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ARTICLES

THE ADVANTAGES AND DISADVANTAGES OF THE PRODUCTION OF SHALE GAS POTENTIAL: THE CASE OF TURKEY

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Abstract: - Energy is a main input for economy. Because of an increase in other fossil fuels' prices and it's accepted as an important resource for energy supply for the countries which don't have enough oil and natural gas resources, shale gas became a current issue in the world. Technically producable shale gas in the world is about 6.621 bcm (billion cubic meter). We can say that this amount may be higher if unsought areas are added. Turkey is one of the countries which has shale gas potential. According to a report published by EIA in 2011, Turkey has approximately 424 billion cubic meter shale gas reserves. This shale gas potential can reduce Turkey's energy dependence if we think of the fact that annual natural gas consumption of Turkey is 46 bcm. Despite all, production of shale gas has not been searched in terms of it's advantages and disadvantages.
The aim of this study is to present the advantages and disadvantages of shales gas for the world and Turkey. Reducing energy dependence, supporting a more clean energy than coal, balancing the oil prices are some advantages. Nevertheless, it's a fossil fuel, it's production is expensive and it gets negative social and environmental reactions.

Key Words: Shale gas, Energy Economics, Turkey, Advantages and Disadvantages of Shale Gas.

1. Introduction

Energy is a main input for economic activities. Energy is defined as a capacity for doing business and accepted as a power behind every sort of energy and everthing that was changed (Stern, 2004: 37). In literature, the concept of energy was discussed as an ability of doing business for human and animal until industrial revolution. Then industrial revolution caused the usage of steam engine and coal for producing iron. After First World War, oil and natural gas have been used instead of human and animals (Bayramoglu, 2013:5).

Although energy is used in every part of life, it's economic aspects are discussed under a sub-branch of economy, energy economics in this study. Investments and activities to reach natural energy resources provide an increase in accumulation of energy and it's usage in economic activities. Therefore energy is driving force for the development of countries and has importance for countries' strategic positions (LadanaiandVinterbäck, 2009:7).

After energy crisis in 1970s, alternative energy resouces have been sought. Because the reasons like advancement of technology, reduction of costs, international pipeline projects, supporting the security of supply and increasing energy demand day by day; shale gas potential has been analyzed and started to produce. Shale

gas is expected to replace other fossil fuels in 2017, and its production is expected to be higher than coal production in the near future (EnergyInstitute, Access Date; 21.03.2014).

Despite all these developments, shale gas is a fossil fuel. Therefore, shale gas is a harmful energy resource for human health and environment from production to final consumption periods. The aim of this study to present the shale gas potential in Turkey and discuss the advantages and disadvantages according to other energy resources. This article will end with conclusion and suggestions.

2. Shale Gas Potential In The World And Turkey

Energy demand is increasing day by day both in the whole world and Turkey. It's expected that global natural gas demand will be rapidly increase depending upon its industrial and urban utilization. It's estimated to reach 5 trillion cubic meter in 2035 while natural gas demand was 2 trillion cubic meter in 1990 (Demirbas, 2013:8).Energy crisis in the past compelled the whole world for new energy resources. Shale gas is one of them. Shale gas has been considering as an alternative energy resource especially in USA after developing new technologies and innovations which reduce the cost of its extraction. Shale gas is a type of energy resource which is among the sedimentary rocksthat consist of clay-like minerals with rich organic substance. It can be extracted by horizontal drilling and hydrolic-break method and also it's among non-conventional energy resources (İEA, 2012).

After sharp increases in oil and natural gas prices, shale gas became popular in the worldas a result of alternative energy searching of developed countries and the lack of energy supply in these countries (Asche, Oglend ve Osmnundsen, 2012:122). Drilled oil-wells in the world increase every passing day. In USA, there are thousands of drilled oil-wells but there are less than hundred in China (Centner, T.J. ve O'Connell, L.K., 2014: 359). USA managed to produce more shale gas than it's imported natural gas. These values show that US will soon get out of energy dependence thanks to shale gas.

Shale gas is not a new subject, especially for some countries. For example; USA, Canada and China have been producing for a long time. Today USA is the country which produces the most shale gas among the countries which have shale gas potential. Shale gas has a power to change the world energy prospect if it's potential is used efficiently as an energy resource. According to a report by EIA, shale gas production in USA is 14% of total production of natural gas and oil and shale gas has a potential to support the half of gas production until 2035. According to estimates made by EIA, the countries that have the most shale gas potential are;

After sharp increases in oil and natural gas prices, shale gas became popular in the world as a result of alternative energy searching of developed countries and the lack of energy supply in these countries. When Table-1 analyzed, it is clear to say that total technically recoverable shale gas potential in the world is 6.621 bcm and first 10 shale gas producer countries have a potential of 5.975 bcm. It's estimated to reach 7.299 bcm today (IEA, 2013). China has 19.2 % per cent of recoverable shale gas potential. USA (13%), Argentina (11.7%) and Mexico (10.3%) follows China respectively. Turkey's shale gas potential has % 1.5 of world total. It'll absolutely make a positive effect to reduce Turkey's energy dependence although the amount of shale gas potential is not too much.

Turkey's energy demand has been increasing in recent years and it's expected to continue to increase in the future. According to the report published by EIA in 2011, Turkey's recoverable shale gas reserve is about 424 bcm (Demirbas, 2013:21). As Figure-2 shows, most of this potential is located atSoutheast Anatolia (Dadas Basin) and Trakya Region (Hamitabat and Mezardere)as estimative areas. Also there are shale gas basins near Salt Lake and Sivas Basins but they are non-estimative. With an agreement between TPAO and Shell, if explorations become successful in Mediterranean Region, this known potential will be able to be drilled in Turkey (TPAO, 2014).

Despite different estimations about Turkey's shale gas reserves, when it is considered that Turkey's annual energy consumption is about 46 bcm, it is possible that this shale gas potential can support at least 14-15 years of Turkey's energy need (Kozakoglu, 2013).On one hand increasing energy demand requires the drilling of shale gas, on the other hand increasing environmental consciousness and negative impact of fossil fuels prevent the production. Advantages and disadvantages of producing shale gas are valid not only for Turkey, but also for the world.

3. Literature Summary

In literature studies, shale gas and shale oil's potential in the world, their roles on supporting the world energy need and finally their economic, politic and environmental effects were discussed with their advantages and disadvantages.

There are many studies about shale gas and shale oil. We can give some examples (Altun vd., 2006; Hepbaşlı, 2010; Boyer vd., 2011; Selley, 2012; Weijermars, 2013; Ahıshalı, 2013; EIA-ARI, 2013; Armor, 2013; Hu ve Xu, 2013; Johnson ve Boersma, 2013; Centner ve O'Connell, 2014) from the world.

Boyer et al. (2011: 23) in their study claimed that shale oil reserve estimations made by EIA in 2011 are much more than estimations made by Roger Study in 1997. In the study shale oil were discussed as a global energy resource and shale oil potential was analyzed all over the world, especially in developing countries such as China, India, South Africa and Argentina. Selley (2012: 100-109) analyzed the shale gas and oil potential in England. Weijermars (2013: 101) emphasized the importance of shale gas for Europe in terms of its economic potential. Accordingly, there are about 150-200 bcm technically recoverable shale gas reserves in Europe.

In addition to shale gas and shale oil's potential in the world, there are also studies about their potential in Turkey in the literature. It's stated that there are intense shale oil potential in South-east Anatolia Basin and Trakya Basin and also there may be shale oil reserves in interior parts of Black Sea Region and Toros Basin (Ahıshalı, 2013: 25). Also Altun et al. (2006:211-227) claimed in their study that shale oil has the second most fossil fuel potential after lignite in Turkey. In the study benefits of shale oil and gas for Turkish economy were analyzed. EIA-ARI (2013:170) in the report named ''Shale Gas and Shale Oil Resource Assessment'' points out that there are 94 billion barrel shale oil and 4.7 billion barrel risky but technically recoverable shale oil resources in Anatolia and Trakya Basins in Turkey. Also in the same report it's added that there are 163 trillion cubic meter shale gas potential and 24 trillion cubic meter recoverable shale gas potential in Turkey.

There are many studies about advantages and disadvantages about shale gas and shale oil in literature. Hepbaşlı (2010: 107-118) mentioned about tarry shale oil fields in Turkey and added that fluidized ones can be profited for generating electricity. It was stated that fluidized shale oil was a good tool for igniting various combustibles from wood to hard coal and it has being used since 1980s in industrial area, but it wasn't preferable because mining cost from shale oil fields were higher than the cost of crude oil. Armor (2013:21-26) emphasized the fact that the usage of shale gas as dynamic and chemical were more environment-friendly than petroleum and coal. Altun et al. (2006: 224) explained that the ash of shale oil was used as a raw material of cement in China today. Also it was predicted that a development at the production of shale gas will cause serious environmental disasters and water scarcity in China without taking measures towards environmental pollution, using advanced technology, providing balanced water consumption, preparing a good relationship between industry and local community (Hu ve Xu, 2013: 21-26).Johnson ve Boersma (2013: 389-399) referred the economic, politic and environmental problems which are possible to encounter for Poland, which is a country that begins to build its shale gas industry. It's emphasized that Polish people won't be non-reactive to fast hydrocarbon emission just like North Americans. In addition to this, development in shale gas industy may increase the tension between Poland and Russia. Centner ve O'Connell (2014: 364) claimed that an increase in air and water pollution may prompt new technologies, innovations and job opportunities in health and environment protection sectors.

4. Advantages and Disadvantages of Shale Gas

Although shale gas has been known before, negative or positive results of its production are not still certain. Shale gas is a fossil energy resource. It carries all negative effects of a fosil fuel, but also it offers someopportunities as a new energy resource. Its positives are: It reduces the energy dependence, it can be used instead of coal which is more contaminant than shale gas, it balances the oil prices, it breaks the monopoly of oil exporting countries, it has the power of providing employment and it has the power of improve the economic indicators. It's negatives are shortly: It is a resource which quickens the global warming, it may be

one of the reasons of earthquake, its production is highly costly, may pollute the water sources, negative environmental and social reactions and continuity of the usage of fossil fuels.

The main advantages of producing shale gas:

- **It reduces the energy dependence:** Turkey, for example, is a country which import over 60 billion dollars energy every year. China is also dependent to imported energy. China's technically shale gas production potential is approximately 1.275 bcm. Turkey's is around 50 bcm. It is expected that if countries which are dependent to imported energy and have shale gas potential, use these resources for energy, they diminish their energy dependence(EE, 2014). According to estimations made by OGT, shale gas will reduce Europe's energy dependence about % 89 in 2035 (OGT, 2014).
- **It can be used instead of coal which is more contaminant than shale gas:** Shale gas can be stay in diagenesis in good condition for many years. It is drilled by hydrolic breaking method. Therefore it's a new resource to get coal gas and also it can be easily substituted for coal. China gets 70 % of its energy need from coal. If China uses its shale gas potential, it can pollute the environment less and take the heat off the rest of the world (Xingang, Jiaoli ve Bei, 2013:607).
- **It balances the oil prices:** Oil prices are expected to decrease in case of using shale oil and gas potential by the countries which have shale reserves. USA beginned to produce shale gas and it has already showed its effect on prices (EİA, 2014, Medlock III, 2012: 37,Johnson ve Boersma, 2013: 37).
- **It breaks the monopoly of oil exporting countries:** USA and China are the biggest oil exporting countries. Also they have the biggest shale gas potential. This dual structure will cause the income of oil exporting countries decrease. Especially Arabic countries will be affected badly(Medlock III, 2012: 37).
- **It has the power of providing employment:** It is projected that producing shale gas will contribute to grow employment globally. For example in Texas state, 12.000 people are employed in shale gas sector. It's estimated that shale gas will create more than 70.000 people employed in England. According to OGP, in the long term shale gas will make more than 1.1 million people employed in Europe (OGP, 2014).
- **It has the power of improve the economic indicators:** It's expected that shale gas production will increase competition and reduce the imported energy dependence in the region and also it provides 1.7-3.8 trillion euros for European economy between the years 2020-2050 (OGP, 2014).

The main disadvantages of producing shale gas are:

- **It is a resource which quickens the global warming:** It's recommended to use renewable energy resources and to stop carbon emission before global warming exceeds the critic line for any living thing. Environmentalists and climate change experts mentioned their worries about production of shale gas. As a result of this development, many governments like French Government[1] banned the drilling of shale gas. While drilling shale gas, carbon emission is 3.5 %- 12 % more than conventional gas (Filoğlu, 2013:20).
- **It may be one of the reasons of earthquake:** Drilling the shale gas is made by hydrolic cracking method. This method causes spaces undergound thus it is thought one of the reasons of earthquakes(Filoğlu, 2013:13). Besides, experts point out shale gas as a responsible for small earthquakes in Weeton, England.
- **Its production is highly costly:** Drilling ofshale gas is two times more expensive than natural gas because the existing technology is still so expensive and there is no other suitable technology for shale gas.
- **It may pollute the water sources:** Shale gas is a resource drilled by hydrolic cracking method and some chemicals are used during the application of this method. There are some worries about some chemicals may mix in underground water(Hu ve Xu, 2013: 23). Environmentalists, claims that chemicals which occurs after drilling shale gas, may pollute water sources. Another problem about water is using too much water while drilling shale gas. 182 tons of water is used while a standard well

[1] French Constitutional Council approved the law in 13 July 2011, which banned shale gas drilling.

bore but 13.650 tons for shale gas drilling (Xingang, Jiaoli ve Bei, 2013:608). Water purification of used water can be provided by new technologies but cost of purification and too much water use are two negative factors for underground water.(Yıldız, 2013:23).

- **Continuity of the usage of fossil fuels:**Oil, natural gas and coal will run short one day, even if these are different dates. The usage of these resources should be lowered to reduce environmental pollution. Fossil fuel usage will continue for many years by the help of turning shale gas potential into production(Filoğlu, 2013:20).

Also other disadvantages of using shale gas are: negative environmental and social reactions, infringement of habitat, environment pollution, changes in underground structure, disputes between global companies and local residents etc. (Hu ve Xu, 2013:23, Filoğlu, 2013:20).

5. Conclusion and Assessment

All countries have to produce in order to increase their income. Energy is an indespensable factor for production. Energy crisis refers countries to different energy resources. Shale gas is one of them. Shale gas wasn't produced until last few years due to the lack of technology, cost of its extraction and its unknown potential. Now today shale gas is considered as an important energy resource. Shale gas has a big potential to produce energy primarily for China and USA. USA beginned to evaluate this potential and other countries do scientific researches for shale gas production. Technically recoverable shale gas potential is 6.621 bcm and Turkey's potential is 424 bcm.

