e-books, webinars, reviews and more. Zarrella (2010, p. 3) considers that the social media applications can be grouped into eight categories: blogs; microblogs; social networks; media-sharing sites; social bookmarking sites and voting sites; review sites; forums, and virtual worlds. Miletsky (2010, p. 75) includes among the social media tools and applications the following categories: e-mail; instant messaging; blogs and vlogs (video blogs); forums and message boards; file sharing (music, pictures, videos, games etc.); wikis; social networking sites; virtual worlds; RSS feeds; reviews of products and services, and mashup sites (combining several tools in one application).

Another noteworthy approach belongs to Bădău (2011), which proposes the classification of the social media platforms into four categories according to their role, namely:

- communication: blogs, podcasts, vodcasts, forums, microblogs, social networks, newsgroups, instant communication, events;
- collaboration: wiki, favorite sites, opinions and questions;
- multimedia: photo, video, live casting, online audio;
- entertainment: virtual worlds, online games.

Starting from this latter perspective and integrating the other points of view presented above in this paper, I propose the classification of the main social media tools, depending on their role, as follows:

Table 1. The typology of social media

Communication:	- social networks - blogs - microblogs - podcasts - videocasts - newsgroups and discussion groups - forums - instant communication
Collaboration:	- wikis - social bookmarking - reviews and ratings websites
Multimedia:	- multimedia sharing websites - live streaming
Entertainment:	- online game worlds - virtual worlds

Source: Platon, O.E. & Orzan, G., 2015.

This classification does not imply the exhaustive inclusion of the mentioned instruments in just one category, each of them serving to other purposes outside their main scope.

Hence, according to this classification, social media brings together a variety of tools and applications that can help the brands to directly communicate and interact with their consumers. With the help of its tools, social media can be used in order to "build

awareness, recognition, recall, and action for a brand" (Gunelius, 2011, p. 10). The companies can decide to build brand-consumer contacts through social networks, blogs, forums, multimedia sharing websites and other social media applications. Managing each of these virtual channels of communication can help the brands to constantly develop and improve their relationship with consumers in the online environment.

"Brands are complex entities, but ultimately they reside in consumers` minds" (Tuominen, 2000, p. 305) and this is why their value for the company is truly achieved only through the contacts with the consumers. Communication is the heart of all the relations with the brand (Ouwersloot & Duncan, 2008, p. 4) and "creating an online presence for the brand should become a part of the communication strategy in order to sustain the long-lasting customer relationship" (Platon, 2014, p. 200)

In social media there is a great degree of interactivity and a wide range of information can be presented to consumers in the form of texts, photos or videos. In addition to using social networks, companies can fully benefit from the advantages of using blogs or content-sharing websites, where consumers can obtain relevant information in an understandable and accessible manner. Although social media tools allow a large transfer of information, it is important to remember that the consumers own the space and they decide what information are of interest for them. In this context, adapting to the requirements and characteristics of the users is an essential aspect for the brands that are engaged in communication through social media applications. Marketing communication in social media is a relational process and the companies should focus on creating connections with consumers and not on trying to persuade them to buy products or services.

Being a strong humanized environment, the most important aspect to remember is that any marketing communication campaign in social media should be based on a good knowledge of the consumers` habits, preferences and interests. In order to be able to turn the consumers into dialogue partners, the companies should not overlook the fact that honesty, credibility and transparency are key elements for the public in social media.

So, the first step in developing effective marketing communications through social media is listening to consumers. Since in social media the consumer is in control and because the consumer is the reference element in evaluating the success of a brand, studying the consumers` opinions should become a priority.

3. Consumers opinions towards their relationship with brands in social media

The purpose of this exploratory research was to study the Romanian consumers` opinions regarding their consented relationships with brands developed in social media. The main objectives pursued throughout this research were:

- identifying the types of social media applications used by the respondents;
- identifying the frequency of use for the three most frequently used social media applications by the respondents;
- identifying the average time of usage per day for three of the most used social media applications by the respondents;
- identifying the ways through which the respondents are relating with brands in social media;

- identifying the categories of brands with which the respondents have established relationships in social media;
- identifying the actions carried out by the respondents in their relationship with brands;
- identifying the socio-demographic profile of the respondents.

The research was implemented both online and offline, through a questionnaire with 14 questions. The questionnaire was administered to 25 consumers, during the period February 23-29, 2015.

The results of the research showed that all 25 participants in the study are currently using social media applications and have developed consented connections or interactions with brands in social media. The socio-demographic profile of the respondents can be described as following: 32% male respondents and 68% female respondents, 48% of the respondents are aged between 18-24 years old, 48% are aged between 25-34 years old and 4% are aged more than 35 years old. With regard to the last level of education completed by the respondents, 48% have graduated high school, 12% have graduated university studies and 40% have graduated post university studies. The socio-professional status of the respondents is: student for 48% of the subjects and employee, without managerial responsibility for 52% of them. The area of origin of the subjects was the urban area for 88% of the respondents and the rural area for 12% of them.

Regarding the types of social media applications currently used by respondents, the research indicated that Facebook is the most used social media application, 96% of the respondents stating that they have a member account on this social network. This is followed by the instant communication applications such as Skype and Yahoo! Messenger, 88% of the respondents stating that they have a user account on them. The third most important application is YouTube, 64% of the subjects having a member account on this site. The social media platforms used by the respondents without having a user account are: Wikipedia (76%), ratings and reviews websites (44%) and YouTube (36%). Google Plus (16%) and Twitter (4%) were cited as applications that respondents do not use, although they have a member account created for this purpose. The applications that have been indicated as not being used by the respondents are: virtual worlds (100%), Twitter (96%) and blog platforms, such as Blogger/Blogspot (96%) or Wordpress (92%).

Regarding the usage patterns of social media applications, the results showed that three of the most commonly used social media applications by the respondents are Facebook, YouTube and Instagram. Facebook was indicated by 96% of respondents, 84% of them stating that they use it several times a day. YouTube was indicated by 68% of the respondents, 24% of them using this site several times a day. Instagram was mentioned by 32% of the respondents, 16% of them indicating that they are using it once per day. The average time per day spent using each of these applications is: under 60 minutes in case of YouTube (with 48% of the responses), 30-60 minutes for Facebook (28% of responses) and less than 30 minutes for Instagram (16% of responses).

The way in which the majority of the respondents (64.9%) are relating with brands in social media is by giving a Like to their official Facebook page. Other methods mentioned are: the subscription to the official YouTube channel of the brand (13.5%) and reading the brand`s official blog (13.5%).

The most important categories of brands with which the consumers have developed relationships in social media are: food/drink (7.8%), health/personal care/sports (7.4%), tourism/travel (7%), hypermarkets/ supermarkets/malls/stores/online stores (7%) and celebrities/singers/bands (6.6%). In most cases, the support of these relationships is Facebook. Other applications mentioned were blogs and forums. The respondents were

asked to indicate examples of brands for each selected category, thus aiming to test the spontaneous awareness of the brands with which the consumers are relating in social media. The most important mentioned examples were:

Table 2. Examples of brands mentioned in the research

Category	Examples of brands
Food/drink	Coca-Cola, Fanta, Doncafe, McDonalds, KFC, Savori Urbane, Mazilique, Ferrero Rocher, Nutella
Health/personal care/sports	MedLife, Doctorul Casei, Viața în verde viu, Ciclism.ro, World Class Romania
Tourism/travel	Bora Bora, Booking.com, Turist Info.ro, Mareea Agenția de turism, Imperator travel blog, Paralela45, Perfect Tour, Ghiduri turistice, Travelmax, Paravion, Momondo
Hypermarkets/ supermarkets/malls/stores/online stores	Auchan, Carrefour, Lidl, Mega Image, eMag, Altex, Cel.ro, De Purtat, OLX.ro, Elefant.ro, Yokko, Ale82, Nissa, MaDame, Bien Savvy, Sideris Organic Shop, Decathlon
Celebrities/singers/bands	Antonia, Adda, Andreea Bălan, Andreea Bănică, Elena Gheorghe, Fly Project, Grasu XXL, Inna, Oana Radu, Beyonce, Jennifer Lopez, Rihanna, Tina Turner, Muse, Metallica, Pearl Jam, Incubus, Garbage, Ashton Kutcher, Mihai Bendeac

Another valuable research result is that the most important actions carried out by the respondents in their relationship with brands are: looking for information regarding various brands (17.2%), voting/evaluating/liking messages of various brands (16.4%), reading the comments of other consumers regarding various brands (15.6%) and viewing photos/videos regarding various brands (13.1%). In contrast, the least mentioned actions were: adding content/articles/posts regarding various brands (1.6%) and participating in group discussions regarding various brands (1.6%).

4. Conclusion

According to the research, Facebook is the most important social media application currently used by the Romanian consumers. Within it, individuals manifest and develop mostly of their consented interactions with brands, appreciating and following their official pages or giving permission to be exposed to the messages sent by the brands and their consumers. The frequency of use, the time spent using it by the consumers, along with its specific operating characteristics, make from this social network the best social media application for the brand`s marketing activity, offering it the possibility to directly, quickly and easily communicate with its audience.

Other applications that can be considered for inclusion in the communication strategy between brands and their audiences are YouTube, Instagram, blogs and forums.

The main action that the consumers are carrying out in their relationship with brands is searching for information about products and services. This is also the way in which the consumers are initiating the process of relating with brands in social media. Starting from

this basis, the relationships between consumers and brands are continuing to develop and to consolidate with the help of the activities that the brands are performing in social media. These actions also contribute to the development of the brand image and create closer ties with the consumers.

The categories of brands with which the consumers are relating in social media are diverse. The fact that individuals can easily cite examples of brands, demonstrates that the presence of brands in social media can contribute to strengthening the brand awareness.

Thus this paper offered some recommendations for brand management, pointing out the main aspects that should be included in the brand communication strategy. Suggestions for further research work include extending the sample of respondents to a representative value so that the research results could be generalized.

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Using the Professional Judgment within the Financial Auditor's Profession

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Abstract: *The audit mission comes to the aid of the big companies in solving the issues that occur in the financial statements. This paper aims to describe and synthesize the situations in which the auditor uses its professional judgment as a main instrument in the audit activity performed within a company. The professional judgment is a polyvalent concept that has implication on both the organizational level and the social, psychological, educational etc. The formation of such a judgment, even though it seems a flexible one, it needs accuracy and a perfect practice as a starting point.*

Key-Words: *professional judgment, auditor, international accounting standards, decision making, financial statements.*

1. Introduction

The audit has the mission to coordinate and to reach every phase prior to the issue of the audit opinion. In the situation in which the regulations applied, used law codes, procedures or directives do not impose a clear path for the decision process, the auditor has the option to appeal and to use his professional judgment based on the accumulated experience in practice and on his own qualities.