Thanks to countries' interests in shale gas and abundance of recoverable shale gas potential in the world, its advantages and disadvantages come into prominence. On one hand shale gas gives especially environmental damages because it's a fossil fuel, on the other hand it has some benefits because it has potential to support energy supply security. In this study its possible advantages and disadvantages were discussed as a result of turning shale gas potential into production. The results show that even if its potential and and its production opportunities are known, its advantages and disadvantages should be considered.

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Table1: Technically recoverable shale gas potential (Billion cubic meter)

Number	**Country**	**Shale Gas Potential**	**Per cent (%)**
1	China	1,275	19,2
2	USA	862	13,0
3	Argentina	774	11,7
4	Mexico	681	10,3
5	South Africa	485	7,3
6	Australia	396	5,9
7	Canada	388	5,8
8	Libya	290	4,3
9	Algeria	231	3,4
10	Brazil	226	3,4
11	Poland	187	2,8

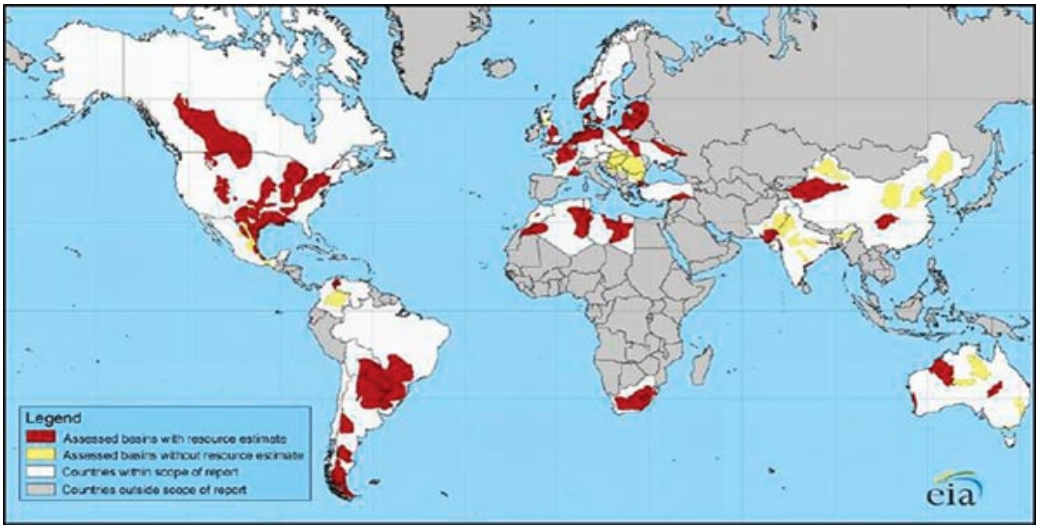
12	France	180	2,7
13	Turkey	100*	1,5
14	Lithuania	100*	1,5
15	Others	647	9,7
World Total		**6,621**	**100**

Source: EİA, World Shale Gas Resources: An İnitial Assesment of 14 Regions Outside the United Satates, http://www.eia.gov/analysis/studies/worldshalegas/ E.T.23.03.2014

*Turkey's and Lithuania's potentialat most 100 billion cubic meter.According to estimations by Turkish Petroleum Corporative (TPAO) it's 20 bcm for sought areas.

*Total per cent may not be 100 % due to rounding off.

Figure 1: Map of World Shale Gas Potential



Source: EİA, http://www.eia.gov/analysis/studies/worldshalegas/, E.T. 26.03.2014

Figure-1 shows where the shale gas potential is in the world. As figure shows, world potential has a power to change energy prospect in the future.

Figure 2: Shale Gas Potential of Turkey

Source: TPAO, http://www.tpao.gov.tr/tpfiles/userfiles/files/2012-sektor-rapor-mayis-tr.pdf, A.D. 26.03.2014

INDEBTED WORLD AND KNOWLEDGE FOR THE FUTURE

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Abstract: - For more than a decade, the amount of public debt is one of the biggest problem in advanced economies. Level of public debt is not only the very one indicator of the risk of national bankruptcy, even though it is the most important indicator. Solution of debt service in indebted economies basically consists of two possible options. The first option is the way of saving of all kinds of expenses, with the exception of investments, the other option is to support economic growth with a positive impact on the relative level of public debt. At the same time it shows that bankruptcies of national economies happen in clusters and linked adjacent to each other due to financial market integration. The aim of this article is to show possible ways of solution of consequences of financial crisis and he high debt levels of advanced economies.

Key Words: debt, deficit, GDP.

JEL Code: H 63, H 68.

1. Introduction

For nearly one decade the whole world is suffering from the overhang of debt and deficit. Discussions are currently taking place in Europe about restructuring Greece's massive state debt, which has risen sharply since 2008. Greece is only one example of a growing number of countries whose debt levels are considered by many to be unsustainable. The most significant cause for the high level of indebtedness for a number of countries was the bursting of the financial bubbles that emerged in the early 2000s, leaving the taxpayer responsible for bailing out the financial institutions which had made multi-billion losses. In other cases, debt has been a long-standing issue, rooted in a colonial past or the exorbitant interest rates on debt repayments. Still other countries have had persistent problems with declining economic growth over many years (Smith, 2015).

Since 2008, when the crises began, public debt in OECD countries (federal, national and local) has risen up by 35 percentage points of total economic output (McKinsey, 2015). In many advanced economies it has risen by much more: 47 points in Italy, 50 points in United Kingdom, 83 points in Portugal. Debt had been gradually building in Italy over several years, but the real problem hit with the economic crisis of 2008. Italy's economy has never recovered since, with it being the only country in the G7 not to have returned to output levels prior to the crisis. Currently, its output is 9 percent below 2008 levels and its total debt is approximately 130 percent of economic output. Portugal was the second country to receive a bailout from the EU and IMF after its financial sector, much like Greece's, faced immanent collapse. By 2013, its debt rose to 129 percent of economic output. The country's mounting difficulties contributed to the risks facing the euro, which was in danger of collapsing in 2012 and has still not been stabilized today.

Greece is only one example of a growing number of countries whose debt levels are considered by many to be unsustainable. The most significant cause for the high level of indebtedness for a number of countries was the bursting of the financial bubbles that emerged in the early 2000s, leaving the taxpayer responsible for bailing out the financial institutions which had made multi-billion losses. In other cases, debt has been a long-standing issue, rooted in a colonial past or the exorbitant interest rates on debt repayments. Still other countries have had persistent problems with declining economic growth over many years.

The after effects of the 2008 economic crisis were responsible for Ireland's massive expansion of state debt, which prior to that, had been comparatively low. The crisis resulted in the virtual collapse of the country's financial system, an outcome that was prevented only by a multi-billion bank bailout organised by the government. This meant that by 2012, debt to GDP stood at 118 percent. Since then, the figure is widely estimated to have risen above 120 percent, with the economy continuing to contract until last year and then only slowly returning to growth.

The debt-to-GDP ratio is a measure of a country's debt compared to its economic output. When a country's economy slows, government will frequently borrow to meet its obligations or to stimulate its economy. If the former is the reason, it can be said that the government had very little cushion in its cash flow and the slow economy has reduced tax revenue making it necessary for the government to borrow. If the government is borrowing to stimulate its economy, for example, to create work programs for the unemployed, then it hopes that this will shorten the duration and severity of the economic downturn. In any event, excess government borrowing for whatever reason, has to be repaid and that's where this ratio is useful (Patton, 2014).

A country can dispose such frightening debt several ways. First way is savings and austerity and second economic growth with low interest rates. Often used are more radical steps of restructuring debt by reducing interest, prolonging the maturity or slashing the amount owed. Around the world are many countries with very toxic combinations of high debt and low growth (Lund, 2014). And high federal debt puts the United States at risk for a number of harmful economic consequences, including slower economic growth, a weakened ability to respond to unexpected challenges, and possibly a debt-driven financial crisis.

2. Cluster defaults

Country defaults tend to come in clusters (Reinhart and Rogoff, 2009). In the 1930s, the Great Depression hurled defaults throughout Europe and Latin America. In 1980s, commodity prices hurled a wave of defaults by emerging economies that had borrowed heavily from Western banks. Single defaults this time around the world are rare. They include Greece, Cyprus and Argentina (Argentina linked to its prior-decade restructuring). Argentina's economy is in its second recession in as many years. The last one occurred in 2012 and was slightly worse than the current downturn. Although the country has an abundance of natural resources and a well educated population, it relies heavily on exports. Hence, with the global economy struggling, Argentina has found it difficult to sustain economic growth. As the third largest South American country by population, Argentina's economy is saddled with an inflation rate some believe to be as high as 25%, though the official rate is 10.9%. Its labor market is also weakening with a current unemployment rate of 7.1%, up from 6.4% one month ago. However, as evidenced by the chart below, even at 7.1%, it's well near the low end of the range since 2002 when it exceeded 20% (Patton, 2014).

For another example, Ukraine is now seeking to restructure its debt to private investors, as is Puerto Rico. Opposition politicians in Ireland, Portugal and Italy have in the past pressed to restructure some of those countries´ debts, which stood last year at 115 %, 129 % and 133 % of GDP, respectively (Mc Kinsey, 2015). The trend of development of Debt to GDP from 2004-2014 shows sheet 1 (Patton, 2014).

Debt-to-GDP Ratio 10 Year Trend		
Country	**2004**	**2014**
Japan	165.5	227.2
Greece	98.6	175.1
Italy	103.9	132.6
Portugal	57.6	129.0
Singapore	98.0	105.5
United States	62.7	101.5
Belgium	94.2	101.5

We can see, that actually, Japan, Greece, Italy and Portugal are in much worse shape than the U.S. despite our $17.6 trillion debt. Lower interest rates have been the trend since 2008. Considering all of the countries listed on the chart, the U.S. has the highest short-term government interest rate at 0.25%. Singapore's rate is 0.17%, the four European nations are at 0.05%, and Japan is at 0.00%. That's correct, Japanese short-term government debt is paying zero.

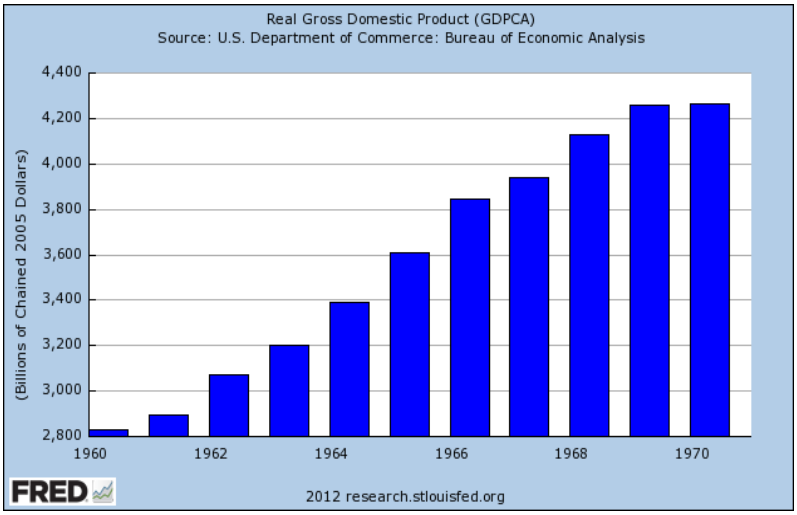
Countries that have borrowed in their own currency, such as USA, Japan and United Kingdom, need never default, since they can, if needed, print their own money-currency. Nonetheless, these countries must still find some other way to slash down their debts. Japan leads the way in terms of its debt to GDP ratio, which was 226 percent in 2013. Since the early 1990s, the world's third largest economy has experienced almost continuous stagnation. More recently, policies pursued by the government to resolve the crisis have tended to push debt levels even higher. These include moves by the country's central bank to print more money in a quantitative easing program similar to that adopted in the United States. In part as a result of this policy, the currency dropped by 18 percent in 2013. The debt rate is still showing no sign of declining.

3. GDP growth or economy drive

The less painful way is – by far – through economic growth. An expanding economy automatically reduces the ratio of debt to the whole of economy and generates tax revenue to shrink deficits. Economic growth has been key to the deleveraging in the past – from the USA after World War II (when entire debt had reached 121 % of GDP) to Sweden and Canada in the 1990s and 2000s. Canada is avoiding many of economic headaches that have plagued other nations. Fiscally conservative leadership combined with robust regulations have kept Canadian banks from melting down during the crisis that crippled many American and European firms. Those factors, combined with low public debt levels, allowed a nimble response to the crisis from the Canadian government. So Canadian economy is relatively stable: with unemployment rate of 7,3 % and projected federal budget deficit of just 1,5 % of GDP.

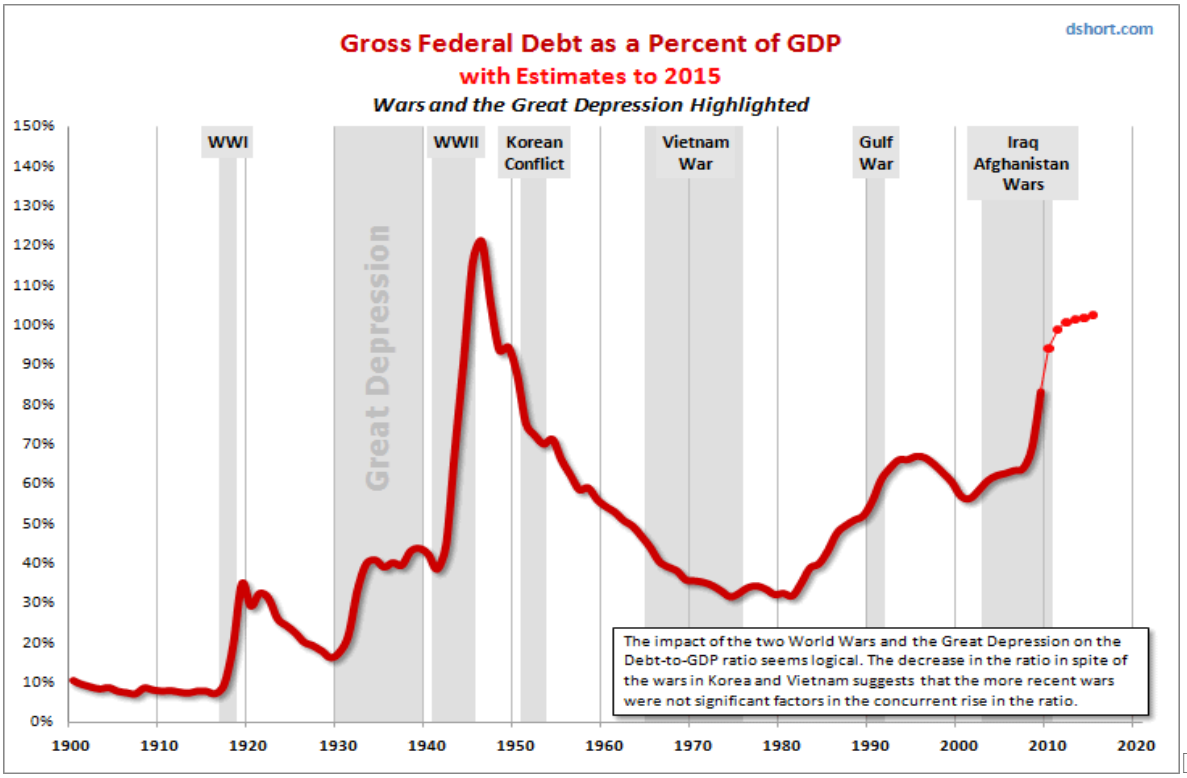
Sweden and Canada were able to compensate the pain of budget cuts by letting their currencies drop and rising export to other countries. They will not work if every country is trying to offset the pain of deleveraging by exporting more at the same time, of course.

After World War II – in 1960s – the USA underlying potential growth was supported by brisk expansion in the labor force and productivity. By contrast, potential growth around the world is now slipping. This has been an underappreciated contributor to the global debt problem. For example, one reason the International Monetary Fund is so pessimistic about Greece´s ability to pay its debts is that, given historically weak productivity and a shrinking working age population, its potential growth is likely negative. A similarly toxic combination of shrinking GDP and budget deficits has pushed Puerto Rico to the breaking point. Italy´s economy is the same size as it was in 2000. The real GDP growth in USA in 1960s shows figure 1 (Stewart, 2012).

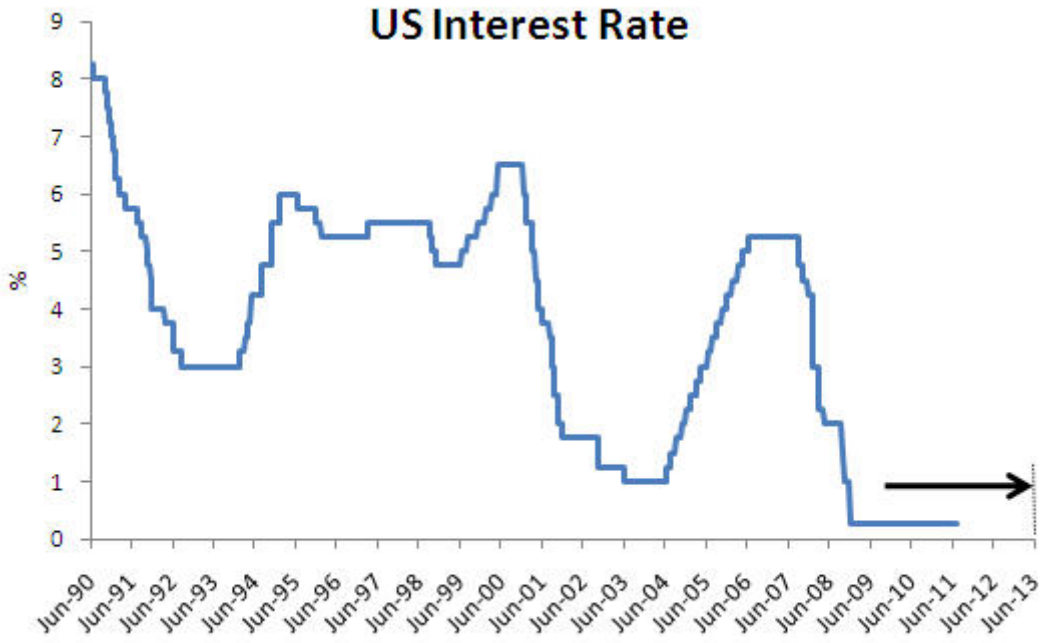


In August 2015 USA administration reduced projected GDP growth for this year, and now sees the federal debt, which it once though would fall steadily, fixed above 74 % of GDP for the coming decade. The USA economy is growing again after its first-quarter slump. Many analysts estimate it is expanding at an annual pace between 2,5 % to 3 % of GDP in the end of 2015. And meantime, the job market continues to improve, driving the unemployment rate down to 5,3 %. Declining long-term growth means more debt reduction will have to come from reduced spending or higher taxes. History has proven that lower tax rates have a stimulating effect on the economy and higher taxes have the opposite result. Although there are many detractors from this position, but again, the data has proven this over and over.

But too much austerity too soon can make matters worse by reducing GDP, and fuel a political backlash that kills the effort. By this time the federal debt may be 17.000 billion USD. This equates to about 54.000 USD per person or 149.000 USD per taxpayer. Even though the annual deficit is falling, it is still 787 billion USD, down from its 1.000 billion USD level just one year ago. The tax law changes that went into effect in USA in 2015 were mainly targeted at the highest income earners (Shirley, 2015). Of course, the expiration of the payroll tax holiday caused tax rates to rise on everyone who earns a paycheck, but the majority of the tax hikes hit the higher income earners. The more income government requires, the more taxes will have to be raised. The problem is that there are not enough “high income earners” to satisfy today’s debt and deficits. This means that middle income will soon be in the scope of the lawmakers. As mentioned before, a government can over-tax the rich until they are no longer rich. However, the rich will take measures to avoid this, and they can certainly afford to do so. Because the poor have nothing to tax, the middle class will be forced to ante up. The development of debt federal USA debt to GDP during last 100 years shows figure 2 (Short, 2010).



The GDP growth leaves one other tool to reduce debt ratios. If central banks can keep real interest rates low, or even negative, then even debts over 200 % of GDP can be sustained indefinitely. While this might raise inflation, that would be welcome, as inflation is currently too low and higher inflation would – by raising the nominal value of GDP – cut the debt ratio. Despite two years of solid growth and falling unemployment, inflation has fallen. Financial market forecasts for the timing of the first increase in interest rates have been consistently pushed back, while predictions of the eventual peak in rates have been lowered. This works with one or two exceptions, it has only been during and immediately after wars that inflation has risen to high levels in developed western economies. For the rest of the time, competition tends to keep prices under control. And labor markets have been operating under intensely competitive conditions. Workers in countries such as the UK have been threatened with their jobs being off-shored, have seen the pool of labor increased by the arrival of skilled immigrant labor, and have seen trade union power reduced. A US interest rate rise has been a long time coming. The last time the Fed pushed up the cost of borrowing was in 2006, so it can hardly be accused of being trigger happy. Having waited this long, however, it is going to conclude that there is no harm done in waiting a little longer (Elliott, 2014). The interest rates in USA given by Fed are shown in figure 3 (Smith, 2013).



Savers, of course, must be sure to accept such paltry results. After World War II, capital controls and other forms of financial repression gave savers little alternatives. Nowadays this is more likely to come in the guise of prudential regulations that require banks and pension funds to hold more government debt (Reinhart and Reinhart, 2015).

The good news then is that there is a way out of today´s crushing debts other than default. It will take some combination of growth, austerity, and for savers punitively low interest rates. And it can take 40 years (Lund, 2015).

4. Conclusion

What does all this mean? Whatever this data pretends, it's clear that governments are continuing to acquire debt. If these governments have been attempting to stimulate economic growth with government spending, then perhaps we'll see the fruits of this in the near future. However, if they have been incurring debt to meet obligations and if economic growth doesn't return soon, we could see a global shock as countries fail to meet debt obligations. In essence, this could be a ticking time bomb or a slow path to recovery. Only time will tell.

Demographic and economic factors will combine to drive spending in social and medical care. The major entitlements and interest on the debt will devour all tax revenues in less than one generation. Lawmakers should reform entitlement programs - to eliminate waste, duplication, and inappropriate spending, to privatize functions better left to the private sector and to leave areas best managed on the local level to states and localities. Cutting unnecessary government spending will set free the people to create jobs, wealth, and prosperity for families and future generations.

There is a strong need to growth-oriented tax reform. There is a growing consensus that a simpler, flatter tax code - one with fewer, lower marginal rates and only essential deductions - is one of the best ways to promote growth. Heritage favors an even bolder approach with a single rate on spent income. In any case, as long as government must tax, it should do so with the least possible burden on and interference with free-market choices. Higher taxes on small businesses and on investment capital always weaken the economy. Revenue will grow when the economy grows, but higher spending and taxes will reduce growth. The most effective way to spur economic recovery is to increase the incentives that drive growth.

Another possible step to solve these problems is to transfer the entitlements to local governments. Most highways, education and economic development programs should be devolved to state and local governments,

which have the flexibility to tailor local programs to local needs. Government ownership of business also crowds out private companies and encourages protected entities to take unnecessary risks. After hopeful profits, government-owned businesses frequently lose billions of dollars, leaving taxpayers to foot the bill.

Another possible or necessary part of solutions is financial advising and higher level of financial literacy. Free Internet and on-line for the poorer will help build population's education level for jobs and so on. Libraries can be built in smaller towns to give people something to do. It will reduce crime, and other problems.

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ANALYSIS OF HOUSEHOLD BEHAVIOUR TO THE COLLECTION OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT IN ROMANIA

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Abstract:- This paper presents an analysis of household behaviour to the collection of waste electrical and electronic equipment in Romania based on an econometric multifactorial linear regression model. In the model, the amount of WEEE collected in the counties represents the endogenous variable, and factors such as regional gross domestic product, the number of employees, monthly average net nominal earnings, unemployed persons, retirees, existing housing, education and other non-quantifiable factors with regional influence are influence factors or explanatory (exogenous) variables. The period considered for the study is 2010-2012, and statistics are taken and processed at county level.*
The study is necessary to identify the extent to which those factors influence the collection of WEEE from private households. The results of this study may lead to an improvement of the management of waste electrical and electronic equipment in Romania, being useful for policy makers and stakeholders involved in the system.

Key-Words: waste electrical and electronic equipment (WEEE), WEEE collection, econometric modelling of household behaviour, endogenous variable, explanatory (exogenous) variables.

1. Introduction

The international scientific community believes that an optimised waste management may allow obtaining economic, social and environmental benefits (Cucchiella, D'Adamo & Gastaldi, 2014 cited in Cucchiella, D'Adamo, Koh & Rosa, 2015). Understanding consumer behaviour to the recycling of WEEE is important for decision makers in Romania to take the correct measures to meet collection targets imposed by the European Directive (Colesca, Ciocoiu & Popescu, 2014).

According to national and European statistics on waste electrical and electronic equipment (WEEE), Romania faces the problem on not fulfilling the collection target of 4 kg/capita/year from private households.
High levels of WEEE, small quantities of WEEE collected, limited recycling and disposal facilities together with the need to transpose EU legislation into national law have shaped the profile of the WEEE management system in Romania (Colesca, Cocoiu & Popescu, 2014). The main problems of the WEEE management system in Romania are related to the collection process and the unregulated activity of the informal sector (Rudăreanu, Popescu, Ciocoiu & Colesca, 2015). To improve the functionality of the system it is important to understand the behaviour of citizens towards WEEE collection. They are provided with the WEEE collection service free of charge, yet the question remains: why isn't there more waste electrical and electronic equipment collected in Romania?

Within the current WEEE management system in Romania, in which the maximum collection level achieved was 1.903 kg/capita in 2009, after this date the collection rate having a downward trend, we developed an econometric multifactorial linear regression model to analyse the behaviour of households to

WEEE collection. The research was based on European (Eurostat, 2015) and national (INS, 2015; ANPM, 2015) statistics available to Romania in the 41 counties plus Bucharest, in 2010-2012.

2. Econometric modelling of household behaviour to the collection of waste electrical and electronic equipment

Analysing the relationship waste generation-economic development, five key factors stand out that have different contributions to increasing the amount of waste, including the decrease in natural resources:

- size of the business or the economy;
- sectoral structure of the economy;
- existing technological level;
- the demand of legislation on waste management;
- the policy and spending related to resource conservation and prevention of WEEE generation.

In the econometric multifactorial linear regression model, the amount of WEEE collected represent a variable dependent on several factors as independent variables in the model, all data being taken into account by counties.

The following were considered as potential influence factors of the collection of WEEE at county level: population size, size of economic activity (measured by regional GDP and number of employees), income (approximated by monthly average net nominal earning), weight of different categories such are county population (employed, unemployed, retired), existing housing, education level and other non-quantifiable factors with regional influence, considered invariants on the short-term (skills, beliefs, traditions, customs, etc.). In the case of education as an influence factor on the collection of WEEE in the model, we took into account the latest Eurostat records, namely the data from 2001 on the grouping of the population (persons) on various levels of education by Romanian counties, according to ISCED 97. The values for each level of education were calculated for the model as percentages of the total education levels. For each county we calculated the ratio between the population corresponding to each level and the total population that includes all levels of education in the respective county. The total was calculated for each level of education, which is divided by the total of the levels of education, as mentioned above. The weights were included in the model as *LLE* (*lower level of education*) and HLE (*higher level of education*) variables, considered "*fixed individual effects*" and calculated according to the methodology presented in the following.

Following the retrieval of data, we built a panel type model as follows:

$$weee_{it} = f(gdp_{it}, population_{it}, housing_{it}, employees_{it}, csnmnl_{it}, unemployed_{it},$$

$$retirees_{it}, education_{it}, efreg_{i}, \varepsilon_{it}), \quad (1)$$

where

$weee_{it}$ = the amount of waste electrical and electronic equipment (tons) collected in the county *i*, year *t* (Source: data courtesy of Mrs. Brînduşa Petroaica, Directorate of Waste and Hazardous Chemical Substances within the National Environmental Protection Agency, 05/13/2015).

gdp_{it} = gross domestic product (mil. lei), in the county *i*, year *t*, SEC 2010 methodology, calculated according to NACE Rev. 2 (Source: INS, TEMPO online, date of accessing June 20, 2015, table CON103I_20_6_2015 - SEC 2010, calculated according to NACE Rev.2, mil. Lei).

$population_{it}$ = population (number of persons) according to residence on January 1, in the county *i*, year *t (*Source: INS, TEMPO online, date of accessing June 20, 2015, table POP107A_20_6_2015).

$housing_{it}$ = the number of existing housing at the end of the year in the county *i*, year *t (*Source: INS, TEMPO online, date of accessing, June 20, 2015, table LOC101A_20_6_2015).

$employees_{it}$ = number of employees at the end of the year in the county *i*, year *t (*Source: INS, TEMPO online, date of accessing June 15, 2015, table FOM105A_15_6_2015).