The research methods that can be used in practice are analysis, synthesis, and interpretation along with the statistical workings over the gathered information.

2. The auditor as a practitioner of the professional judgment

The International Audit Standard highlights the audit in the manner of an increase of confidence of the practitioners in the financial statements that are the subject of auditing, therefore the auditor will issue, at the end of the audit mission, an opinion based on the full testing of the financial statements under all significant aspects.

The regulations that guide the auditor's activity do not have an absolute character but represent a general picture, without taking into consideration the particular aspects and situations.

"It is the purpose of the professional to act in the virtues of the professional judgment in order to solve the particular issues of every entity, not stated in the professional standards" (Popa et al., 2012).

The professional judgment used by the auditor in the process of planning and conducting the audit mission over the financial statements is founded on the vast experience in the audit field and his ability to correctly interpret the ethical provisions and those stated in the ISA's (International Standards of Auditing).

We have centralized the regulations that refer to the professional judgment within the audit activity as follows:

National regulations	Number of mentions of the "professional judgment"
Ministry of Finance – Act dated 09/12/2003 Published in Official Monitor, part I no. 929 dated 23/12/2003 regarding the Ethic Code of the fiscal control inspector.	**1**
Ministry of Finance – Minimal internal audit note dated 21/09/2000 Published in Official Monitor , part I no. 480 dated 02/10/2000	**7**
The Chamber of Financial Auditors – Decision no 274/2011 dated 15/12/2011, Published in Official Monitor, part I no. 86 dated 02/02/2012 regarding the modification and completion of the Council of the Chamber of Financial Auditor of Romania's Decision no. 182/2010 regarding the approval of the procedures regarding the revision of the activity of the financial audit conducted by the financial auditors.	**1**
The Chamber of Financial Auditors – Decision no 73/2006 dated 20/09/2006 Published in Official Monitor, part I no 909 dated 08/11/2006 regarding the approval of the quality control procedures of the financial audit activity and related services.	**6**
The Chamber of Financial Auditors - Rule dated 19/01/2005 Updated version as of 08/08/2007 regarding the professional practice internship period for financial audit activity.	**1**
The Chamber of Financial Auditors - Rule dated 26/02/2003 Updated version as of 15/03/2006 regarding the professional practice internship period for financial audit activity.	**1**
	TOTAL 55

Source: Processed by the authors

The professional judgment issued is a result the competent application of the accounting principles and it is necessary in the audit especially in the decisional process that implies:

- The evaluation of the audit risk and settlement of the materiality threshold of the identification of the significant misstatements (example: the inappropriate description of the accounting policies that can mislead a user of the financial statement ISA 320; the overstatement of assets by not properly recognize and record allowances and provisions etc.).

The audit risk refers to the auditor risk to issue an inappropriate opinion in the existence of material misstatements in the financial statements.

When we take into consideration the nature of risks, the auditor takes into consideration a series of aspects, among which:

- If there is a fraud risk;
- If the risk is related to recent evolution of significant economic nature, accounting of other nature and therefore needs a special attention;
- The complexity of transactions;
- If the risk implies significant transactions with related parties;
- The subjectivity level used in the evaluation of the financial information related to the risk, especially the ones that involve a wider uncertainty interval in the evaluation;
- If the risk implies significant transactions outside the normal course of the activity that seem unusual in other ways (ISA 315).

- Conditions related to nature, time and duration of the audit procedures used in order to comply with the provisions of the international standards and in order to collect audit evidence (ISA 200).

The auditor carries, based on his professional judgment, a series of procedures needed to collect the audit evidence. The audit evidence needs to fulfill two conditions regarding the sufficiency and suitability. Sufficiency refers to the amount of evidence needed and at the quality of the evidence (ISA 540):

- the verification of the audit evidence and procedures performed in order to achieve the general objectives of the auditor established within ISA's (ISA 501);
- the evaluation of the reasonableness level of accounting estimates performed by the management in the preparation of the financial statements and the evaluation of appropriateness of the accounting principles used;
- issuing the conclusions based on the audit evidence obtained.

The issuance of the audit report that will contain the audit evidence designates the existence or the inexistence of significant misstatements in the financial statements.

Expressing this opinion represents a demarche of the whole audit process carried as consequence of using the professional judgment.

3. Conclusions

"Using the professional judgment is a result of the relative nature of the audit. The necessity of the processional judgment becomes natural consequence on one side of the over general character of the regulations that stand as basis for the audit missions, and on the other side due to the reasonable insurance provided by the auditor for the users of the financial statements" (Popa, Tiron & Span, 2012).

When talking about the known character elements, but not stated in the usual regulations, the auditor uses the professional judgment based on prior situations in which he was in the positions of taking various decisions in similar cases.

The foreignness elements can put the auditor in difficulty by bringing him in the situation to use the professional judgment in order to orient the audit process on the normal path towards a positive finality. The professional judgment of the auditor is based on his intellectual abilities, his experience, on the auxiliary mechanisms of informing, on the interdisciplinary of elements in other domains and on the inductive and deductive capacities he owns.

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[4] International Standard on Auditing ISA 315 - Identifying and assessing the risks of material. Misstatement through understanding the entity and its environment.

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[6] International Standard on Auditing ISA 540 Auditing accounting estimates, including fair value accounting estimates, and related disclosures.

[7] International Standard on Auditing ISA 501 Audit evidence — specific considerations for selected items.

Central and Eastern European Countries Focus on the Silk Road Economic Belt

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Abstract: *The Silk Road Economic Belt, a strategic priority of the Chinese foreign policy in 2015, draws the attention to the countries of Central and Eastern Europe through the multiple benefits that it displays (investments, economic growth, trade between the countries along its corridors, job creation, infrastructure development, the strategic importance of being part of a grandiose multi-continental project). Among these benefits an important one is represented by the opportunities of Chinese investments in infrastructure, since the EU is suffering from a credit restraint. Also, The Silk Road Economic Belt could lead to a potential increase in the bilateral trade. Analyzing the literature in the field and the various official information available online, this paper aims to depict the Chinese project form the Eastern European perspective, identifying local priorities, conflicting interests, possible infrastructure projects, routes, focusing on two strategic countries in the region: Romania and Serbia, both displaying advantages and disadvantages.*

Key-Words: *Silk Road Economic Belt, China, Central and Eastern Europe, investments, infrastructure*

1. Introduction

In a globalize world, countries have to take any economic and political opportunity in order ensure the welfare of their citizens. At present, there are several big scale projects aiming at developing international trade at unprecedented levels before. The Silk Road Economic Belt and the 21st Century Maritime Silk Road, also known as "One Road one Belt" or "Belt and Road" (Ze Shi, 2014) is one of the most complex projects that have ever been launched in the recent history through the magnitude of its objectives, the number of countries along its various transportation corridors and the friendly approach of the initiator. The Belt and Road is designed to respect five principles for the countries involved:

- Respect for the sovereignty
- Territorial integrity of the countries;
- Non-aggression;
- Non-interference in each other's affairs;
- Equality, mutual benefit, and peaceful coexistence.

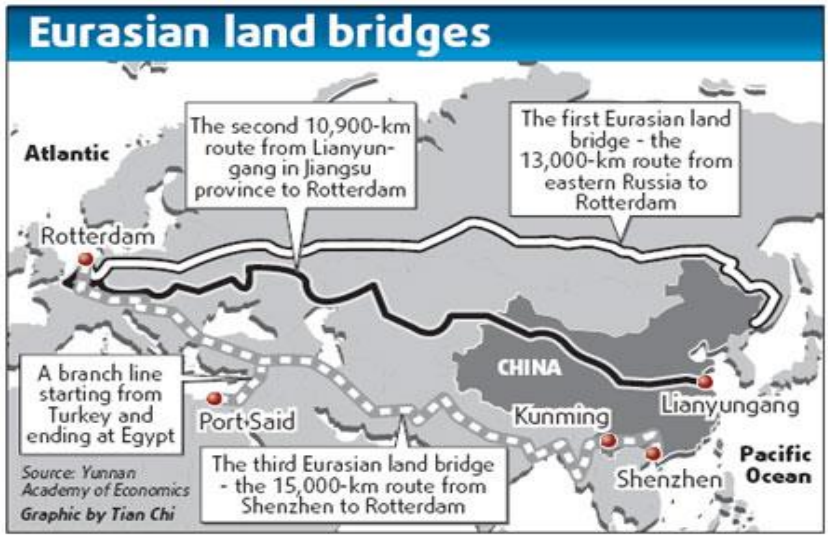
According to the Chinese version, the terrestrial Silk Road starts in Xi'an, the capital city of Shaanxi Province, in central China, stretching west through Lanzhou, Urumqi and Khorgas. Then continues west through the countries of Central Asia (Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan) traversing then Azerbaijan, Armenia, Georgia, Pakistan, Afghanistan, Iran, Iraq, Syria and Turkey. The Silk Road Economic Belt crosses than the Bosphorus Strait and stretches through Europe - **Bulgaria, Romania, Poland**, Russia, Belarus, the **Czech Republic**, Germany, the Netherlands and then turns to Italy, where it converges with the Maritime Route.

The Maritime Silk Road begins in Quanzhou and heads to the Malacca Strait, Malaysia, Bangladesh, Sri Lanka, India, crosses the Indian Ocean, towards Kenya, continues north along the Horn of Africa and enters the Red Sea through the Gulf of Aden, reaches Egypt and enters the Mediterranean Sea through the Suez Canal and the Mediterranean Sea to Greece (Piraeus) and then crosses the Adriatic sea to Venice in Italy and connects to the land Route.

Zuokui Liu (2014) mentions three continental land bridges connecting Eastern Asia to Western Europe:

1. The Siberian Continental Bridge (Vladivostok – Rotterdam);
2. The Second Eurasian Continental Bridge (Lianyungang – Russian Federation, Belarus, Poland - Rotterdam);
3. The third Eurasian Continental Bridge (in planning stage) from Shenzhen to Europe via Myanmar, Bangladesh, India, Pakistan, Iran, Turkey and Bulgaria.

Figure 1: The three continental land bridges form Asia to Europe



Source: www.chinadaily.com.cn/china/2009-07/02/content_8345835.htm

According with the map above the third Eurasian land bridge (which is still on the drawing board) is the closest terrestrial route to Romania and could include this country given its strategic location as a gateway to North and Central Europe, especially if, due to some extraordinary conditions, the corridors through the Russian Federation and the Maritime Road couldn't be used. In this regard, Rolland (2015) points out that "for over a decade, Chinese authorities have sought to circumvent the "Malacca dilemma" by finding

ways to lessen reliance on the Southeast Asian Strait through which 80% of China`s energy supplies from the Middle East and West Africa now pass."