$csnmnl_{it}$ = monthly average net nominal earnings (lei) in the county *i*, year *t (*Source: INS, TEMPO online, date of accessing June 15, 2015, table FOM106E_15_6_2015).

$unemployed_{it}$ = number of registered unemployed persons in the county *i*, year *t (*Source: INS, TEMPO online, date of accessing June 15, 2015, table SOM101B_15_6_2015).

$retirees_{it}$ = average number of retirees in the county *i*, year *t (*Source: INS, TEMPO online, date of accessing June 15, 2015, table PNS101D_15_6_2015).

$education_{it}$ = level of education (weight in specific population) in the county *i*, year *t* (Source: Eurostat, "Population by sex, age group, educational attainment level, occupation (ISCO-88) and NUTS 3 regions", date of accessing June 20, 2015, table "cens_01reisco", http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do).

efregi = other non-quantifiable factors with regional influence, considered invariants on the short-term (skills, beliefs, traditions, customs …), specific to the county i;

εit = idiosyncratic error.

Because the behaviour related to the collection of WEEE is influenced by local factors, related to the specificity of the area, and, in general, cannot be quantified for inclusion in econometric models (latent factors), we opted for a panel-type model in differences (Jula, 2014). Specifically, we write the regression equation at time *t* and at time *t-1*:

$$weee_{it} = a_0 + a_1 \cdot gdp_{it} + a_2 \cdot population_{it} + a_3 \cdot housing_{it} + a_4 \cdot employees_{it} + a_5 \cdot csnmnl_{it} + a_6 \cdot unemployed_{it} + a_7 \cdot retirees_{it} + a_8 \cdot education_{it} + a_{9,i} \cdot efreg_i + \varepsilon_{it} \quad (2)$$

$$weee_{it-1} = a_0 + a_1 \cdot gdp_{it-1} + a_2 \cdot population_{it-1} + a_3 \cdot housing_{it-1} + a_4 \cdot employees_{it-1} + a_5 \cdot csnmnl_{it-1} + a_6 \cdot unemployed_{it-1} + a_7 \cdot retirees_{it-1} + a_8 \cdot education_{it-1} + a_{9,i} \cdot efreg_i + \varepsilon_{it-1} \quad (3)$$

The following difference was calculated:

$$d(weee_{it}) = weee_{it} - weee_{it-1}, \quad (4)$$

$$d(weee_{it}) = a_1 \cdot d(gdp_{it}) + a_2 \cdot d(population_{it}) + a_3 \cdot d(housing_{it}) + a_4 \cdot (employees_{it}) + a_5 \cdot d(csnmnl_{it}) + a_6 \cdot d(unemployed_{it}) + a_7 \cdot d(retirees_{it}) + a_8 \cdot d(education_{it}) + d(\varepsilon_{it}) \quad (5)$$

because a_0 is a calibration factor common to both equations and the variable $efreg_i$ is invariable in time. By building a model in differences, we obtain consistent estimators, because the specification does not require the inclusion of local influential variables.

In terms of ensuring the data, a problem occurs in assessing the level of education, because such data are not routinely reported at county level, in national statistics (National Institute of Statistics), or in European statistics (Eurostat). Therefore, we opted for the following solution: we took the last records from Eurostat statistics regarding on different levels of education of population, and for each level we calculated values as percentages of the total population comprising all levels of education, and we have included them as constant values regionally. These data are grouped into the following levels in the model (Table 1):

Table 1. Levels of education

Indicator	Symbol in the model

Total	Total
No education	No education
Preschool and primary education (levels 0 and 1)	Levels 0 & 1
Lower secondary education (level 2)	Level 2
Upper secondary education (level 3)	Level 3
Post-secondary non-tertiary education (level 4)	Level 4
First and second stage of tertiary education (levels 5 and 6)	Levels 5 & 6
Unknown education	Unknown

Source: data processing according to Eurostat, "Population by sex, age group, educational attainment level, occupation (ISCO-88) and NUTS 3 regions", table *cens_01reisco*, http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

Note 1. Recent statistics use a classification with 8 levels.

Note 2. In Romania, lower secondary education means middle school. Upper secondary education includes secondary, vocational and apprenticeship schools. Post-secondary non-tertiary education includes post-secondary and foremen vocational education. The first and second stage of tertiary education are represented by higher and postgraduate education.

The variables were calculated as a share of total population. Based on these data, two variables were calculated:

- *The lower level of education (SLLE)*, including levels 0, 1 and 2: "No education" + "Preschool and primary education (levels 0 and 1)" + "Lower secondary education (level 2)"
- *The higher level of education (HLE)*, including levels 3, 4, 5 and 6: "Upper secondary education (level 3)" + "Post-secondary non-tertiary education (level 4)" + "First and second stage of tertiary education (levels 5 and 6)"

LLE = No education + Levels 0&1 + Level 2

HLE = Level 3 + Level 4 + Levels 5&6

The initially estimated model is:

$$d(weee_{it}) = a_1 \cdot d(gdp_{it}) + a_2 \cdot d(population_{it}) + a_3 \cdot d(housing_{it}) + a_4 \cdot (employees_{it}) + a_5 \cdot d(csnmnl_{it}) + a_6 \cdot d(unemployed_{it}) + a_7 \cdot d(retirees_{it}) + a_8 \cdot LLE_i + a_9 \cdot HLE_i + d(\varepsilon_{it}) \quad (6)$$

In the terminology of panel-type models, the LLE_i and HLE_i variables are *individual fixed effects*.

In this model, the coefficient a_6, which estimates the link between changes in the number of unemployed persons, $d(unemployed_{it})$ and the evolution of waste electrical and electronic equipment collection, $d(weee_{it})$ is not significant econometrically (the risk associated with type I error is 0.7525, a lot higher than the standard threshold of 0.05). Therefore, we removed that variable from the model and retained the following specification:

$$d(weee_{it}) = a_1 \cdot d(gdp_{it}) + a_2 \cdot d(population_{it}) + a_3 \cdot d(housing_{it}) + a_4 \cdot (employees_{it}) +$$

$$+ a_5 \cdot d(csnmnl_{it}) + a_7 \cdot d(retirees_{it}) + a_8 \cdot LLE_i + a_9 \cdot HLE_i + d(\varepsilon_{it}) \quad (7)$$

3. Obtained results

Previous model estimation results are shown in Table 2 (Dependent variable: $d(weee_{it})$; Period: 2010-2012; Number of included units: 42; Total notes: 84):

Table 2. Model estimation results

Explanatory variable	Value of the estimator	Standard error	t-Statistic	Probab.
$d(gdp_{it})$	0.042861	0.001881	22.78348	0.0000
$d(population_{it})$	0.023684	0.001762	13.43777	0.0000
$d(housing_{it})$	0.002145	0.000696	3.079458	0.0029
$d(employees_{it})$	0.006251	0.000718	8.703710	0.0000
$d(retirees_{it})$	-0.055987	0.003262	-17.16167	0.0000
$d(csnmnl_{it})$	0.854358	0.058563	14.58861	0.0000
LLE_i	1.422585	0.077061	18.46041	0.0000
HLE_i	-2.098748	0.341540	-6.144958	0.0000
Weighted statistics				
R^2	0.351910	Dependant var. average		39.67781
Adjusted R^2	0.292218	Standard deviation of dep. var.		521.2020
Standard regression error	430.8478	Sum of error squares		14107870
Durbin-Watson Statistics	1.845388			
Not-weighted statistics				
R^2	0.087755	Dependant var. Average		-37.66500
Sum of error squares	16615946	Durbin-Watson Statistics		1.916473

Source: authors processing in EViews-9.

The estimators are significant econometrically. The risk that the parameters that shape the relationship between the endogenous variable, d(weee), and the explanatory variables are not different from zero is below the standard threshold of 1%. As shown in the "probab." column, the risk that the relationship between d(weee) and d(housing) is zero is 0.29%, and, for other relationships, the risk is insignificant.

Obviously, there are other factors influencing the collection of waste electrical and electronic equipment, for example, the development of a regional network of collection units, compensation attractiveness, visibility and effectiveness of campaigns that support those activities and others. Therefore, the

factors included in the model explain only 35% of the variation d(weee). However, the model is significant econometrically and, as shown, estimators are significant at less than 1% risk. An analysis of stability of coefficients is shown below:

Table 3. Analysis of the stability of the coefficients

		Interval in which the coefficient is found, with the probability:					
Variable	Coefficient	90%		95%		99%	
		min.val.	max.val.	min.val.	max.val.	min.val.	max.val.
d(gdp)	0.042861	0.0397	0.0460	0.0391	0.0466	0.0379	0.0478
d(population)	0.023684	0.0207	0.0266	0.0202	0.0272	0.0190	0.0283
d(housing)	0.002145	0.0010	0.0033	0.0008	0.0035	0.0003	0.0040
d(employees)	0.006251	0.0051	0.0074	0.0048	0.0077	0.0044	0.0081
d(retirees)	-0.055987	-0.0614	-0.0506	-0.0625	-0.0495	-0.0646	-0.0474
d(csnmnl)	0.854358	0.7568	0.9519	0.7377	0.9710	0.6996	1.0091
LLE	1.422585	1.2943	1.5509	1.2691	1.5761	1.2190	1.6262
HLE	-2.098748	-2.6675	-1.5300	-2.7790	-1.4185	-3.0011	-1.1964

Source: authors processing, the table is obtained in EViews using the program sequence: View/Coefficient Diagnostics/Coefficient Confidence Intervals.

For reasonable confidence intervals (90%, 95% and 99%), the coefficients of the model retain their constant sign, which demonstrates the stability (robustness) of the estimate. Also, the minimum value of the sum of squares of the errors in the model (the gradient of the objective function is practically zero) is reached:

Table 4. The gradient of the objective function for the estimated parameters

Variable	Sum	Average
d(gdp)	8.67E-08	1.03E-09
d(population)	-3.80E-08	-4.52E-10
d(housing)	-1.49E-08	-1.77E-10
d(employees)	2.98E-08	3.55E-10
d(retirees)	3.05E-08	3.63E-10
d(csnmnl)	2.62E-10	3.12E-12
LLE	1.11E-09	1.32E-11
HLE	2.12E-09	2.53E-11

Source: authors processing, the table is obtained in EViews using the program sequence: View/Gradients and Derivatives/Gradient Summary.

Note. The gradient measures the change in the objective function generated by the change by one unit of each variable. If the gradient values are practically zero, then their change cannot improve the objective function, which means that the objective function reached the optimal value. In the regression model, estimated by the least squares method, the objective function is calculated as the sum of the squares of the differences between the values of the endogenous variable (WEEE) and the model estimated values. The optimal value of the objective function implies that the sum should be minimal.

The estimated model is:

$$\begin{aligned} d(weee_{it}) &= 0.042861 \cdot d(gdp_{it}) + 0.023684 \cdot d(population_{it}) + 0.002145 \cdot d(housing_{it}) + \\ &+ 0.006251 \cdot (employees_{it}) + 0.854358 \cdot d(csnmnl_{it}) - 0.055987 \cdot d(retirees_{it}) + \\ &+ 1.422585 \cdot LLE_i - 2.098748 \cdot HLE_i + d(\varepsilon_{it}) \end{aligned} \quad (8)$$

4. Conclusion

The size of the economic activity (approximated by GDP and number of employees) is positively associated with the collection of waste, as well as with income, population or the number of housings growth, which means that for an increase in the variables GDP, number of employees, salary, population, number of housings, the amount of WEEE collected also increases. The increase of the number of retirees and of the proportion of people with higher or average education is associated negatively with the collection of WEEE, i.e., if the number of retirees and of the proportion of population with higher or average education increases, the amount of WEEE collected decreases, and causes can be different: the relatively low income of retirees can generate a behaviour of preservation and storage for a long period of those objects and appliances, and the higher income of the educated population enables the purchase of more efficient appliances, with a longer life. Or, compared to the recorded incomes, the compensation for handing over old appliances is not appealing.

As a result of applying the model, we identified that independent variables such as population size, economic activity level (regional GDP and number of employees), income (monthly average net nominal earnings), various social groups such as county population (employed, unemployed , retired), existing housing, level of education and other non-quantifiable factors with regional influence considered invariants on the short-term (skills, beliefs, traditions, customs, etc.) affect the collection of WEEE only by 35%. This means that there are other factors influencing the collection of waste electrical and electronic equipment, such as: the development of a regional network of collection units, compensation attractiveness, visibility and effectiveness of campaigns to support those activities, etc.

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IS QUANTITATIVE EASING AN APPROPRIATE WAY FOR THE SUCCESS OF MONETARY POLICY IN A POST-CRISIS PERIOD?

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Abstract: - Quantitative easing is an unorthodox monetary policy focused on buying large quantities of bonds, mainly government bonds, by central bank in order to increase the reserves of commercial banks and thus to support private bank lending. It first started in Japan 14 year ago and this country experienced 3 rounds of QE with limited success. ,After that it spread in USA and UK with a certain degree of success and finally it was adopted by ECB in March 2015. Although huge amounts of money were injected in the banks it is difficult to assess to what extent liquidity trap was overcome and economic recovery after the recent crisis was helped. The opinions of different financial analysts and technocrats are divided and their arguments are not based on serious analyses using reliable statistical data and clear scientific evidence.

Key Words: monetary policy, financial crisis, interest rate, bond, financial asset, money supply, credit

JEL Classification: E 31, E 41, E 43, G 12, G21, O23.

1. Introduction

Quantitative easing is an instrument of monetary policy used for stimulating the economy in a period of recovery or stagnation after a financial crisis. This instrument is used by the central banks not only for buying financial (toxic) assets from commercial banks and other financial institutions but also for increasing money supply. Due to liquidity trap, cutting or reducing short term interest rates close to zero is not able to stimulate the economy, hence monetary authorities usually buy assets (bonds and other assets) of longer maturity from banks increasing the availability of their funding. Quantitative easing is meant to prevent the deflation process but increasing the money supply may lead to higher inflation in the longer term, coming into collision with the objective of monetary policy of keeping inflation in check. Usually central banks use overnight interest-rates mechanism for controlling inflation and for stimulating economic growth. By cutting interest rate they encourage credit activity, preventing the economy from falling into recession and by raising interest rate they discourage a too large credit expansion and spending and try to prevent inflation rising. It was obvious that after the financial crisis central banks could no longer reduce the interest rates, under zero level. The only alternative or last resort measure was quantitative easing and they were forced to buy large quantities of bonds to support private bank lending. Quantitative easing involves a strict control of currency used in a country but in the case of the Euro Area central banks have no control which was lost in favor of European Central Bank.