After the fall of the communist regimes in Central and Eastern Europe, the newly independent countries started their alignment to the Western democratic ideology, ignoring the potential of bilateral economic relations with a superpower in the making as China.

According to Long Jing (2014) "the political relations between China and CEE countries, however, remained relatively sluggish compared with their economic relations. Such an asymmetry was primarily caused by some CEE countries' superior mentality towards China on issues concerning political system, human rights, religion and other values." This attitude forced China to put on hold its interests in the region for several years until CEE countries advanced in the process of transition and reshaped their foreign policy and economic priorities to a more pragmatic basis due to the new realities induced by the last global economic crisis.

In 2012, in Poland, China initiated a new platform of cooperation with the 16 CEE countries (the 16+1 format), marking, thus, the beginning of a new era of bilateral and multilateral relations with the former communist countries.

Jurica Simurina (2014) argues that "the main driver of this changing focus from developed EU countries to CEE countries is the Eurozone crisis and growth performance of CEE countries; CEE countries increasingly import higher technology products from China, while exports to China remain largely low-tech."

CEE countries are also important for China due to their potential in transportation infrastructure (ports, highways, railway networks). China can also use CEE countries as ambassadors to the EU over the bilateral investment agreement and a possible free trade agreement.

Some analysts (Zoukui, 2014) highlights one of the major problems of the Bridge & Road now "As the majority of trains from Europe to China have no goods to transport on their return journeys, it is usual for the empty containers to be send back to China via sea transportation, which is a waste of both resources and capital." He also mentioned that the "supporting infrastructure facilities in the CEE are rather undeveloped and they lack unified standards. Also, the double track rate and electrification of the railway lines are much lower than in developed countries."

Table 1: Rail freight service to Europe transiting the Eastern European Countries

Base	**Operational since**	**Destination**	**Service frequency per week**	**Transport volume in the first three quarters of 2014 in TEU (20-foot equivalent unit)**
Chongqing	2011	Duisburg* (Germany)	5	3.936
Chengdu	2013	Lodz, Poland	1	3.198
Wuhan	2014	Pardubice, Czech Republic	1	2.600
Zhengzhou	2014	Hamburg, Germany	2	3.280

Source: Yang, J. (2014)

The table shows the importance of the 16+1 platform which led to an increase in freight carried by rail from China to EU via EEC countries.

The journey time of the goods transported by train from Eastern China to Western Europe is between 16 to 25 days, compared to 36 days needed to transport it by sea.

2. Competition for Chinese investments

On the 16th of February 2015, China launched a $40 billion Silk Road infrastructure fund. Its main objective is to identify investment opportunities and to finance works and services related to B&R project. Central and Eastern European countries, especially the ones that had a late start in joining the EU or have been left outside, need big investments in industrial and transportation infrastructure, in order gain more weight on the international arena.

As underlined in the literature in the field, (Pavlićević, 2015) after a long time, CEE countries have become again attractive to China's foreign policy due to the new Silk Road project. He mentions that the first Central European Countries and China (CEECs) Summit, held in Warsaw in 2012 represented the beginning of the Chinese financial involvement in the region (a credit line of $10 billion for the EEC countries. $8,5 billion have already been allocated to various projects).

Two more funds were created during the last summit in Belgrade: one of $3 billion for Chinese investments in public-private partnerships and another one of $1 billion for investments in CEE. A target to double the current trade volume in the next 5 years was also set at the summit in Belgrade (an increase from $60 billion to $120 billion).

According to the official web page of CEECs, "So far, Chinese enterprises have invested more than 5 billion dollars in CEE countries, covering such fields as machinery, chemical industry and telecommunication, while relevant sides are now actively expanding collaboration on investment in nuclear power, thermal power and others projects" (Pavlićević, 2015). Frank Sieren (2014) sees China`s money poured into projects along the Silk Road as a way to reducing its "dependence on freight lines dominated by European shippers and also to develop new markets for the Chinese exports. Another credible reason, as it was mentioned before, would be to diversify the transportation routes in order to avoid, if necessary, its trade rivals (USA, Russian Federation etc.).

2.1. Serbia

During communist era, in Eastern Europe, China had good relations with Albania, Yugoslavia and Romania, these countries being seen as entry gates to Europe for Beijing. After the EU enlargement in 2004, the Chinese policy toward Eastern Europen could be perceived through the three primary areas: economy – the most important dimension of the PRC's influence on Europe; politics – at present playing a supportive role for achieving economic goals; education and culture – seen as soft power tools, with the predominant aim to warm relations with the region. Presently, Serbia is perceived as a strategic point in China's strategy toward Europe (massive investments in the port of Piraeus), due to its strategic location between Greece and the Danube. The fact that Serbia is not an EU member is another reason for China to try transforming this Slavic country into a gateway to Central and Western Europe. One of the priorities from this standpoint is the 2 billion

euro high speed railway line between Belgrade and Budapest (HSR) for which an agreement was signed December 2014. The line is planned to be completed by 2017 and will enable speeds up to 200 km/h. The railway is a part of a bigger project that aims at connecting Piraeus and Budapest through a high speed railway (trans-Balkan) which has been under consideration since 2014. Agreements have been signed between the Chinese premier and his counterparts from Serbia, Hungary and Macedonia for this project in Belgrade after the last 16+1 summit.

So far, Yale (2015), China financed in Serbia a Thermal Power Plant in Stanari ($1,7 billion dollars), a bridge of 1500 meters over the Danube River in Belgrade (€170 million).

Other infrastructure projects have been considered. Among them the construction of Belgrade`s ring road by Chinese state owned Sinohydro, estimated at $608 million and an industrial zone for the Chinese companies.

At the beginning of 2013, Gezhouba Group Corporation, a Chinese state-owned company, signed a protocol with the Serbian Government on Danube – Morava –Vardar – Aegean Sea Canal, that explores the possibility to excavate a canal of approximately 650 kilometers between the Aegean Sea and the Danube through Morava River basin and Vardar River basin, taking advantage of the favorable geography enabling such project. This waterway could be 1.200 kilometers (three days of sailing) shorter than the existing route through the Bosporus Strait and Constanţa, and then via the Danube to Belgrade, Budapest and Western Europe following the pan-European Corridor VII and Danube – Main – Rhine Canal (Milena Nikolic, 2014). According to Balkan Insight, the project will take about 8 years to be completed at a cost of 12 billion euro. ***If the Canal takes shape, Romania will lose some of its importance as a transit hub for the goods coming from the Suez Canal to Eastern and North Europe.*** For now, the priority for the Chinese investors seems to be the high speed highway from Piraeus to Budapest.

COSCO, a big Chinese shipping company, which has a 35-year concession to expand two container terminals at Piraeus, wants to take a majority stake in Piraeus port aiming at turning it into a trade hub for the Silk Road Economic Belt, securing, thus, the southern end of the planned Canal.

Figure 2: The Danube – Morava – Aegean Sea waterway

Source: Encyclopædia Britannica. Author`s alteration.

Turcsányi (2014) argues that "The four Visegrad countries (Czech Republic, Hungary, Poland and Slovakia) account for approximately 80 percent of all 16 CEE countries' exports to China. A similar pattern is found in imports and investment statistics. Historically, some of the countries occupied a substantial place in China's foreign relations before 1989, such as, for example, Romania, which played an important role in the Sino-American rapprochement."

Table 2: Value of exports to China of some of the EEC countries (USD 10.000)

Country	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Bosnia-Herzegovina	2.729	661	1.420	1.760	2.989	2.330	2.088
Bulgaria	15.800	21.678	14.108	32.300	45.928	83.889	95.674
Croatia	6.763	6.784	7.486	5.089	7.953	7.451	10.427
Czech	83.080	100.270	113.150	172.801	231.793	240.699	261.492
Hungary	121.008	138.220	146.640	219.770	245.222	232.310	271.515
Macedonia	983	1.328	2.418	9.176	15.431	13.978	10.797
Montenegro	135	213	74	307	1.206	2.202	1.614
Poland	111.225	139.443	150.593	169.661	204.798	199.690	223.180
Romania	28.147	35.990	43.319	75.613	94.625	97.957	120.750
Serbia	1.312	1.228	2.923	5.512	7.789	10.135	18.013
Slovak	73.531	98.373	89.745	179.056	345.735	365.523	345.816
Slovenia	11.055	13.156	12.647	17.657	20.204	25.603	30.280

Source: National Bureau of Statistics of China, 2015

In terms of exports, between 2007-2013, Romania registered an increase of 328%, Poland of 100.6%, Bulgaria of 505.3 % , Czech of 214.4%, Hungary of 124.4%, Macedonia of 998.3% and Serbia of 1 272.9%, a spectacular boom.

Table 3: Value of Imports from China of some of the EEC countries (USD 10.000)

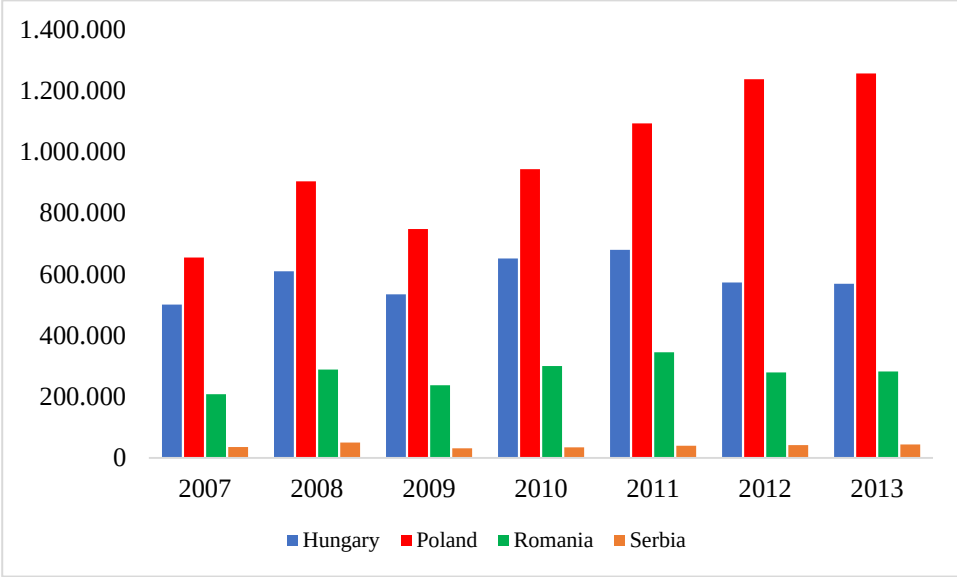
Country	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Bosnia-Herzegovina	5.392	7.283	3.566	3.759	4.143	4.671	9.133
Bulgaria	81.265	112.484	59.607	66.091	100.562	105.457	111.698
Croatia	151.526	174.199	111.863	134.373	154.093	129.983	138.994
Czech	413.478	549.748	502.402	712.152	766.941	632.304	683.780
Hungary	501.496	609.685	534.327	651.831	680.602	573.797	569.228
Macedonia	7.534	7.072	5.601	5.278	9.181	8.875	6.348
Montenegro	5.342	8.660	7.693	7.108	8.998	14.576	8.638
Poland	655.293	904.037	748.697	943.831	1.093.955	1.238.646	1.257.488
Romania	208.423	288.992	237.737	300.446	345.378	279.718	282.254
Serbia	35.441	49.952	30.835	34.502	39.635	41.288	43.191
Slovak	147.060	196.604	139.906	195.848	251.260	242.303	308.444
Slovenia	69.239	96.421	77.002	138.556	167.537	156.664	183.281

Source: National Bureau of Statistics of China, 2015

Long Jing (2014) argues that "Confronted with a difficult situation during the global financial crisis, the bilateral trade has kept on growing, and China's imports from CEE countries grows by 30% annually. Poland is China's biggest trading partner in the region. The trade volume between the two countries was only US$ 144 million in 1991." In 2013 it exceeded US$ 14 billion, a tenfold increase in 22 years.