QE is not about money creation because it is described as reserve creation as a central bank buys securities and pays for them with bank reserves (liabilities of the central bank and assets of commercial banks), thereby increasing the central bank's balance sheet and the reserves of its member banks. But there is an indirect linkage between QE and money supply as commercial banks may use or not these new reserves to create money. When they use them, the reserves are an active constraint on lending but they may be an inactive constraint when banks are not willing to lend or borrowers do not wish to borrow. QE does not increase the money supply and do not cause inflation when banks are looking for raising their capital and borrowers are paying their debts.

Quantitative easing started in Japan in March 2001, followed by USA in November 2008, United Kingdom in March 2009, Japan again in October 2010 and April 2013 and finally EU through ECB in March 2015.

2. Quantitative easing in Japan

For the first time QE started in Japan in 2001, a country affected by deflation and an economic stagnation after the banking crisis of 1997–1998 triggered not only by financial crises from Eastern and South-Eastern Asia but mainly by the asset price (real estate) bubble which led to non-performing loans and damaged balance sheets, crisis that was largely resolved by the early 2000s. Japan made strong efforts to restart economic growth and to get prices rising again, beginning with the year 2001 and lasting five years (**Ashworth**, 2015), but this monetary programme failed to revive the world's third largest economy of its long stagnation and deflation, and the failure of this non-orthodox monetary policy was remarked and repeatedly cited by QE's critics. So Japan is the birthplace of modern-day QE and has the longest experience with QE. In March 2001 Bank of Japan began purchasing Japanese government bonds and the process lasted until March 2006 when the Japanese economy showed the first signs of exiting deflation.

The second round of QE in Japan started after the global financial crisis hit its economy in 2008, and deflation and recession were again menaced this country. The Japanese central bank had to introduce comprehensive monetary easing in October 2010 in order to fight this old nightmare, stagnation associated with deflation.

The third round of QE and the most recent QE programme of the Bank of Japan began in April 2013**,** when central bank boss Haruhiko Kuroda promised to unleash a massive QE programme worth $1.4 trillion as a part of a set of policies known as Abenomics (formulated by Japan's prime minister Shinzo Abe). Under the QE plan, the Bank of Japan (BoJ) vowed to buy $70 billion of government bonds each month, using electronically created money. At that time, the US Federal Reserve was spending only a little more per month of $85 billion, compared with $70 billion by the Bank of Japan, but the size of US economy was almost three times that of Japan's. But with inflation at very low levels and consumer spending languishing, the Bank of Japan went even further and in the same week that the Fed was stopping QE, Japanese policymakers revealed plans to move in the other direction and to re-enforce their already massive QE programme. Japan's central bank said it would raise the amount pushed into the system each year to $675 billion from $500-590 billion a year previously, mainly through the purchase of government bonds. This was a surprising move, explained by central bank boss Kuroda through policymakers wish to avoid a return to deflation doing almost everything that can be done to this purpose. The question is how much QE helps ward off stagnation and deflation and the critics of the policy look to Japan's long economic record and relatively poor results linked to its vast QE scheme**.**

3. Quantitative Easing in United Kingdom

The Bank of England argued for QE and started it to support economic growth and the jobs market, but it also accepted the conclusion that the scheme did more for wealthier households. The Bank of England launched its QE programme in March 2009 with an initial spending target of £75 billion over three months and at the same time it cut interest rates to a record low of 0.5%. Between March 2009 and January 2010 the Bank of England bought assets worth of £200 billion (about 14% of GDP), to help the revival of UK economy following the credit crunch. In October 2011, in the face of a potential danger of a double-dip recession and a certain Euro zone crisis, central bank policymakers voted to resume QE and pump another £75 billion into the financial system, increasing the QE budget to £275 billion and later on Bank of England raised the total amount to £375 billion (**Allen,** 2015).

After six years from its start, the debates concentrate not on the opportunity of QE but on its role, if this was the most adequate way to stimulate Britain's economy and extract it out of the credit crunch. One of the allegations facing Bank of England was that QE has exacerbated social inequality, partly by helping banks in handing wealthy people big amounts of money while doing little to support small firms and households. Even Bank of England recognized that wealthy families had been the biggest beneficiaries of QE due to the rise in value of shares and bonds but also argued that almost everyone had benefited from the boost to the overall economy and therefore also to jobs. Business groups or corporations also complained that by focusing on buying government bonds rather than corporate bonds, following Japan's example, the Bank of England did little for the real economy. QE did not tackle the problem of poor access to loans for small and medium sized companies struggling to stay on market and keep on workers. But those supporting QE scheme argued that the economy would probably not have recovered and asset prices would have been lower without such an

unconventional loosening of monetary policy. Martin Weale, a member of the Bank's Monetary Policy Committee said the QE programme contributed to around 3% to GDP or £50 billion since it was first introduced. He also suggested QE had a significant impact on inflation than first thought and that it had a role to play in dampening stock market volatility by reducing uncertainty. After the implementation of QE programme the UK economy has enrolled on a recovery track but is has shown some signs of slowing in the late 2014 although it was the fastest growing of the G7 rich nations in 2014 with a GDP growing rate of 2.6%. Inflation meanwhile has fallen well below the Bank's 2% government-set target, hitting a record low of 0.5% in December 2014, leaving policymakers worried about the threat of deflation, of falling prices.

4. Quantitative Easing in USA

After the financial crisis erupted in US, the Treasury and the Federal Reserve took some important and urgent measures: control of mortgage giants Fannie Mae and Freddie Mac and injection of $200 billion in them, bailing out of AIG with $ 85 billion, adoption of $ 700 billion bail out plan for banks, cutting the key interest rate to 1%.

The first round of QE in United States began in November 25, 2008 and ended in March 31, 2010 and during that period Fed initiated purchases of $500 billion in mortgage-backed securities; announced purchases of up to $100 billion in debt obligations of mortgage giants Fannie Mae, Freddie Mac, Ginnie Mae and Federal Home Loan Banks; cut the key interest rate to near zero in December 16, 2008; in March 2009 Fed expanded the mortgage buying program and said it would purchase $750 billion more in mortgage-backed securities and announced it would invest another $100 billion in Fannie and Freddie debt and purchase up to $300 billion of longer-term Treasury securities over a period of six months (**Da Costa& Ponder**, 2015). This round of the quantitative easing program, or QE1, concluded in the first quarter of 2010, with a total of $1.25 trillion in purchases of mortgage-backed securities and $175 billion of agency debt purchases. Initially Fed did not set an end date for the program until about six months out, as it slowed the buying pace. The significant result of this round was that the mortgage rates dropped significantly, to as low as 5%, about a year after QE1 started.

The second round of QE deployed between November 3, 2010 and June 30, 2011 when Fed continued to reinvest payments on securities purchased during the QE1 program and in addition began the purchase of $600 billion of longer-term Treasury securities. The Fed expected that QE2 would help promote a stronger pace of economic recovery while keeping mortgage rates low or push the rates lower. Contrary to what was expected, mortgage rates spiked more than half a percentage point in a little more than a month after QE2 started. When the program ended, the 30-year fixed-rate mortgage was about 30 basis points higher than it was when QE2 started.

The third round of QE started in September 2012 and ended in December 18, 2013 and the Fed was planning to buy another $40 billion in mortgage-backed investments each month until the economy improves, besides the tens of billions of dollars in mortgages it already had been buying each month, making U.S. banks flush with cash. Fed intended to continue to sell short-term bonds and use the money to buy long-term bonds and the time period during which it would keep interest rates near zero was extended from the end of 2014 to mid-2015. The aim of QE3 was to hold rates down or reduce them on mortgages and other financial instruments and it was hoped that with new cash injections, banks would lend out the money and give the economy a boost. The result was an initial fall of the 30-year and 15-year fixed-rate mortgages but since then they bounced up and down.

The last phase of QE program in US was between December 18, 2013 and October 29, 2014 and was characterized by a certain dilution, as Fed began to reduce its $85 billion-per-month asset purchases by $10 billion per month at each Fed meeting, cutting them to $35 billion in June 2014. Fed continued to keep the federal funds rate between 0 and 0.25%, and expected to keep it there at least as long as it could reach its goal of maximum employment and inflation rate remained around the committee's 2% goal. The intention of Fed was to maintain a low level for mortgage rates and to spend another ten of billions of dollars a month to keep downward pressure on longer-term interest rates, support mortgage markets and promote economic recovery. Months before tapering began, mortgage rates rose in anticipation and when the announcement finally was made in December 2013, mortgage rates rose for a couple of weeks but later on they have declined. In the brief time since tapering began, the effect on home prices can't be separated from housing supply and demand. In September 2014 Fed injected only $ 15 billion while keeping the federal funds rate near zero and continued to

reinvest principal payments from its holdings and rolling over maturing Treasury securities at auction. While industry experts anticipated that mortgage rates would move higher as a direct result of QE3 ending, mortgage rates increased only in the short term, declined through the first quarter of 2015, but reversed their course by the end of the second quarter of 2015.

We have a lot of different viewpoints about the U.S. Federal Reserve's quantitative easing program, some of them are quite favorable, others are very critical. Among financial field specialists one could see extremely negative opinions, some even announcing potential disasters like the enormous danger for financial sector, hyper-inflation peril, collapse of the dollar, disturbing the stock market, but none has shown to be real. While the Fed used the research departments at its various branches to validate its monetary policy, including QE, all coming with different academic justifications, some far from the truth, other specialists tried to seriously investigate the true results of QE.

One of them is **Shah Gilani** (2015), a recognized expert on the credit and financial crises, who writes for Money Morning and believes that QE has greatly contributed to growing income and wealth gap between the rich and poor in USA, being the greatest financial disruptor of modern times. The policy of cheap money was good only for private equity companies and venture capital firms and for financial intermediaries who reaped big fees from arranging loans, orchestrating mergers and acquisitions, and taking companies both public and private. Owners of financial assets and financial intermediaries have enjoyed a windfall at the expense of the middle class and the poor. The Fed openly stated the purpose of QE was to create a "wealth effect" by lifting financial asset prices so people would feel wealthy and start consuming again. But most of the middle class and poor people do not have many assets, they are savers and retirees and their interest income on the hard-earned savings and on the fixed-income investments are close to zero. The wealth they could be accumulating has been redistributed to everyone who has the means to borrow cheaply to acquire appreciating financial assets due to the implementation of QE. As a result of the credit crisis and Great Recession, the household sector from US, meaning the middle class, lost $11 trillion in wealth and 10 million jobs. The country lost an estimated $21 trillion worth of productivity. The Great Recession's middle-class losers haven't bounced back, but QE has made the rich even richer.

Bob McTeer (2015), a former Dallas Fed president, thinks that the Fed's QE programs didn't work as expected because it took huge bond purchases to achieve modest to moderate results. When there is a Keynesian liquidity trap and short-term interest rates reach effective zero, more money cannot reduce interest rates further, and significant bond purchases may stimulate the economy by increasing the "quantity" of money and credit. Asset purchases by the central bank would increase bank reserves and the money supply initially by the same amount and the excess reserves created in the banking system would result in a further multiple expansions in the retail money supply. Banks may use their new reserves to create new money by lending their newly created excess reserves. While the QE programs were not very successful in speeding up M2 growth, they did put downward pressure on longer-term interest rates and the Fed and others started touting QE as an interest rate tool. It is obvious that the increases provoked by QE rounds in the money supply haven't had the results (inflation and a weak dollar) that it was believed they would have. The low rate of M2 expansion after QE seems quite strange and it has dropped even lower since QE3 expired in October 2014.

Stephen D. Williamson (2015), vice president of the St. Louis Fed, believes there is no evidence QE boosted economy and finds fault with three key policy tenets: a) the zero interest rates in place since 2008 that were designed to spark good inflation actually have resulted in just the opposite; b) the Fed has not used proper means to communicate its intentions and thus succeeded in confusing investors; c) quantitative easing (or the monthly debt purchases-exceeding $4.5 trillion) that led to a strong pressure on central bank's balance sheet has at best a weak contribution to the actual economic improvements. Ben Bernanke, Fed's President, was determined to inject cash into banks in order to avoid great monetary errors made during Great Depression from 1929-1933. For Stephen D. Williamson there is no work that establishes a link from QE to the ultimate goals of the Fed—inflation and real economic activity-because the results targeting spurring inflation, reducing unemployment or generating sustained economic activity are "at best mixed." Casual evidence suggests that QE has been ineffective in increasing inflation and QE seems to have worked in the stock market, where the S&P 500 has soared by 215%.

Joseph Stiglitz (2015) finds that aggressive monetary policy (so called quantitative easing) focused more on restoring stock prices than on relaunching the SME's lending and therefore it was more effective to re-establish the wealth of those rich than to bring benefits to the average American and create jobs for him. In the first three

years of economic relaunching around 95% of income growth went to the top 1% group and six years after the crisis burst average wealth was 40% below the pre-crisis levels.

Chris Brightman (2015), chief investment officer in Research Affiliates, believes that it is not easy to give an answer to the question whether QE has been a success or a not. Paul Samuelson(2014) considers that the answer depends on the central bankers' intentions—their objective for adopting a policy of QE in the first place. Under the circumstances created by the global financial crisis, the first round of QE seems to have been effective in averting a financial collapse in USA. Through QE Fed provided liquidity to the financial system by buying large quantities of securities from the market rather than waiting for banks to strongly involve on bond market. Beyond providing the liquidity necessary to avoid financial panics and bank runs, QE may increase economic output and employment but the evidence sustaining this statement is quite mixed. There is a belief that if an economy is operating below its potential growth rate, lowering interest rates to inflate capital asset prices indirectly stimulates the economy through a wealth effect: people owning stocks, bonds, and houses will spend more if they feel wealthier. Other opinions worry that intentionally inflating capital asset prices distorts markets, creates bubbles, and leads to malinvestment. Monetizing the national debt and facilitating the increase of the public deficit, by purchasing newly issued government bonds, is similar to printing money, so one may say that QE plus substantial fiscal stimulus is money printing and may cause inflation. As the QE increased monetary reserves was not inflationary but it may become inflationary if it achieves its intended purpose of stimulating more economic activity by fueling bank lending and money creation. Indeed, many specialists are concerned that, if and when loan demand accelerates, the Fed will need to drain the excess reserves created by QE from the system in order to avoid rapid money creation and inflation.

5. Quantitative Easing in Euro zone

The European quantitative easing programme, the Public Sector Purchase Programme (PSPP), started on March 9, 2015 and was forecasted to last at least until September 2016. It was supposed to consist of purchases of sovereign bonds and securities from European institutions and national agencies. The ECB, and national central banks in the Euro zone, are going to create new money or increase the money supply by buying bonds at a monthly rate of € 60 billion and it was assumed that purchases would continue until the end of September 2016(total is € 1080 billion) but they can run longer if necessary to restore inflation to the ECB's target of just below 2%.The central banks from Member States are buying government bonds only in the secondary market, they can't buy directly from the issuer due to EU legislation. As interest rates are at very low levels, effectively at zero, the ECB hoped that QE would push down bond yields (which moved in the opposite direction to prices) and thus to lower borrowing costs across Europe, not just for governments but also for households and businesses.

The Governing Council of European Central Bank imposed limits to ensure that the Eurosystem will not breach the prohibition on monetary financing but these limits will apply only to the size and duration of the programme if it continues after September 2016. There is the possibility for national central banks to buy securities from national agencies, but their number is limited and Eurosystem should find more eligible agencies, based on some criteria. Another problem is related to European institutions especially concerning their number and outstanding debt securities and also their high ratings. The PSPP profits that will be repatriated to national treasuries will be small due to current very low yields. Maybe profits will result from the major increase in reserves following the implementation of QE, to which may be added the negative deposit rates on excess reserves at the ECB. This year ECB started buying bonds issued by governments in the Euro zone.

In anticipation of the ECB's arrival in the market government bonds performed quite well in Europe, e.g. benchmark 10-year government bonds in Germany yielded just 0.3% -- nearly 2% less than the equivalent U.S. Treasury bonds and yields on five-year German bonds have entered on negative side, which eased the pressure on governments budget across Europe. The prospect of strongly increasing monetary supply had two positive effects, on one side euro exchange rate decreased 10% against the dollar in 2015 to trade at below of $1.08 in November, and may reach parity with the dollar late this year, which makes European exports cheaper on world markets and drives up the cost of imports, giving a boost to Euro zone prices, after a deflation period. On the other side cheap money may also push investors into surging stock markets in search of better returns.

QE may not help Greece as bond purchases are not supposed to apply to the countries receiving bailout funds from the EU. Greece's difficult financial situation aggravated during the spring despite the extension of bailout program. Due to the fact that radical left wing coalition-Syriza- won the elections in 2015, this brought a political blockage in the negotiations with Troika and to the prospect of a true Grexit.
On August14, an agreement was finally concluded to support Greece through the European Stability Mechanism (ESM), it is the third agreement of international financing to Greece in five years and amounts to €86 billion, the Greek government committed itself to undertake a number of structural reforms, in the fields of pensions, taxation, bankruptcy code, independence of national statistics, and the automatic cutting of public spending in the case of missing budget deficit targets. However, Greece must transfer in a fund located in Luxembourg state assets worth of €50 billion. Euro zone leaders rejected the call for a new cutting of Greece's public debt (already cut twice with about € 140 billion), the Greek government had to basically support all the reform measures proposed by the Troika and the Euro group, although the Greek population voted against further austerity in the referendum organized by Syriza on July 5. The ECB that stopped for a while the funding of Greek banks could accept junk-rated Greek bonds, but only if it is satisfied with Greece fulfilling the conditions of the new agreement. Any participation by Athens in QE is highly unlikely this year, and next year its participation will depend on how economic situation evolves and how the hard terms of the new agreement are implemented.

There are three possible advantages of QE for Europe. Firstly, it allows governments to refinance their borrowings at much cheaper interest rates and longer maturities, so that governments may use this opportunity to pay down debts rather than embark on new borrowing, public debt burdens will ease appreciably reducing fears about its long-term sustainability. Secondly, quantitative easing has driven up the value of bonds held on bank balance sheets, and banks with high amounts of government bonds may now sell the bonds at a larger profit, boosting their capital ratios, and a back-door recapitalization of the Euro zone banking system should support future growth in bank lending. Thirdly, quantitative easing intends to mitigate the geopolitical risks for eurozone and help economic recovery started in 2014. So far in 2014 and 2015, the Euro zone had to face an escalation in the Ukraine crisis, the deepening of economic crisis in Greece, and the dangers of local military conflicts in the Middle East attracting a massive wave of immigrants to Europe, all being important tests for EU cohesion after the end of cold war.

6. Nouriel Roubini's ten points referring to QE

Nouriel Roubini, professor at NYU's Stern School of Business and Chairman of Roubini Global Economics put some questions about the effectiveness and risks of QE and identified ten potential costs associated with unconventional monetary policies (**Roubini**, 2013). **First,** Roubini correctly noted that the Austrian school response, austerity, to asset and credit bubbles may lead to a depression. *QE policies that postpone the necessary private- and public-sector deleveraging for too long may create an army of zombies: zombie financial institutions, zombie households and firms, and, in the end, zombie governments***.** So, any QE program must end some time. **Second**, too many and repeated rounds of QE are not effective as the channels of transmission to real economic activity, like bond channel, credit channel and stock market channel, are not functional due to low bond yields, banks liquidity trap, limited short term boom (reflation) of stocks. **Third,** the currency weakening or decrease of exchange rate implied by monetary easing (another channel of transmission) is considered ineffective if several major central banks pursue QE at the same time, as under these circumstances QE becomes a zero-sum game, not all currencies can fall and not all trade balances can improve, simultaneously. So Roubini sees a link between QE programs and currency wars.

Fourth, QE applied in developed economies may lead to excessive capital flows to emerging markets and the sterilization of them may keep domestic interest rates high and stimulate these inflows. If sterilization is not made and domestic interest rates are maintained at reduced levels this may lead to inflation and asset and credit bubbles. Any appreciation of currency leads to erosion of external competitiveness, causing large external deficits. Imposing capital controls on capital inflows is quite difficult but macro-prudential controls on credit growth are useful, although they can be ineffective in stopping asset bubbles due to the impact of low interest rates on liquidity conditions. **Fifth**, persistent QE can lead to asset bubbles in the countries where is implemented that may spill over to other countries**.** Such bubbles may occur in equity markets, housing markets, commodity markets, bond markets and credit markets. QE may be justified by weak economic

recovery and growth fundamentals, but keeping interest rates too low for a long time may eventually create asset bubbles as happened in 2000-2006, when the US Federal Reserve cut the federal funds rate to 1% during the short 2001 recession and subsequent weak recovery and then kept rates down, thus fueling credit/housing/subprime bubbles.

Sixth, QE may create moral-hazard problems by weakening governments' will to pursue needed economic reforms and may also delay the fiscal austerity if large deficits are monetized, and, by keeping rates too low, prevent the market from imposing discipline. **Seventh,** exiting QE too slowly and too late, could result in inflation and/or asset/credit bubbles and selling too many long-term assets purchased during QE may lead to a sharp increase in interest rates affecting economic recovery and may cause large financial losses for holders of long-term bonds. If the exit attracts a rise in the interest rate on excess reserves it may cause important losses for central banks' balance sheets. **Eighth,** a long period of negative real interest rates can produce a redistribution of income and wealth from creditors and savers toward debtors and borrowers**. Ninth,** QE and other unconventional monetary policies may have serious consequences like an excessive inflation or slowing down the credit growth, if banks – faced with very low net interest-rate margins – decide that risk relative to reward is insufficient. **Tenth,** there is a risk of a difficult return to conventional monetary policies due to giving up to inflation-targeting regime which involves no anchor for price expectations.

In Roubini opinion monetary policies are becoming more unconventional, not even knowing short-term effects, unintended consequences, and long-term impacts. QE and other unconventional monetary policies have important short-term benefits, but such policies cannot remain in place too long as their side effects could be severe and the longer-term costs very high.

7. Conclusions

It is quite difficult to evaluate the positive and negative effects of QE programs applied in the most developed countries. While for European Union it is too soon to measure these effects, for the other countries the impact of QE on economic growth, lending, inflation and deficits is hard to quantify it on statistical basis. We have some opinions of renowned experts, more or less subjective, more or less objective, and a quite pertinent analysis of a great economist and analyst, Nouriel Roubini. It is quite obvious that QE was an effective monetary tool in USA and UK, less in Japan. QE had a certain contribution to the economic growth and commercial lending recovery, and especially to the boom of capital market, although other important factors may be brought up, like regaining of consumers and investors confidence. Increasing the money supply as a result of QE did not lead to inflation raising and thus to higher interest rates. The danger of deflation still persists in the context of an anemic consumer demand due to huge losses caused to the households by the financial crisis and increased propensity to save. The very low level of deposits interests also have their major contribution to the new boom of capital market, a possible new asset bubble, together with the strong decrease of oil, raw materials and gold prices. In USA QE and growing confidence of investors in the economy have allowed loans to grow across categories, the biggest gainer has been the country's commercial lending sector. Outstanding commercial and industrial loans by U.S. lenders were in April 2015 at a record high of $1.85 trillion. This represents a growth of more than 50% over the last five years – outpacing every other loan category over this period. The table 1 highlights the proportion of loans held by all U.S. commercial banks at three specific periods: in October 2008 (when loan sizes were at their peak before the recession), in February 2010 (when loans were at the lowest level since the recession), and in April 2015 (the period with available data).

Tabel 1. Loans held by all US commercial banks in 2008, 2010 and 2015(in $ billions)*

Field	**Oct.2008**		**Feb.2010**		**Apr.2015**	
	$ bn	**100%**	**$ bn**	**100%**	**$ bn**	**100%**
Residential Mortgages	2,103	28.9	2,099	32.1	2,050	25.0
Commercial & Industrial	1,586	21.8	1,223	18.7	1,856	22.7
Commercial Real Estate	1,721	23.6	1,620	24.8	1,655	20.2
Credit Card	374	5.1	318	4.9	625	7.6
Retail	486	6.7	494	7.6	587	7.2
Other	1,017	14.0	776	11.9	1,414	17.3
Total	**7,287**		**6,530**		**8,187**	

Source: Forbes, Investing, 2015, Q1 2015 U.S. Banking Review: Outstanding Commercial Loan Portfolio, June 17
* statistical data are compiled by the Federal Reserve

During 2011-2014 US capital markets as measured by debt and equity issuances continued their growth trend with $1.23 trillion in 2011, $ 1.63 trillion in 2012, $ 1.72 trillion in 2013 and $1.80 trillion in 2014. The majority of financing activity on capital market took place in the investment-grade and high-yield debt market. Another beneficiary of QE is consumer spending which increased in the United States to $11,268.60 billion in the third quarter of 2015 from $9,740 billion in the first quarter of 2013 and from $ 8,999 billion in the last quarter of 2008. At the same time, economic growth was slowly returning in USA being 1.6% in 2011, 2.3% in 2012, 2.2% in 2013 and 2.4% in 2014, in a low inflation environment with improving macroeconomic fundamentals, including employment and housing.

In **Europe**, in Euro zone in fact, the need to implement QE was imposed by feeble economic growth (1.7% for EU 28 in 2011, -0.5% in 2012, 0.2% in 2013 and 1.4% in 2014) caused not only by the impact of the crisis but also by the effects of austerity policy imposed by Germany and European Commission. Three years ago, on September 6, 2012 the president of ECB Mario Graghi announced the Outright Monetary Transactions (OMT) or bond-buying programme for purchasing Euro zone countries' short-term bonds in the secondary market, to bring down the market interest rates and to save the single currency, euro. The size of the programme was unlimited but any purchases under the OMT were going to be subject to "strict and effective" fiscal conditions, most likely to take the form of austerity measures and structural reforms. This was established in order to avoid the weakness of a previous ECB bond-buying plan, the Securities Markets Programme or SMP, which was both limited in its scope and unconditional.

It should be noted that a contributing factor to the increase of public debt and its share in GDP was the big difference between the interest on government securities and the growing rate of nominal GDP. In Greece case this tumbling effect of public debt exceeded 30% of GDP in 2011 and at the same year it represented 10% of GDP in Spain and 15% of GDP in Italy. As of February 2013 no country had yet applied for help under OMT, but the very fact of its existence had greatly calmed financial markets. Similar to the purpose of OMT the quantitative easing is meant to diminish the cost of financing of public debts.

As concerns **Japan** it is interesting to note that between 1992 and 2012 Japan's economic growth averaged 1% and the country struggled to survive the devastating impact of deflation. Over 20 years, Japan's stock market lost about 80% of its nominal value, as did property values. The nation became deeply indebted, as it tried fiscal stimulus to revive the economy. The yen soared in value against the U.S. dollar. Inflation rate in Japan averaged 3.13% from 1958 until 2015, reaching an all time high of +25.0% in February 1974 and a record low of -2.52% in October 2009, but after the beginning of the third round of QE, inflation rate started to grow from –0.3% in May 2013 to +4.4% in May 2014, decreasing to 2.9% in December 2014, 0.8% in April 2015 and 0.10% in September 2015. On October 31, 2014 the Bank of Japan (BoJ) unexpectedly expanded its programme of quantitative easing, showing a solid determination to end deflation, but the bank's action is also an admission of partial failure of QE. Its bond-buying has succeeded in sparking some inflation, but its goal of achieving price rises of 2% a year by around April 2015 has remained a distant dream. Both central bank and the government underestimated the dampening effect of a hike in the consumption tax in April 2014, which caused the economy to shrink by 1.7% in the second quarter and due to stagnation of consumer and corporate demand, and falling oil prices, inflation was heading in the wrong direction in 2015, and decreased even under 0.5%.

Many economists had questioned Mr. Kuroda's commitment to removing Japan's strong deflationary psychology and suggested that the central bank's formerly conservative mentality might even be returning. Mr. Kuroda's predecessor, Masaaki Shirakawa, pursued monetary easing rather unconvincingly and achieved little as a result of this program. Mr. Kuroda had sought to extend the deadline for exiting deflation but this did little to reassure that Abenomics was on track in spite of stalled growth and low inflation. When he announced the additional easing, Mr. Kuroda admitted that problems had reached a "critical point", as the bank's efforts were losing momentum.

In April 2015 it was OECD that drew attention on Japan to keep an eye on how much its massive bond-buying program is disrupting the bond market, although it was right to tackle perpetual crippling deflation." *QQE (qualitative and quantitative easing) has been very successful at raising inflation expectations to around two percent…and we have to trade off the risk of qualitative and quantitative easing with allowing deflation to*

continue," said Randall Jones, the OECD's Head of Japan & Korea Desk. After two years of a 80 trillion yen ($671 billion) quantitative easing program, the Bank of Japan's 2% inflation target has proven to be only a dream and the country is again flirting with deflation. In February 2015, core consumer prices were flat year-on-year and many economists were forecasting that low oil prices would lead Japan's inflation rate into the negative over the next months which were not happened but the inflation rate reached very low levels. Ageing of population, low birthrate, cultural aversion to immigration and depreciation of labor force, associated with famously high savings rate, had severe repercussions on incomes and consumer demand, and seemed to be the main problems with Japan in the last two decades of economic stagnation. Besides the deflation danger Japan could suffer a possible fiscal crisis, sometime between 2021 and 2023, so the government should increase sales tax to over 15% from its current level of 8%.Printing money for covering deficits and public debt is not an alternative, but any tax increase will affect the consumer demand and also the inflation rate, as it did in the past.