Chunyan Yu and Chunjie Qi (2015) emphasized that "Central and Eastern European countries are rich in agricultural resources, highly complementary with China's agricultural products. Bilateral agricultural cooperation has great potential. The bilateral cooperation has profound impact on achieving mutual benefit and win-win progress and the implementation of China's agricultural strategy of "going out". It is an important part of realizing the common development of China and CEE countries in the new period."

Chart 1: The evolution of imports from China in a selection of EEC



Source: National Bureau of Statistics of China, 2015

In terms of imports from China, Romania reached the peak in 2011 ($3,4 billion) and Serbia in 2008 ($0,4 billion), from this perspective Serbia couldn`t be considered important to China, but geography makes the difference (Hungary, Slovakia and Slovakia add on to that).

2.2. Romania

George Friedman (2014), argues that "nobody expected in 2004, it is the western shore of the Black Sea that's at peace and that has some strength and I don't mean Bulgaria, I mean of course Romania which is the single anchor that still remains intact on the west shore plus Turkey, a country whose future is uncertain because it wishes to become a great power, but is very cautious not to get caught up in the chaos of its region. It cannot have both; it has to work things out."

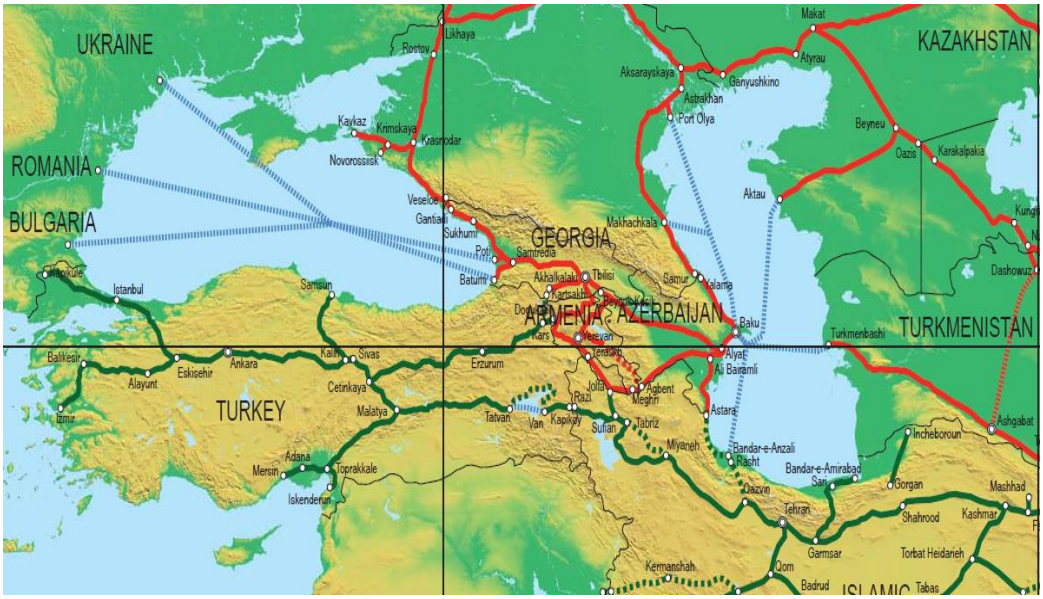
The stability Friedman mentioned could be an incentive for China to increase its presence in Romania and to transform our country in a trade and logistics hub. So far, China General Nuclear resumed discussion with the Romanian counterparts to negotiate a possible investment in the Units 3 and 4 of Cernavodă power plant. The estimated cost of the 2 additional units is around $7 billion, according to the feasibility study[1].

H.E. Mr. Xu Feihong, Chinese Ambassador to Romania (2015) emphasized the importance of our country in Central and Eastern Europe in the context of the new "Freight Corridor between the Black Sea and the Caspian Sea". For China, this corridor might be important as an alternative to the route through the Russian Federation. There are highways and railways that already connect China with the ports of Turkmenbashi

[1] China Restarts its Nuclear Reactor Construction Program. Avaliable online at http://theenergycollective.com/dan-yurman/2202391/china-re-starts-its-nuclear-reactor-construction-program

(Turkmenistan), Baku (Azerbaidjan) by the Caspian Sea, Batumi, Poti (Georgia) and Constanta by the Black Sea.

Figure 3. The land/sea corridors including Romania, Bulgaria and Ukraine (Caspian Sea - Black Sea)



Source: UNESCAP, 2015

On October 16, 2014, was launched the Ro-Ro freight ferry service connecting the port of Constanţa (Romania), Batumi (Georgia) and Ilichivsk (Ukraine). The weekly line is operated by a private Ukrainian ferry that accommodates 85, 17-m long, trucks and up to 150 passengers. A trip from Constanţa to Batumi takes about 48 hours, being shorter than the terrestrial route through Bulgaria and Turkey, around the Black Sea.

During his visit in Romania in 2014, the Chinese Prime Minister Li Keqiang, pointed out that our bilateral relations could become a model for the CEE countries and Europe as a whole[2]. He proposed the Romanian partners to jointly build an economic and technological park and to create favorable conditions for bilateral investment. He also mentioned that both countries should cooperate in large projects (nuclear energy and high-speed railways etc.).

The context is perceived by the Chinese officials (Keqiang, 2013) as an historical opportunity for Romania to develop a big project as the Egyptian president Abdel Fattah al-Sisi did with the expansion of the Suez Canal.

At present, in the world there are two such ongoing projects aiming to boost the world trade. One is the expansion mentioned of the above mentioned Canal, which will double the capacity of the existing waterway and almost triple revenues in fewer than 10 years, from $5.3bn (£3.5bn) in 2014 to $13.2bn in 2023[3]. The other one is the Panama Canal Expansion which will create a new lane of traffic along the Canal through the construction of a new set of locks, doubling thus the waterway's capacity, allowing it to compete with the Suez Canal.

[2] Chinese premier concludes Romania trip with enhanced ties, Avaliable online at http://news.xinhuanet.com/english/china/2013-11/28/c_132926361.htm

[3] Avaliable online at http://www.bbc.com/news/world-middle-east-30895545

In the literature in the field (Sanders, 2014),The Danube-Black Sea Canal (DBS) is considered an important transportation corridor in Europe, connecting the Black Sea to the North Sea through the Danube-Main-Rhine Canal and also provides a maritime passage to Eastern Europe by way of the Volga-Don canal. The Danube-Black Sea Canal shortens by some 400 km the route of cargo from the Black Sea to the Danube ports of Central Europe. Using this waterway, the route from Australia and Far East bounded for Central Europe shortens its way by 4,000 km[4]. Advantages like these might qualify the Canal for an expansion project too, including new locks, especially if the cargo transport on the river increases by 20% by 2020 as compared to 2010, according to EU Strategy for the Danube Region. In this respect, it should be mentioned the fact that there is an ongoing project aiming to rehabilitate the locks on the Danube-Black Sea Canal and Poarta Alba-Midia Navodari Canal which is due to be completed in 2017 at a cost of 228,613,798 EUR out of which 156,379,303 EUR, is EU cohesion funds, but this just scratches the surface.

The project of systematization of Argeş and Dâmboviţa Rivers for navigation and other uses "Danube–Bucharest Canal" is still on hold due to lack of financing sources. The estimated cost of the project is 1,706,127,000 EUR.

Negotiating with China big infrastructure projects might conflict the EU strategies and priorities in the area, that`s why negotiation have to make sure the projects meet both standards, even if the Chinese prime minister assured that future infrastructure projects undertaken in CEE will be in line with the EU laws and Standards". We should also take into consideration the national interest since other European countries benefit already form Chinese investments and contracts (see Table 3). 25 years after the revolution and 8 years after joining the EU, Romania can`t be cross by highway from both east to west and south to north in all the historic provinces.

Table 4: Chinese investments and contracts (Selected European countries, 2005-jun 2014 ($bn)

EU Country	Agriculture	Energy	Finance	Real Estate	Tech	Transport	Other	Total
Britain	2,3	4,9	4,8	7,1	0,2	1,7	2,7	23,6
France	0,6	6,6	-	-	0,8	1,6	1,1	10,6
Italy	-	3,5		0,5	2,4	0,5	-	6,9
Germany	-	0,5	0,9	2,3	0,7	1,0	0,6	5,9
Greece	-	-	-	0,1	-	5,2	0,1	5,5
Portugal	-	4,0	1,4	-	-	-	-	-
Spain	-	-	-	0,9	1,5	-	-	2,5

Source: Financial Time (October 6, 2014)

Dragan Pavlićević (2015: p. 12) argues that "China`s cooperation with the 16 CEECs will not result in fragmenting the European Union. Much to the contrary, it will help deepen cooperation between China and the European Union and narrow the development gap between the eastern and western parts of the European Union… China-CEEC cooperation is undoubtedly part and parcel of China-Europe cooperation, and the two could naturally go in parallel and be mutually reinforcing".