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BREXIT: THE ECONOMIC AND POLITICAL IMPACT OF A POSSIBLE WITHDRAWAL OF GREAT BRITAIN'S FROM THE EUROPEAN UNION

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Abstract: Great Britain's withdrawal from the European Union would not only change the internal political climate, but it could have important political repercussions within the EU and also on its relations with other European Community's countries. Also, it could stimulate the other EU Member States to re-evaluate the terms and conditions of their membership. The same applies if Great Britain fails to renegotiate these terms and conditions while keeping the status of EU member. A priority for the UK is to maintain close trade relations with the EU, even if politically it would opt for withdrawal. In the event of possible withdrawal from the EU, Great Britain could conclude an agreement with the EU following the example of a customs union (after Turkey's model). In this case, it would not be obliged to contribute to the EU budget or accept immigration from the EU member states. Last but not least, from a geopolitical point of view, Great Britain's exit from the EU could be seen externally as a sign of decline, EU losing its financial, economic, political and military powerhouse. From this point of view, the European Union itself have a significant political and economic interest to conclude a mutually beneficial agreement with Great Britain considering that it could terminate its EU membership.

Key-Words: BREXIT, Great Britain, Uk's withdrawal from the European Union, EU Membership.

JEL Classification: F10,F13, F15, G00, G20, J10, J60, K00

1. Introduction: Brexit and the Problem of the Right of Voluntary Withdrawal under the EU Treaties

Until the adoption of the Lisbon Treaty (2009)[1], voluntary withdrawal from the European Union was not explicitly stated neither in the constitutive treaties of the EU nor the accession treaties of the Member States. The lack of regulations on the right to withdraw from the Union, most likely, a deliberate omission to not weaken the Member States' commitment to the political project of EU. Before the adoption of the Lisbon Treaty, given the absence of any express provision regarding the withdrawal from EU, there were two approaches to the problem (Miheș 2012):

[1]The Lisbon Treaty was signed by EU Member States in 2007 and entered into force in 2009. The purpose of this treaty is to make amendments and additions to the two treaties representing the constitutional basis of the European Union: the Treaty of Rome (1958) and the Treaty of Maastricht (1993), also known as the Treaty of the European Union.

1. According to the first approach, there was a unilateral right of withdrawal, even if there were no explicit stipulations in this respect –by the right of any sovereign state to withdraw from concluded international treaties. This approach was not universally accepted, particularly given that the European Court ruled for EU member states, that the accession to the EC brings a permanent limitation to sovereign rights.
2. Therefore, before Lisbon Treaty, the main way of withdrawal from the EU was consensual withdrawal. In very restrictive conditions, it would have been possible also for member states to exit the union under the Vienna Convention (1969), mentioning as the main reason the fundamental change of circumstances about the time of contract.

The Lisbon Treaty established the right of Member States to withdraw voluntarily and unilaterally. Currently, to terminate its membership of the EU, the UK could invoke, from a legal point of view, Article 50 of the Treaty on the European Union (TEU). Thus, according to par. 1, art. 50 of the TEU **"any Member State may, by its constitutional rules, to withdraw from the Union".** Formally, a Member State who intends to withdraw from the EU must make known the withdrawal request to the European Council. Further, the European Union must negotiate and conclude a withdrawal agreement with the state that wants to give up the EU member status. The negotiation of the withdrawal agreement is under **Article 218, par. 3 of the Treaty on the Functioning of the European Union** (TFEU). The agreement is concluded on behalf of the EU by the Council of Ministers which approve the agreement by a qualified majority after it has been voted in the European Parliament.

Article 50 of the TEU stipulates that EU Treaties shall cease to apply to the Member State, which has withdrawn from the EU or, if negotiations failed and did not reach any agreement, two years after the EU Member State sent the notification. The constitutional rules in force in each Member State and have the freedom to determine the withdrawal procedure, must take the decision to withdraw from the EU.

EU Member States option to withdraw from the European Union draws the attention of European politicians and analysts for the first time several years ago, when Greece was unable to pay its foreign debt. From that moment, the legal provisions on the right to withdraw from the EU were analyzed and debated extensively. The second country questioning its EU membership is the UK.

In January 2013, David Cameron, the Prime Minister of Great Britain, has asked for the renegotiation of terms and conditions for Britain's membership of the EU and a referendum is to be held by the end of 2017, given the fact that the Conservative Party won the general elections in May 2015. If British exit from EU will take place, a process of deliberation regarding the desirability of preserving certain laws and regulations imposed by EU will be held at the national level.

2. Agreements and Trade Treaties - the Main Choices for Great Britain in the event of a Withdrawal from the EU

In the case of British exit from EU, the UK main options regarding the conduct of foreign relations with the EU Member States and also with other countries are the following:

- The Norwegian model - following terms and conditions of the Agreement on the European Economic Area (EEA). This agreement was signed in 1992 between the EU Member States and several other member states of the European Free Trade Association (EFTA) and entered into force in 1994;
- The Swiss model (which is EFTA member, without being part of the EEA) – following EFTA terms and conditions and, moreover, signing bilateral treaties with the EU. Switzerland has, so far, 120 bilateral treaties with the EU concluded in two rounds (in 2002 and 2005 respectively);
- The Turkish model – following the terms and conditions of the EU Customs Union (EUCU);
- Bilateral agreements under WTO auspices.

What are all these options involving?

a. As a member of the EEA and EFTA, Great Britain would maintain its access to the EU market under the rights EEA member states have (free movement of goods, services, and capital). At the same time, though, it should recognize the same rights for the EU Member States, including the free movement of people (immigration) and, partially, it should adopt the provisions of the Treaties and EU laws.
b. EEA and the EFTA Member States should contribute to the operational and administrative expenditure of the EU, by Protocol 32 and Article 82 of the EEA Agreement. The contributions of the EEA and the EFTA Member States to the operational costs of EU programs are set out in Article 82.1 of the ASEE and is established annually, based on a proportionality factor determined according to the relative size of the GDP of the EEA and the EFTA States compared to EEA total GDP. Also, these states contribute and support the administrative expenditure of the European Commission (EC). Thus, if Britain would become a member of the EEA and /or EFTA, the contribution to the EU budget would not be canceled, but it is possible to be significantly reduced. According to the latest data and estimates of HM Treasury (2014), in 2014 UK was the 4th largest contributor to the EU budget (10.97%) after Germany (21.26%), France (16.27%) and Italy (12.22%). Britain's net contribution to the EU budget in 2014 was 9.8 billion pounds.
c. EEA and EFTA members have a smaller number of EU regulations to implement internally. Thus, as a member of the European Union, Great Britain must annually implement over 1000 EU regulations while, a member of the EEA, have to implement only 350. These regulations may concern any field depending on the regional impact (infrastructure, energy, climate change and general interest services, for which the local authorities and regions initiate draft laws that are subsequently adopted by EU authorities). EFTA members do not need to implement regulations annually, but by signing the bilateral treaties they should apply, at least partially, the provisions of the Treaties and EU law.
d. In the event of possible withdrawal from the EU, Great Britain could conclude an agreement with the EU following the example of a customs union (as in Turkey); in this case, it would not be obliged to contribute to the EU budget or accept immigration of persons EU member states.

Table 1: Great Britain options in the event of withdrawal from the EU

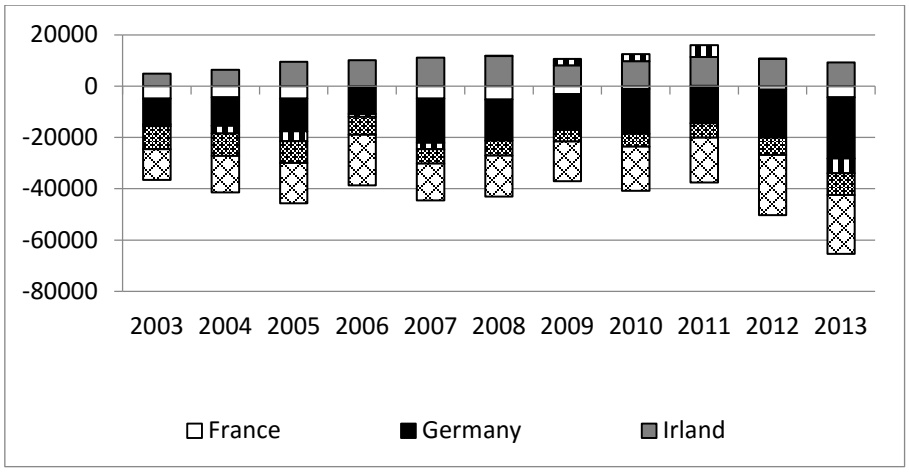
	EU/EEA	**EEA/EFTA (Norwegian model)**	**EFTA/bilateral agreements (Swiss model)**	**EUCU (Turkish model)**	**Bilateral agreements /WTO**
Free movement of goods	Yes	Yes	Yes	Yes	Custom duties
Free movement of services	Yes	Yes	Yes	No	Custom duties
Free movement of capital	Yes	Yes	Yes	No	Yes
Free movement of persons	Yes	Yes	Yes	No	No
Contributions to EU budget	Yes	Yes	Yes	No	No
The application of EU laws	Yes	Yes	Yes	Partial	No

	EU/EEA	EEA/EFTA (Norwegian model)	EFTA/bilateral agreements (Swiss model)	EUCU (Turkish model)	Bilateral agreements /WTO
New regulations per year (the EU legislation)	1000	350	0	0	0
The possibility of independently negotiate trade agreements with the EU	No	Yes	Yes	No	Yes
Control of fisheries resources	EU	Great Britain	Great Britain	Great Britain	Great Britain
Control over agriculture	EU	Great Britain	Great Britain	Great Britain	Great Britain
Responsibility for home affairs	EU	Great Britain	Great Britain	Great Britain	Great Britain
Responsibility in the Justice field	EU	Great Britain	Great Britain	Great Britain	Great Britain
The legal basis for international trade	EU Treaties	EEA	EFTA / Bilateral agreements	EUCU/ Bilateral agreements	Bilateral agreements

Source: Synthesis of authors based on the analysis of literature in the field (Randwyck van, Hugo (2013), Efta or EU, Qs and As, The Brouges Group; Randwyck van, Hugo (2013), Efta or EU, Qs, and As, The Brouges Group)

e. Assuming that Great Britain would decide to leave the EU and would not enter into any trade agreement with the European Union, relying solely on the General Agreement on Customs and Trade (WTO), the EU could decide to introduce customs duties for products imported from Great Britain, as for any third country. Although Great Britain's trade balance with the EU is unfavorable - especially given the trade surplus of Germany, Spain and, more recently, of the Netherlands - however, approximately 50% of British exports go to the EU (Ireland, in particular). At the same time, less than 10% of EU exports go to the United Kingdom (see Chart 1, Table 2).

Chart 1: Great Britain's trade balance with the EU's main trading partners during the period 2003-2013, in million pounds



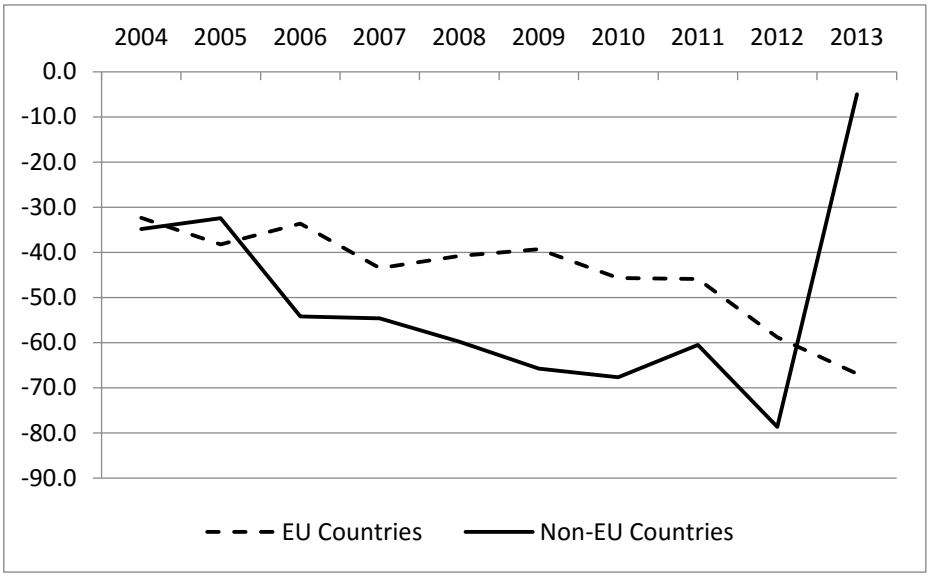
Source: National Bureau of Statistics, UK, 2015

Table 2: Great Britain's exports during 2004-2013 (% of total exports)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Countries outside the EU	41.1	43.4	37.3	42.1	44.4	44.9	47.2	49.8	49.7	56.4
EU Countries	58.9	56.6	62.7	57.9	55.6	55.1	52.8	50.2	50.3	43.6

Source: Eurostat, 2015

Chart 2: The evolution of Great Britain's trade balance during 2004-2013 (in billion pounds)



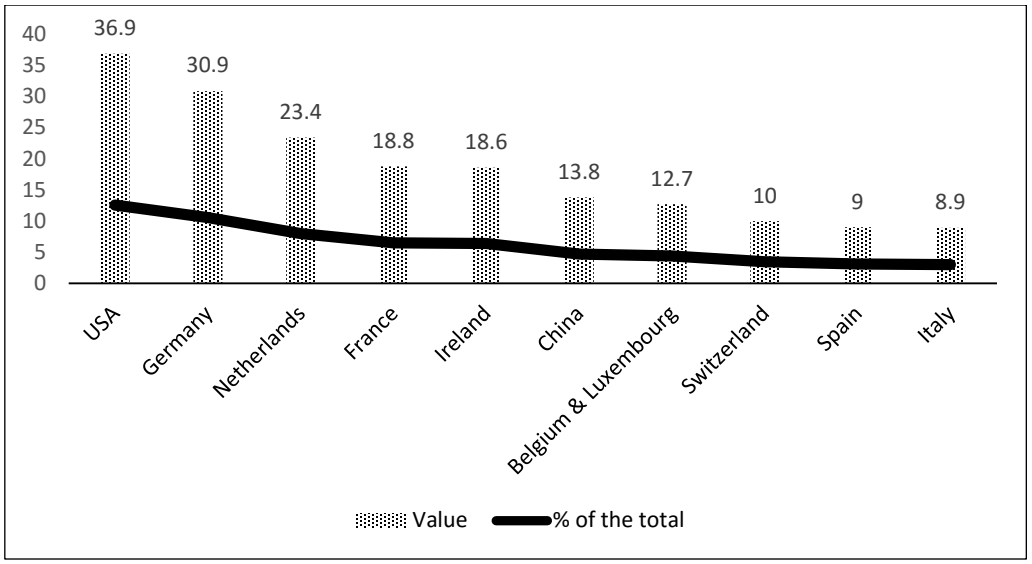
Source: Eurostat, 2015

From the statistical data presented above, it is noticeable that UK has an interest in maintaining close trade relations with the EU, even if politically it would opt for the withdrawal from the EU. In the absence of a preferential trade agreement with the EU, UK could have difficulties in maintaining the current level of trade and the pressure to conclude bilateral trade agreements as quickly as possible with countries outside the EU

would increase considerably. Finally, non-tariff barriers are rising globally, and the practice of the rounds of negotiations in the WTO shows that commercial disputes can last for years.