There are examples in the CEE region. In February 2012, Guangxi Liu Gong Machinery Co Ltd took over Huta Stalowa Wola, a Polish road machinery maker, for

[4] Administratia Canalelor Navigabile S.A., Available online at http://www.acn.ro/index.php?id=3

about $100 million, marking China's biggest investment to date in Poland[5]. Szunomár et al. (2014) argues that ”Chinese investment in Hungary by 2013 was over 2.5 billion USD. More than 1.5 billion USD from that is the investment of the Chinese chemical company Wanhua, which acquired a 96 per cent stake in the Hungarian chemical company BorsodChem through its Dutch subsidiary in 2010 and 2011”.

3. Conclusions

The Silk Road Economic Belt is a project that can change the dynamic of the relations between East and West. Chinese authorities put in place institutions which could move the project further and declared their willingness to start working at it. Romania, an oasis of stability on the west coast of the Black Sea, has a geostrategic position, being well connected, by all transportation corridors (air, sea and land), although not very modern and developed. The history of the bilateral relations between Romania and China date back form the Communist Era. At present, as Chinese Prime Minister Li stated, Romania's relations with China could be an example for the Central and Eastern European countries, and it depends on the Romanian authorities to enhance them in the way that Romania gets the most visibility and investments possible. There are various fields in which China could invest more: bridges over the Danube and other major rivers, expansion of Danube Bucharest Canal, highways, railways, ferry lines between Constanţa and the eastern ports at the Black Sea, logistics hubs, industrial parks etc.)

Most of the European countries benefit from Chinese FDI in various fields of economic activity and the trend in this regard is increasing. Since there is no investment agreement between China and European Union, each country tries to get the best advantage possible through bilateral or private negotiations. Serbia plays its card well. The amount of significant Chinese investments is increasing in the context of the development of the Greek port of Piraeus, a transportation hub at the end of the Maritime Silk Road coming through the Suez Canal.

In this favorable context CEE countries should be more active in displaying the advantages and assets they have in order to attract more investments so the economic disparities between Western and Eastern Europe decrease more, for the benefit of the whole of Europe.

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Financial Crisis and the Central Bank System

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Abstract: *The financial crisis that began in 2008 gradually developed into a global economic crisis and continues to this day. There is a lot of causes standing behind the creation, depth and process of the crisis, which is the deepest since the thirties of last centrury. One of the reasons can be found in the risky behavior of commercial banks, especially in the excessive lending of credits and mortgages. Its share on the financial crisis have central banks and their failure as the financial supervisory authority. But there is a lot of another causes of failures in the commercial banking system. And some of the causes lies outside the banking system and monetary policy. Its share of the blame has also become from state and its expenditure on the social policy.This article analyzes the role of the commercial banking system and the central banks on the financial crisis including prevention options and measures.*

Keywords: *Financial Cisis, Central Bank, Monetary policy, Money, Deficit*

JEL Classification: *E 44, E 52*

1. Introduction

Financial and banking crises properly defined consist either of panics or of waves of costly bank failures. These phenomena were rare historically compared to the present. A historical analysis of the two phenomena (panics and waves of failures) reveals that they do not always coincide, are not random events, cannot be seen as the inevitable result of human nature or the liquidity transforming structure of bank balance sheets, and do not typically accompany business cycles or monetary policy errors. Rather, risk-inviting microeconomic rules of the banking game that are established by government have always been the key additional necessary condition to producing a propensity for banking distress, whether in the form of a high propensity for banking panics or a high propensity for waves of bank failures (Calomiris, 2009).

Other risk-inviting rules historically have involved government-imposed structural constraints on banks, which include entry restrictions like unit banking laws that constrain competition, prevent diversification of risk, and limit the ability to deal with shocks. Another destabilizing rule of the banking game is the absence of a properly structured central bank to act as a lender of last resort to reduce liquidity risk without spurring moral hazard.

Macroeconomists and policy makers often remind us that banking crises are nothing new, an observation sometimes used to argue that crises are inherent to the business cycle, or perhaps to human nature itself. Charles Kindleberger (1973) and Hyman Minsky (1975) were prominent and powerful advocates of the view that banking crises are part and parcel of the business cycle, and result from the propensities of market participants for irrational reactions and myopic foresight.

Some banking theorists, starting with Diamond and Dybvig (1983), have argued in a somewhat parallel vein that the structure of bank balance sheets is itself to blame for the existence of panics; in their canonical model, banks structure themselves to provide liquidity services to the market and thus create large liquidity risks for themselves, and also make themselves vulnerable to self fulfilling market concerns about the adequacy of bank liquidity.

In fact, a central lesson of the history of banking crises is: banking crises are not an historical constant, and therefore, the propensity for banking crises cannot possibly be said to be the result of factors that have been constant over time and across countries for hundreds of years, including business cycles, human nature, or the liquidity transformation inherent in bank balance sheets. The structure of the rules governing the banking system within a country – defined by the rules that govern the location, powers, and operations of each of the banks, including government subsidies or special rights granted to favored participants in the banking system and the incentive consequences of those subsidies and rights – has been at the center of the explanation of the propensity for banking crises for the past two centuries. In times and places where politically determined microeconomic rules of the banking game have encouraged risky practices or prevented effective private measures to limit banking crisis risk, the risk of banking crises is high; conversely, the absence of such adverse political rules of the game have resulted in stable banking systems (Calomiris, 2009).

This review offers important insights for policy makers. The crisis of 2007–2009 has sharpened or redefined many public policy questions of central importance to prudential financial regulation (a means of preventing crises) and the proper role of government assistance policy (a means of mitigating the costs of crises).

2. The Banking Crisis Era Before 2008

In the past thirty years roughly 140 episodes have been documented in which banking systems experienced losses in excess of 1% of GDP, and more than 20 episodes resulted in losses in excess of 10% of GDP, more than half of which resulted in losses in excess of 20% of GDP - these extreme cases include, for example, roughly 25–30% of GDP losses in Chile in 1981–1983, Mexico in 1994–1995, Korea in 1997, and Thailand in 1997, and a greater than 50% loss in Indonesia in 1997 (Caprio & Klingebiel, 1996).

Some of empirical studies of this era of unprecedented frequency and severity of banking system losses has concluded uniformly that deposit insurance and other policies

that protect banks from market discipline, intended as a cure for instability, have instead become the single greatest source of banking instability.

It is also significant that the four countries that suffered the most severe bank failure episodes of the pre-World War I era – Argentina, Australia, Norway, and Italy – had two things in common:

a) all of them suffered real estate booms and busts that exposed their financial systems to large losses,

b) prior to these crises all of them had employed unusually large government subsidies for real estate risk taking that were designed to thwart market discipline (Calomiris, 2007).

In Argentina, that subsidy took the form of special mortgage guarantees issued by the government, which guaranteed holders of the mortgages repayment. Banks were licensed to originate these guaranteed mortgages, and then resold them as guaranteed liabilities in the London market, where they were traded as Argentine sovereign debts. The less dramatic banking system losses during the Norwegian and Italian land busts reflected less aggressive, more regionally-focused government policies promoting land development. In Norway, that was achieved through government-sponsored lending and accommodative monetary policy. The Norwegian banks' losses amounted to roughly three percent of GDP, and the Italian banks' losses (which largely reflected exposures to the Roman land market) were roughly one percent of GDP (Calomiris, 2007).

3. The Crisis After 2008

The crisis, like the episodes of historical banking crises described above, was not just a bad accident. On an ex ante basis, subprime default risk was excessive and substantially underestimated during 2003–2007. Reasonable, forwardlooking estimates of risk were ignored, and compensation for asset managers created incentives to undertake underestimated risks. Those risk-taking errors reflected a policy environment that strongly encouraged financial managers to underestimate risk in the subprime mortgage market. Four categories of policy distortions were most important in producing that result.

1. Lax monetary policy, especially from 2002 through 2005, promoted easy credit and kept interest rates low for a protracted period.

The history of postwar monetary policy has seen only two episodes in which the real federal funds rate remained negative for several consecutive years: the high-inflation episode of 1975–1978 (which was reversed by the rate hikes of 1979–1982) and the accommodative period of 2002–2005. The Fed deviated sharply from the "Taylor Rule" in setting interest rates during 2002–2005; the federal funds rates remained substantially and persistently below levels that would have been consistent with that rule. Not only were short-term real rates held at persistent historic lows, but unusually high demand for longer term Treasuries related to global imbalances and Asian absorption of U.S. Treasuries flattened the Treasury yield curve during the 2002–2005 period, resulting in extremely low interest rates across the yield curve. Accommodative monetary policy and a flat yield curve meant that credit was excessively available to support expansion in the housing market at abnormally low interest rates, which encouraged the overpricing of houses and subprime mortgages.

2. Numerous housing policies promoted subprime risk taking by financial institutions by effectively subsidizing the inexpensive use of leveraged finance in housing.

Those policies included:

a) political pressures from Congress on the government sponsored enterprises (GSEs), Fannie Mae and Freddie Mac, to promote "affordable housing" by investing in high-risk subprime mortgages,

b) lending subsidies for housing finance via the Federal Home Loan Bank System to its member institutions,

c) Federal Housing Administration (FHA) subsidization of extremely high mortgage leverage and risk,

d) government and GSE mortgage foreclosure mitigation protocols that were developed in the late 1990s and early 2000s to reduce the costs to borrowers of failing to meet debt service requirements on mortgages, which further promoted risky mortgages, and – almost unbelievably,

e) 2006 legislation that encouraged ratings agencies to relax standards for subprime securitizations.

All these policies encouraged the underestimation of subprime risk, but the behavior of members of Congress toward Fannie Mae and Freddie Mac, which encouraged reckless lending by the GSEs in the name of affordable housing, were arguably the most damaging actions leading up to the crisis. For Fannie and Freddie to maintain lucrative implicit (now explicit) government guarantees on their debts, they had to commit growing resources to risky subprime loans (Calomiris, 2008, Wallison & Calomiris, 2009). Due to political pressures, which were discussed openly in emails between management and risk managers in 2004, Fannie and Freddie purposely put aside their own risk managers' objections to making the market in no-docs subprime mortgages in 2004. The risk managers correctly predicted, based on their experience with no-docs in the 1980s, that their imprudent plunge into no-docs would produce adverse selection in mortgage origination, cause a boom in lending to low-quality borrowers, and harm their own stockholders and mortgage borrowers alike. In 2004, in the wake of Fannie and Freddie's decision to aggressively enter no-docs subprime lending, total subprime originations tripled. In late 2006 and early 2007, after many lenders had withdrawn from the subprime market in response to stalling home prices, Fannie and Freddie continued to accumulate subprime risk at peak levels. Fannie and Freddie ended up holding $1.6 trillion in exposures to those toxic mortgages, half the total of non-FHA outstanding amounts of toxic mortgages (Pinto, 2008).

3. Government regulations limiting the concentration of stock ownership and the identity of who can buy controlling interests in banks have made effective corporate governance within large banks extremely challenging.

Lax corporate governance allowed some bank management (for example, at Citibank, UBS, Merrill, Lehman, and Bear, but not at Bank of America, JPMorgan Chase, Goldman, Morgan Stanley, and Deutsche Bank) to pursue subprime investments aggressively, even though they were unprofitable for stockholders in the long run. When stockholder discipline is absent, managers can set up the management of risk to benefit themselves at the expense of stockholders. An asset bubble (like the subprime bubble of 2003– 2007) offers an ideal opportunity; if senior managers establish compensation systems that reward subordinates based on total assets managed or total revenues collected, without regard to risk or future potential loss, then subordinates have the incentive to

expand portfolios rapidly during the bubble without regard to risk. Senior managers then reward themselves for having overseen "successful" expansion with large short-term bonuses and cash out their stock options quickly so that a large portion of their money is invested elsewhere when the bubble bursts.

4. The prudential regulation of commercial banks and investment banks has proven to be ineffective.

That failure reflects:

a) fundamental problems in measuring bank risk resulting from regulation's ill-considered reliance on inaccurate rules of thumb, credit rating agencies' assessments, and internal bank models to measure risk,

b) the too-big-to-fail problem (Stern & Feldman 2004), which makes it difficult to credibly enforce effective discipline on large, complex financial institutions (such as Citibank, Bear Stearns, AIG, and Lehman) even if regulators detect large losses or imprudently large risks.

The risk measurement problem has been the primary failure of banking regulation and a subject of constant academic criticism for more than two decades. Regulators use different means to assess risk, depending on the size of the bank. Under the simplest version of regulatory measurement of risk, subprime mortgages (like all mortgages) have a low asset risk weight (50 percent) relative to commercial loans, although they are riskier than those loans. More complex measurements of risk (applicable to larger U.S. banks) rely on the opinions of ratings agencies or the internal assessments of banks, neither of which is independent of bank management.

Rating agencies, after all, cater to buy-side market participants (i.e., banks, pensions, mutual funds, and insurance companies that maintained subprime-related asset exposures). When ratings are used for regulatory purposes, buy-side participants reward rating agencies for underestimating risk because that helps the buy-side clients reduce the costs associated with regulation. Many observers wrongly believe that the problem with rating agency inflation of securitized debts is that sellers (sponsors of securitizations) pay for the ratings; on the contrary, the problem is that the buyers of the debts want inflated ratings because of the regulatory benefits they receive from such ratings.

The too-big-to-fail problem involves the lack of credible regulatory discipline for large, complex banks. The prospect of their failing is considered so potentially disruptive that regulators have an incentive to avoid intervention. That ex post "forbearance" makes it hard to ensure compliance ex ante. The too-big-to-fail problem magnifies incentives to take excessive risks; banks that expect to be protected by deposit insurance, Fed lending, and Treasury-Fed bailouts and believe that they are beyond discipline will tend to take on excessive risk because taxpayers share the downside costs.

The too-big-to-fail problem was clearly visible in the behavior of large investment banks in 2008. After Bear Stearns was rescued in March, Lehman, Merrill Lynch, Morgan Stanley, and Goldman Sachs sat on their hands for six months awaiting further developments (i.e., either an improvement in the market environment or a handout from Uncle Sam). In particular, Lehman did little to raise capital or shore up its position. But when conditions deteriorated and the anticipated bailout failed to materialize for Lehman in September 2008 (showing that there were limits to Treasury-Fed generosity), the other major investment banks immediately either were acquired or transformed themselves into bank holding companies to increase their access to government support.

4. Conclusion

Banking crises properly defined consist either of panics or of waves of costly bank failures. These phenomena were rare historically compared to the present. A historical analysis of the two phenomena (panics and waves of failures) reveals that they do not always coincide, are not random events, cannot be seen as the inevitable result of human nature or the liquidity transforming structure of bank balance sheets, and do not typically accompany business cycles or monetary policy errors. Rather, risk-inviting microeconomic rules of the banking game that are established by government have always been the key additional necessary condition to producing a propensity for banking distress, whether in the form of a high propensity for banking panics or a high propensity for waves of bank failures.

Some risk-inviting rules took the form of visible subsidies for risk taking, as in the historical state level deposit insurance systems in the U.S., Argentina's government guarantees for mortgages in the 1880s, Australia's government subsidization of real estate development prior to 1893, the Bank of England's discounting of paper at low interest rates prior to 1858, and the expansion of government-sponsored deposit insurance and other bank safety net programs throughout the world in the past three decades, including the generous government subsidization of subprime mortgage risk taking in the U.S. leading up to the recent crisis.

Other risk-inviting rules historically have involved government-imposed structural constraints on banks, which include entry restrictions like unit banking laws that constrain competition, prevent diversification of risk, and limit the ability to deal with shocks. The most important example of these structural constraints was the U.S. historical system of unit banking, which limited competition and diversification of loan risk by preventing branching, and by effectively preventing collective action by banks in the management of crises once adverse shocks had hit.

More recent banking system experience worldwide indicates a dramatic upward shift in the costs of banking system distress – an unprecedented high frequency of banking crises, many bank failures during crises, and large losses by failing banks, sometimes with disastrous consequences for taxpayers, who end up footing the bill of bank loss. This pandemic of bank failures has been traced empirically to the expanded role of the government safety net, as well as government involvement in directed credit. Government protection of banks and government direction of credit flows has encouraged excessive risk taking by banks and created greater tolerance for incompetent risk management (as distinct from purposeful increases in risk). The government safety net, which was designed to forestall the (overestimated) risks of contagion, ironically has become the primary source of systemic instability in banking.

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BOOK REVIEW

The Military Dimension of American Hegemony

Thomas Oatley, *A Political Economy of American Hegemony - Buildups, Booms and Busts,* Cambridge University Press, 2015, Kindle Edition

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A Political Economy of American Hegemony - Buildups, Booms and Busts by Thomas Oatley offers relevant historical and statistical evidence regarding military buildups in postwar America, assessing the economic and political impact of deficit financed military spending. From this point of view the book proves to be a very instructive and challenging reading.

Thomas Oatley is professor of political science at North Carolina University, teaching courses on international politics and political economy. He is also the author of a series of papers and books on international political economy. His main theme of research is the interaction between economic interests and political institutions and how it shaped governments' foreign economic policies. *A Political Economy of American Hegemony Buildups, Booms and Busts* is the most recent and also the most challenging of his books, in terms of inquired questions and defended theses.

1. Thomas Oatley's Main Theses and Arguments on Military Dimension of American Hegemony

The central problem examined in the book is how the military dimension of American hegemony has shaped the global political economy. The main thesis defended is that America's military buildup has repeatedly pushed a distinctive "political economy of imbalance" to the center of the global political economy and also that this type of imbalances emerged each time the United States has embarked on a deficit-financed military buildup in response to unexpected security shocks.

The author attempts to link military Keynesianism to the financial and economic crises that characterized the economy of postwar America. Reading the book, we find out that U.S. military spending have averaged roughly 6 percent of American income across postwar period – an amount equal to 1 to 2 percent of world income. The defense budget has been the single largest category of U.S. government expenditures across this period, accounting for between one-quarter and one-half of all government spending. Because military spending accounts for such a large share of total government spending, military buildups have been the single most important source of sudden, large, and persistent

changes in U.S. government spending across the postwar period, according to Oatley. Moreover, the author insists that credit booms and asset bubbles occurred only in the context of military buildups. (Oatley 2015, Chapter 6, Par. 2)

Let's pass in review the main arguments advanced by the American professor in defending the central thesis of his book.

Two key factors that contributed to the military buildups and to the global economic imbalances emerged after the World Wars are highlighted in the first chapter of the book: America's political institutions and America's financial power. According to Thomas Oatley, America's political institutions contributed significantly to the augmentation of the U.S. twin deficits – the federal (fiscal) deficit and the balance of payment deficit – and also to the broadening of global imbalances that emerged in the context of unexpected military challenges. Foreign security shocks prompted American policymakers to increase military spending significantly. America's political institutions transformed these military buildups into large and persistent budget deficits by allowing policymakers to increase military spending and at the same time constraining their ability to equilibrate the federal budget by cutting spending on other programs or raising taxes. Also, America's financial power enabled U.S. government to pay for military buildups, especially to finance budget deficits without paying high interest rates or crowding out private investment or consumption.

The author emphasizes that sudden large changes in defense spending in America were possible only in response to military challenges such as September 11, 2001 attacks. Such challenges produced immediate convergence of policymakers' opinions regarding the need to increase military spending, but did not modify policymakers' beliefs regarding other aspects of the budget, such as the appropriate tax rate or the level of spending on other programs. Thus, although policymakers agreed that military spending need to increase in the context of security shocks, they disagreed sharply on raising taxes or cutting funds from other programs and, consequently, U.S. paid for most postwar military buildups by borrowing (i.e. selling government IOUs).

America's financial power is considered by Oatley a key factor for U.S. ability to pay for military buildups, enabling U.S. to borrow from the rest of the world in large volumes, for extended periods at low interest rates. He emphasizes that financial power does not inhere solely in the ability of the government to borrow cheaply from the rest of the world but lies also in the ability of the economy as a whole to borrow cheaply in large volumes for extended periods. U.S. residents sell financial assets, such as mortgage-backed securities, corporate bonds, stocks, bank deposits, as well as government bonds, to foreigners. The author believes that America's financial power consists primarily in the ability to escape the "crowding out" constraint so that when government borrowing increases, foreign capital covers the domestic demand, filling "*the gap between the increased demand for and an unchanged domestic supply of savings*" (Oatley 2015, Chapter 1, Par. 2). Moreover, America benefits from the dollar's role as world's primary reserve currency. Foreign investors think that U.S. default risk and liquidity risk are lower than in the case of many other countries, mostly because U.S. has the largest and most active capital market in the world and the liquidity of such a market generally enables holders of dollar denominated assets of all kind to liquidate their holdings quickly and at low cost. Also, the U.S. central location in the global financial network encourages capital to flow to the U.S. from the rest of the world. The extent to which the U.S. attracts foreign capital, increasing the volume of dollar-denominated assets foreigners hold stimulates other foreign investors to acquire additional dollar-denominated assets. Thomas Oatley observes that somehow "*U.S. has more and more financial power because it already has*

financial power" (Oatley 2015, Chapter 1), this dynamic contrasting sharply with the capital market dynamics that applies to other countries, where the volume of capital inflows is typically a negative function of current exposure. Financial power thereby enables the U.S. government to increase military spending without having to cut social welfare programs and without having to reduce private consumption or to reduce private sector investment.

The epistemological approach of the analysis undertaken in the book is depicted by the author himself as analytic eclecticism. Oatley describes analytic eclecticism as a problem oriented and pragmatic approach to social sciences, seeking to deal with real-world issues and complex phenomena by integrating the work generated in separate research programs (Oatley 2015, Chapter 1). Therefore, the author advances both theoretical arguments and empirical evidence in order to substantiate the main theses of the book. Quite often quantitative analysis, especially correlations and regressions are used by the author as empirical tests for his hypothesized relationships and analyses (the link between security shocks and increased military spending, the analysis of budgetary consequences of postwar military buildups, the relation between expansionary fiscal policy and weak current account, the analysis of financial consequences of large and persistent macroeconomic imbalances and so forth).

Having established the key factors that contributed to military buildups in U.S. and the method of analysis, the author undertakes the difficult task of proving that military Keynesianism leads ultimately to economic booms and busts and of explaining how the military dimension of American hegemony had shaped global political economy.

According to Thomas Oatley, capital market dynamics transformed deficit financed military buildups into asset bubbles. He stresses that credit booms and asset bubbles occurred only in the context of military buildups: "*we see no credit booms, or real estate bubbles, or banking crises in the absence of military buildups induced expansion*" (Oatley 2015, Chapter 6 Par. 2). Oatley justifies this important assertion, which happens to be central in the book, by corroborating it with the classic Kindleberger-Minsky (K&M) model that asserts that asset bubbles are triggered by exogenous shocks, that is, by unexpected events that originate outside the financial system (Oatley 2015, Chapter 1). His focus is on security shocks and on the resulting fiscal policy as trigger of the crises. The causal relation between military buildups and economic crises, as the author conceives it, remains to be depicted in Oatley's sequential analysis spread on the next 5 chapters of his book (chapters 2-6).

In the first stage of argumentation (Oatley 2015, Chapter 2), the author reveals that large changes in military spending are correlated with security shocks (i.e. military action of foreign actors that threatens important American interest or ally, according to author's terminology). He uses a statistical model, selecting five conflicts that took place during postwar period and that represented large security shocks for American policymakers: Soviets fighting an American ally (South Korea, South Vietnam), military invasion that threatened an American interest or ally (Soviet Union invading Afghanistan; Iraq invading Kuwait) and direct attack on American territory (Al Qaeda). The author emphasizes that four of all these five security shocks were followed by very large increases in military spending (only Iraqi invasion of Kuwait in 1990 did not spark large military spending increases, mostly because of the brevity of conflict). He assesses also the institutional and political relevance of each security shocks, corroborating statistical results with historical context.

In the second stage of the analysis (Oatley 2015, Chapter 3), the author examines the budgetary consequences of postwar military buildups, arguing both empirically and theoretically that military buildups have been the single most important cause of America's large and persistent budget deficit. He shows that military buildups have widened deficits by 1.5 to 3 percent of GDP and these buildup induced deficits have persisted for more years. The lack of agreement between administrations and congressional leaders concerning the method of deficit reduction delayed the enactment of adjustment packages for years.

Further, the American professor assesses the macroeconomic impact of the budget deficits caused by military buildups (Oatley 2015, Chapter 4): fiscal expansion increased the output, strengthened the currency, weakened the current account and also led to an increase of net capital inflows. The author explains how, in his view, deficit financed military buildups have generated unbalanced growth and crises: (1) deficit financed military buildups impart persistent pro-cyclical stimulus to the economy inducing the economic boom; (2) the current account worsened and net capital inflows increased in order to finance the external deficit; (3) capital inflow strengthened the national currency and the relative price movements encouraged investment and employment in those economic sectors "sheltered from international trade". The author explains in detail that the American economy experienced eleven economic expansions between 1948 and 2008 and that each expansion lasted, on average, just under five years. He notes that these booms are highly correlated with postwar military buildups: the presence and absence of a military buildup correctly classifies nine of eleven postwar expansions into the boom and normal expansion categories, the two misclassified cases including one in which a buildup did not spark a boom and one in which a boom was not accompanied by a buildup. For instance, the Korean War is not associated with a boom, according to Thomas Oatley. He suggests that this happened because additional military expenditures generated by Korean War were paid through tax increases. Thus the author concludes that the modality of payment is more important than the buildup itself. The second exception was the tech boom, which was not associated with a military buildup. Thomas Oatley admits that a deficit-financed military buildup represents only a sufficient condition for a postwar economic boom, but not a necessary one. Further, the author considers that military buildups are highly correlated with changes in relative prices, dollar appreciation and persistent external imbalances. He found that seven of ten largest military spending increases were associated with large deteriorations of the current account balance, while five of ten largest military spending cuts were associated with large improvements in the current account balance.

Further, the author suggests that in order to understand how military buildups evolved into booms it is necessary to find how U.S. exploited his financial power. America's financial power is emphasized by Oately in the analysis of net cross border capital flows between 1970 and 2008. Thomas Oatley measured the concentration of cross-border capital flows by calculating a Gini coefficient for the ten largest national current account deficits in each year. Gini coefficient rises toward unity as cross-border capital flows become heavily concentrated in a single country and falls toward zero as capital flows are more evenly distributed across the ten largest deficit countries. Oately reveals that the cross national distribution of net capital flows has varied substantially over the selected period, ranging from 0.3 to 0.85. He discovered a strong positive relationship between U.S. external imbalances and the concentration of net cross-border capital flows. More exactly, when the U.S. demand for foreign capital rises it attracts an increasing share of total net cross-border capital flows and when U.S. demand for foreign capital falls, net

capital flows are more evenly distributed across the world's deficits countries. Thus at one extreme, large U.S. current account deficits are associated with a Gini coefficient of 0.82, while at the other end, small U.S. current account deficits are associated with Gini coefficients that range between 0.3 and 0.5. Therefore the magnitude of the total global imbalance correlates with the concentration of net cross-border flows, at least since 1980. Thus, global imbalances widen as net capital flows become more concentrated in the United States, and they narrow as net capital flows are more widely distributed across the system. Thomas Oatley suggests that because of the easiness of attracting foreign capital, increased government borrowing did not crowd out private investments in the U.S. economy. The author concludes: "*America's financial power thus allows the American economy to benefit from the dual impact of a sustained pro-cyclical fiscal expansion and an increase in private investment. The combination has unfailingly produced economic booms – extended episodes of rising prosperity*." (Oatley 2015, Chapter 4, Par.5)

Thomas Oatley sustains further, in the next chapter (Oatley 2015, Chapter 5) that global imbalances sparked U.S. protectionism, given of the impact that the over-valued dollar has on the international competitiveness of American manufacturing. U.S. started to pressure his trading partners to adjust their policies in order to narrow global imbalances, threatening to withdraw American security commitments and restrict access to the U.S. market unless agree to change policy. The author sustains that postwar American protectionism has also a pro-cyclical nature. By focusing on imposing more trade barrier in U.S. and fewer abroad America's trading partners were indirectly encouraged to embrace a more expansionary fiscal and monetary policy.

Analyzing financial consequences of America's postwar booms, Thomas Oatley sustains that postwar economic booms triggered by military buildups have been the cause of every major episode of financial instability in U.S. Thus, on the one hand the author emphasizes that in all cases a credit boom followed by an asset bubble or real estate bubble occurred only in the context of military buildup induced expansion. On the other hand, he notes that credit booms rarely occur in the absence of macroeconomic imbalances (U.S. twin deficits), but also mentions that no asset bubble emerged in the absence of a credit boom (Oatley 2015, Chapter 6).

Finally, in the last chapter of the book, the author suggests that America must rely less on military power and proposes to raise awareness of American public regarding the implications of America's wars. The author emphasizes that between 2001 and 2013 the U.S. government spent approximately 6 trillion dollars, fighting two wars. During the same period, close to seven thousands American soldiers have been killed in action, approximately 59.000 have been wounded and an unknown number of others returned home with posttraumatic stress. But American public does not pay too much attention to foreign policy issues or to the economic and humanitarian consequences of the America's wars. Consequently, the politicians did not encounter any electoral pressure or check regarding the cost of wars. The author emphasizes also that America's exploitation of its financial power has been costly in terms of global goodwill, increasing the determination of other nations to create an alternative to the U.S. dollar in order to limit America's global power. Thomas Oatley notes also that, though America is renowned as "system maker and privilege taker"[1], in many occasions it has been rather a system breaker, in the sense that America's determination to defend the postwar liberal order ended up in every instance in

1 Michael Mastanduno, "System Maker and Privilege Taker: U.S. Power and the International Political Economy", *World Politics*, Volume 61, Number 1, January 2009 pp. 121-154.

weakening substantially key components of this order. Vietnam War undermined the Bretton Woods system of exchange rates, while the subprime crises eroded the confidence in liberal capital markets and international financial interdependence (Oatley 2015, Chapter 7). However, Thomas Oatley's radical solution to raise awareness of American public concerning foreign policy and America's costly wars – National Universal Service Act, i.e. compulsory enlistment of people in the military service – could rather undermine than strengthen the same liberal order that the author seems to defend.

2. Short critical review and conclusions on Thomas Oatley's analysis

First of all, from an historical point of view, Thomas Oatley's account of military buildups in postwar America needs a short but important amendment. Challenging the military dimension of American hegemony, Thomas Oatley highlights the role of America's political institutions and its international financial power as the most important factors in fueling U.S postwar military buildups. The overall impression reading Oatley's account is that military buildups in postwar America are the unfortunate and unintended outcome of some impersonal political and economic causes. Up to one point this account may be true. Nevertheless ignoring the role of military industrial congressional complex (MICC) and of the particularities of U.S. military procurement system gives a simplified and misleading account of the entire process. The problem is that there are no incentives to change the main institutional setting that lead to large military spending because of the alliance between great military corporations and powerful military authorities. Robert Higgs explains that modern MICC originates in World War II time, when an elaborate legal and administrative mechanism was built – big business and its representatives occupying strategic positions in the procurement agencies of the military departments and in the civilian mobilization agencies. Military spending grew tremendously. During the fiscal years 1922-1939 they averaged just 744 million dollars, amounting to one percent of GNP. Between mid-1940 and late 1941 Congress appropriated 36 billion dollars for the War Department alone (more than the army and navy had spent together during the World War I). Besides, government adopted several important changes in its procurement laws and regulations, these changes including "negotiated cost-plus-fixed-fee contracts instead of contracts arrived at within the solicitation-and-sealed-bid system; various forms of tax breaks; government loan guarantees; direct government funding of plants, equipment, and raw materials; and provision of advance and progress payments, sparing the contractors the need to obtain and pay interest on bank loans"[2]. All these arrangements became by and large permanent features of the MICC. After the World War II military spending never fell to the previous level of interwar period. Under such conditions the risk of business for military contractors was completely shift from privileged firms onto the taxpayers, allowing private profits and imposing public risks. Between 1948 and 1989 national defense spending reached 10 trillion dollars, consuming, on average, 7.5 percent of American GNP. Given that great corporations, powerful military authorities, and members of Congress are all linked in a mutually self-serving complex, there is little incentive to

2 Robert Higgs, "Military-Economic Fascism: How Business Corrupts Government and Vice Versa", *Delusion of Power*, The Independent Institute, 2012.

change the entire system of military procurement and American foreign policy.[3] Therefore, overlooking what MICC means for American foreign policy and its role in U.S. military buildups, Thomas Oatley gives an altogether simplified and even misleading account of factors that favored large increases in military spending in postwar America.

Secondly, Thomas Oatley main position concerning the military dimension of American hegemony is revealed more clearly in the last chapter of the book when he advocates that time for retrenchment has come, that America has spent too much on wars in Iraq and Afghanistan and too little on the domestic foundations of power. He emphasizes that buildup-related deficits are costly and these costs manifest already in the form of systemic instability and declining political influence. Following Michael Mastanduno who emphasizes that U.S. has been simultaneously a "system maker and a privilege taker", Thomas Oatley emphasizes that on the one hand U.S. took advantage of its privileged position within international order and followed its interests. But he points very perceptively, that on the other hand, U.S. military buildups undermined rather than supported the postwar liberal order and that in this sense U.S. proves to be rather a system breaker and privilege taker than a "system maker". Overall, the account of Thomas Oatley has a general and holistic character, judging all aspects of the problem in terms of macroeconomic implications and general political consequences. This kind of approach has undeniable advantages, giving an all-encompassing perspective of the analyzed phenomena. But on the other side of the coin it has some shortcomings also. Important elements may be overlooked. Thus the author turns a blind eye to the costs of wars in terms of individual liberties and private property protection. The "war on terror" increased tremendously the size and power of government, threating the very foundations of the free society[4]. The solution that Thomas Oatley proposes to raise awareness of American public concerning the realities of U.S. foreign policy and America's wars – i.e. compulsory enlistment of people in the military service – reflects the same holistic or collectivist bias of diminishing the sphere of individual liberties for the sake of an impersonal political or economic good.

Thirdly, Thomas Oatley's implicit conception on economic crisis it is also important to depict. The author discovered an important connection between military buildups and economic booms and busts of postwar America. Nevertheless he does not pretend to develop general or universally valid claims about economic and financial consequences of military spending in his book. He rather aims to "*deepen the understanding of the economic and financial consequences of America's postwar military buildup based on established mid-range theories*" (Oatley 2015, Chapter 1). However, to this end, Thomas Oatley enumerates the most commonly advanced explanations of the economic crises, highlighting his agreements and disagreements. In his brief analysis of theoretical accounts of the crises (Oatley 2015, Chapter 1), the author rightly rejects some standard explanations of economic crises because they do not cover all the cases. The typical approaches that stress the complexity of financial system, the failure in the management of risk and the lack of appropriate regulations are dismissed by the author because they do not cover the entire range of postwar crises, but mainly the 2007-2008 subprime crisis. The

[3] Robert Higgs, World War II and the Military-Industrial-Congressional Complex, Independent Institute, 1995, http://www.independent.org/publications/article.asp?id=141; Robert Higgs, "Private Profit, Public Risk: Institutional Antecedents of the Modern Military Procurement System in the Rearmament Program of 1940–41", *Depression War and Cold War*, Oxford University Press, 2006;

[4] Robert Higgs, ***Crisis and Leviathan: Critical Episodes in the Growth of American Government*, Oxford University Press, 1987.**

author looks for a broader conception able to explain a wide range of economic booms and busts that occurred in postwar America. But Oatley implicit account of economic crises suffers also from the same type of problem. In explaining American postwar economic booms, he leans too much on particular conditions emphasizing expansionary fiscal policies on account of military buildups. Thus, on the one hand, the author tends to consider deficit financed military buildups as the main cause of economic crises in postwar America, asserting that "*we see no credit booms, or real estate bubbles, or banking crises in the absence of a military induced expansion*" (Oatley, Chapter 6, Para 2). But on the other hand, he admits that not every economic boom is associated with a military buildup and that, for instance, tech boom was not preceded by large military buildups. Consequently, military buildups are not necessary conditions of economic crises. However, the author indicates at some point in his analysis a necessary condition of economic bubbles pointing out that "*no asset bubble emerged in the absence of credit boom*" (Oatley 2015, Chapter 6). But this assertion is not further substantiated and neither the role of FED and commercial banks nor the role of other financial institutions and regulations are inquired or even considered by the author in connection with the analyzed credit booms. He overlooks the possibility of finding a general explanation or a general cause of credit expansion within the financial and banking system[5], adhering instead to an exogenous theory of business cycle. In this view, economic crises are triggered by exogenous shocks (in this case, large deficit spending military buildups).

Thomas Oatley emphasizes also a series of general conditions, such as America's financial power and macroeconomic imbalances, including global imbalances. He asserts that "*America's deficit-financed military buildups have generated economic booms because of America's global financial power*" (Oatley 2015, Chapter 4) and also that "*America's macroeconomic imbalances, characterized by the configuration of robust economic growth, pro-cyclical fiscal policy imparted by military buildups and capital flow bonanzas have generated credit booms*." (Oatley 2015, Chapter 6, Para 2) Capital flow bonanzas are more or less, according to Thomas Oatley, the result of American financial power: the capacity of U.S. government and American citizens to borrow from the rest of the world in large volumes for extended periods of time at low interest rates, benefitting from the dollar's role as the world's primary reserve currency. The author mentions also the massive capital inflow from export oriented countries, like China, that bought IOUs from the U.S. government, preventing their currency to rise and stimulating Americans to buy more imported goods. The capital flows from countries like China or Japan represent the counterpart of the U.S. balance of payment deficit with these countries and this is how the U.S. twin deficits are closely related, feeding into each other. But the causal chain between U.S. twin deficits, capital bonanzas and credit booms is rather fuzzy in Thomas Oatley's account of economic crises. The author's explanation is based in this important point mainly on a discovered covariance: "…*we observe a strong correlation between economic expansion, capital flow bonanzas and pro-cyclical fiscal policy on the one hand and credit booms on the other. The presence and absence of this macroeconomic environment correctly classifies ten of eleven of postwar economic expansions into credit boom and non-credit boom categories.*" (Oatley 2015, Chapter 6, Para 2) In fact, the same conclusion applies for these factors also: neither America's financial power nor

[5] See for example Austrian business cycle theory (Ludwig von Mises, "The 'Austrian' Theory of Trade Cycle", *The Austrian Theory of Trade Cycle and Other Essays*, Ludwig von Mises Institute, 1996; G. Hülsmann, "Toward a General Theory of Error Cycle", The Quarterly Journal of Austrian Economics, vol. 1, no.4)

macroeconomic imbalances and capital flows bonanza can be considered *per se* necessary conditions of economic crises. However the author insists that when all these factors come together, they are always correlated with credit booms and economic crises.

The symbiosis between credit expansions fuelled by government borrowing in context of war has been revealed also in relation to some of the economic crises of XIX century – 1819, 1837, 1857 and so forth[6]. This pleads for the idea that Thomas Oatley analyzes in his book a very significant and persistent historical relation but also raises questions regarding the role he attributes to "capital flow bonanzas" or America's twin deficits in sparking credit booms, given that economic environment in XIX century was quite different. M. Rothbard emphasizes instead the role played by banks, through inflation and "wild-cat banking", in fuelling credit expansion in case of XIX century economic crises, and also stresses the role of governments that tried to patronize banks in order to control and direct credit expansion according to their immediate political interests.

In the cases of postwar credit booms it could be also significant to examine the role of banks, including FED and the foreign central banks of exporting countries, like China. Thomas Oatley main suggestion is that America's military buildups are deeply interlaced with global economic imbalances and that this type of economic environment generated crises. He turned a blind eye to the role of banks and other financial institutions in credit expansion and economic bubbles. But the question is whether there would be any story about America's twin deficits in the absence of practice of "lending fiat money to buy fiat promises"[7] at the global level. From this perspective the causes of economic crises are more deeply rooted in the very settlement of our global financial system[8].

As a final remark, it is important to note that although the author denounces the costs generated by deficits financed military buildups, such as "systemic instability and declining political influence" and requires a more responsible fiscal policy, he does not reject in principle military Keynesianism. Oatley assumes the Keynesian theoretical framework of analysis. He adheres to the standard conception of pro-growth fiscal stimulus, accepting that "*deficit-financed military buildups have ushered in extended periods of exceptional prosperity*". (Oatley 2015, Chapter 4)

A Political Economy of American Hegemony Buildups, Booms and Busts is an altogether interesting read. The author finds an historical correlation between military buildups, macroeconomic imbalances and economic crises in postwar America. Overall, the most important contribution of the book is factual or empirical, in the field of economic and political statistics. The main theses and arguments rely mostly on discovered statistical correlations and less on theoretical explanations. Nevertheless, insightful considerations on

[6] "In the United States, mass suspension of specie payment in times of bank troubles became almost a tradition. It started in the War of 1812. Most of the country's banks were located in New England, a section unsympathetic to America's entry into the war. These banks refused to lend for war purposes, and so the government borrowed from new banks in the other states. These banks issued new paper money to make the loans. The inflation was so great that calls for redemption flooded into the new banks, especially from the conservative nonexpanding banks of New England, where the government spent most of its money on war goods. As a result, there was a mass "suspension" in 1814, lasting for over two years (well beyond the end of the war); during that time, banks sprouted up, issuing notes with no need to redeem in gold or silver. This suspension set a precedent for succeeding economic crises; 1819, 1837, 1857, and so forth. As a result of this tradition, the banks realized that they need have no fear of bankruptcy after inflation, and this, of course, stimulated inflation and "wildcat banking." (Murray Rothbard, *What has Government Done to Our Money*, Ludwig von Mises Institute, 2010)

[7] Gary North, "Twin Deficits", *Mises Daily*, 2012.

[8] M. N. Rothbard, History of Money and Banking in the United States: the Colonial Era to World War II, Luwig von Mises Institute, 2002.

America's recent wars are sprinkled throughout the book, Thomas Oatley challenging America's reliance on military power, analyzing its economic and political impact at the global level and raising important questions on military dimension of American hegemony.