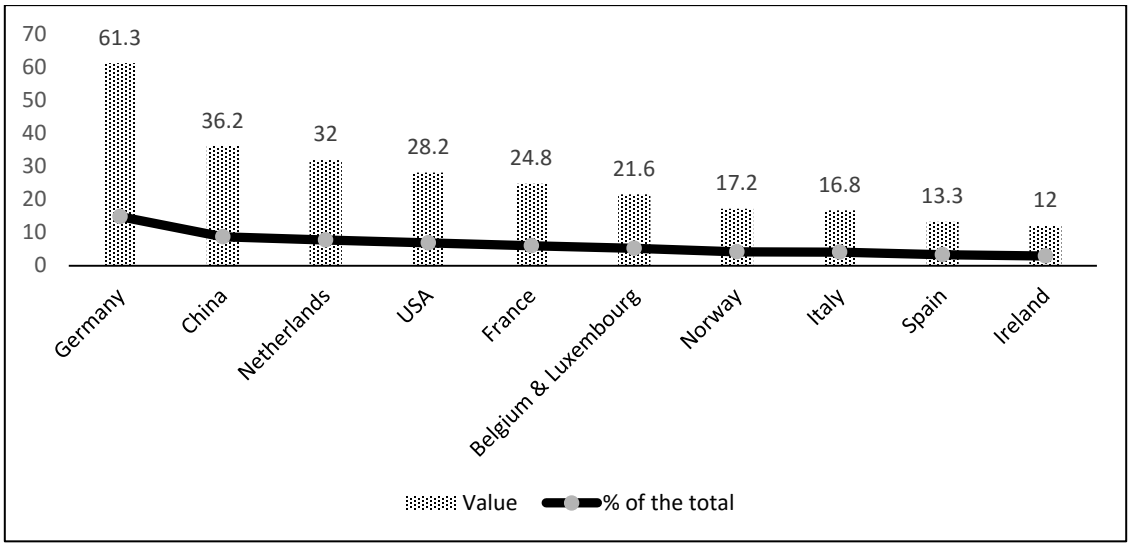
From this perspective, the negotiation of bilateral trade agreements with countries from outside the EU is not easy or without risk. However, since 2012, Great Britain's trade deficit with non-EU countries narrowed considerably, indicating UK orientation towards non-EU markets, increasing exports to these markets. In last three years, a trend reversal regarding the commercial trade of Great Britain with the EU took place (Table 2 and Chart 2). More precisely, while in 2004, 41% of Great Britain exports went to countries outside EU and 59% in the EU Member States after ten years, gradually, the ratio has almost reversed: in 2013 56.4% of great Britain exports went to non-EU countries and 43.6% to the EUIn 2014, Britain preserved tight trade relations with the US, which occupies a leading position among UK' trading partners (12.6% of total exports) - see Charts no. 3 and no. 4.

Chart 3: Great Britain's main trading partners, 2014 (export destinations)



Source: National Bureau of Statistics, UK, 2015

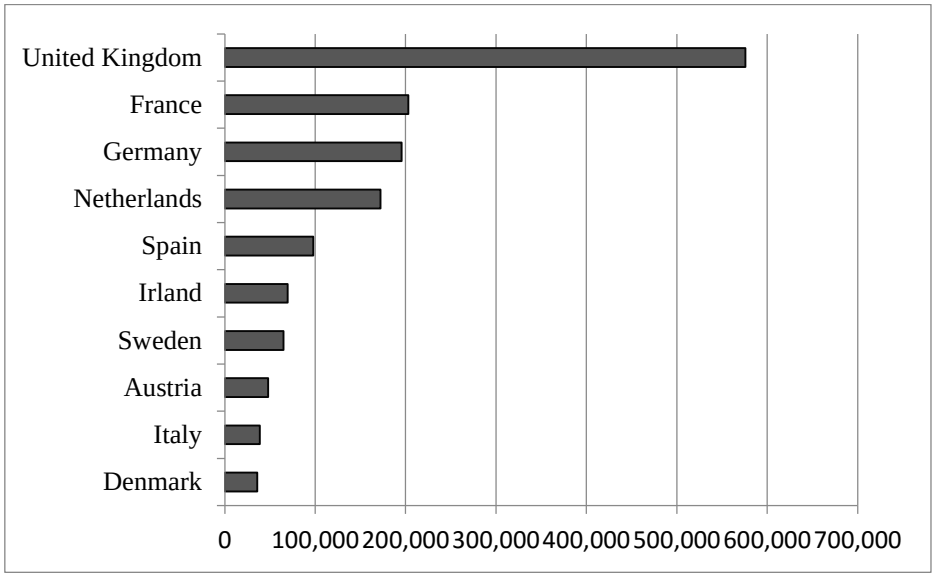
Chart 4: Great Britain's main trading partners, 2014 (imports)



Source: National Bureau of Statistics, UK, 2015

Regarding the foreign direct investments (FDI), United Kingdom remains the largest recipient of FDI in the EU. Most of the foreign direct investments received by EU are coming from the USA, and the United Kingdom is the top destination. For example, in 2013, over 30% of the foreign direct investment flows received by the United Kingdom came from the USA (13.451 million out of a total of 43.359 million pounds). Being a member of the EU plays an important role, given that most of the companies investing in the European Union are seeking an EU member state where they can distribute their products without trade barriers. The market size is also an important factor in attracting FDI, therefore, and EU membership is an advantage, from this point of view, for the UK. The majority of foreign direct investment received by the UK (60% of the total) are in services, and half of these are in the banking sector.

Chart 5: The main EU member states recipients of FDI outside the EU from 2012 (stock - billion pound)



Source: Eurostat, 2015

3. Brexit and the possible influence on the UK banking system

London's financial sector includes over 250 banks (30.5% being EU banking institutions), all of them enjoying free entry to the European single market, given the fact that Great Britain is a member of the European Union. The UK potential exit from the European Union could be done according to the art. 50, therefore it would take place within two years from the submission of the formal application for withdrawal. This period would be marked by a decreased influence of Great Britain's at the negotiating table in Brussels as well as by increased uncertainties. In 2013, combined financial services and insurances recorded a surplus of 19.1 billion pounds (Agnew, 2015).

UK's withdrawal from the European Union would generate the relocation of banks in countries that allow them to maintain their access to the EU single market (for example Ireland), which sums up over 500 million consumers. Already, the number of banking units in the UK has declined from 2009 to 2012 by 4.11% (from 11,869 to 11,381 units). Also, the number of employees has decreased by 10.53% from 2009 to 2013 (471,129 to 421,508), according to the European Central Bank (ECB, 2015). The same statistics indicate a reduction in the EU banking institutions operating in the United Kingdom by 19.5% (from 77 in 2009 to 62 in 2013) and those from outside the EU from 91 to 90 in the same range (1,09%). The value of the assets held by British subsidiaries of EU credit institutions decreased by 25.7% (from 508.13 billion pounds in 2009 to 377,600,000,000 pounds) in 2013. It is noticeable a downward trend regarding financial cooperation between the banks of the UK and the EU banks, strengthened by the decrease of the British foreign direct investments in Europe's countries and, especially, in the European Union (see Table 3).

Table 3: The evolution of the value of net British FDI in geographical areas

Region	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Europe	**16.899**	**90.683**	**50.863**	**15.690**	**11.374**	**27.312**	**2.008**	**-17.582**
European Union	4.038	69.836	47.298	-7.047	9.761	15.856	-2.262	-12.430
Other countries from Europe	5.935	17.227	1.088	18.188	145	9.621	-331	-5.763
Of which:								
Russian Federation	-13	1.334	3.919	-353	-1.859	467	-2.662	-9.627
Off-shore British Islands	5.023	14.752	-4.278	17.848	1.036	8.468	1.720	3.522
America (North and South)	**19.100**	**53.837**	**33.574**	**-2.218**	**-13.814**	**14.675**	**15.791**	**27.997**
ASIA	**7.992**	**7.734**	**6.364**	**8.575**	**8.401**	**20.526**	**-3.099**	**-4.165**
Asian Australian and Oceania	**3.132**	**2.149**	**7.662**	**-3.543**	**11.704**	**803**	**1.139**	**8.064**
AFRICA	**-235**	**4.726**	**881**	**6.590**	**7.822**	**-3.186**	**11.554**	**2.923**
World Total	**46.887**	**159.129**	**99.322**	**25.094**	**25.486**	**60.130**	**27.392**	**17.237**
OECD	21.276	125.975	83.393	1.164	7.674	36.119	20.257	19.459
Central and Eastern Europe	76	0	53	40	-26	-3	10	55

Source: National Bureau of Statistics, UK, 2015

Foreign banks hold about 50% of the banking assets in England. The financial banking sector contributes to about 16% to the UK's budget (more than the oil industry in this country). At the same time, the financial sector in London's Citi generates 10% of Great Britain's GDP, UK being the biggest exporter of financial services in the world and, therefore, also in the Eurozone (The Economist, 2014).

According to the same analysis of the prestigious British magazine, From 2007 until now, given the financial and banking crisis, a decrease in the financial and banking service revenues took place and, therefore, the state budget revenue halved. Also, a reduction in international banking flows to London would create problems of financing UK's current account deficit, in the context of the EU's trade surplus with the United Kingdom.
According to preliminary statistics published by the Bank for International Settlements, in the third quarter of 2014, the total exposure of Great Britain to European banks was £ 989.4 billion (details in Table 4).

Table 4: UK banks' exposure to countries in the EU - information from reporting institutions (in billions of pounds)

2014	European banks	Belgium	France	Germany	Italy	Spain
Total exposure	989.5	12.8	142.1	250.9	29.8	5.5
Public sector	88.1	0.4	17.0	16.4	0.2	21.3
Banks	298.8	6.7	75.9	76.5	12.1	11.5
Nonbank private sector	596.5	6.1	49.2	158.5	17.0	196.8
Unallocated sectors	6.1	0.0	0.2	-	0.0	-
Other potential exposures	1166.2	7.9	57.1	297.0	68.6	-
Derivatives contracts	702.2	-	23.9	257.5	4.9	46.2
Guarantees	331.0	-	7.3	16.4	52.8	1.8
Credit commitments	133.0	-	26.7	23.1	10.9	39.5

Source: Bank for International Settlements (BIS), 2015

International investors see London as an intermediary between the US, EU and Asia. In the event of UK's exit from the EU, London would lose a great deal of its influence. The importance and attractiveness of London Citi's banking and financial institutions outside the EU would be diminished because they will lose the privilege of exporting free of charge capital, goods, and services on the EU Single Market. Also, business specialists exchange, favored by the free movement of persons in the European Union could be inhibited in the event of the UK exit from EU. In the European Union mainland are working approximately 1.4 million British citizens while in the UK are working 2.2 million European citizens from other EU countries. The UK exiting the European Union would lead to at least a partial exodus of this human capital, depriving Britain of one of its current net benefits (Sanati, 2013).
The discussions and tough negotiations regarding the restriction of free movement of labor in the UK as a Brexit pretext can be better understood in the context of parliamentary elections that took place in Albion in May 2015. European legislation requires that, to access the European Single Market, all non-member countries must have financial and control regulations equivalent to those in the European Union. Therefore, the legislative independence of Great Britain's from EU could be illusion or merely an electoral stake (Karim, 2014). In the event of Brexit, Great Britain would lose its power to influence the EU legislation, including the financial transaction tax issue on the EU agenda, which is vital to Citi of London. Besides, Junker's plan for financing productive activities in the Union via the single capital market diminished already the role of banks în this kind of activities.
In 2013, Great Britain's GDP was 1713.11 billion pounds and in 2014 the total exposure of British banks to EU countries represented about 60% of GDP for the year 2013. According to BIS statistics, (synthesis of the 25 countries whose financial institutions have reported information), Great Britain's exposure to European countries represent 63.17% of the total exposure of the Kingdom. According to Anna Fedorova from Investment Week, the total exposure of British banks in Greece was about 12 billion pounds (according to BIS

data), while the exposure to PIGS countries in general (Portugal, Italy, Greece, Spain) has been reduced as the economic situation in southern Europe worsened. At the end of Q4 of 2014, the value of external operations of financial institutions registered in the UK was 188% of Great Britain's GDP in 2013 (Fedorova, 2015).

Table 5: Foreign operations of financial institutions registered in the UK by currency and sector (liabilities) in billion pounds

	2013	2014			
	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Pounds					
Central banks	77	87	89	77	79
Unresident banks	420	438	439	401	392
Other unresident institutions	271	233	244	238	232
Total	767	759	772	716	704
Dollars					
Central banks	157	157	161	160	149
Unresident banks	937	867	878	909	903
Other unresident institutions	866	902	898	899	891
Total	1.960	1.926	1.937	1.967	1.943
Euro					
Central banks	41	30	25	30	24
Unresident banks	971	1.014	1.051	952	900
Other unresident institutions	573	588	569	546	514
Total	1.585	1.631	1.645	1.527	1.438
Swiss Francs					
Central banks	1	0	1	0	1
Unresident banks	46	46	42	39	36
Other unresident institutions	19	18	19	20	17
Total	66	64	62	60	54
Yen					
Central banks	3	2	3	2	4
Unresident banks	95	81	83	78	82
Other unresident institutions	79	80	84	80	80
Total	177	163	171	160	166
Other currencies					
Central banks	78	84	83	70	72
Unresident banks	123	118	122	126	114
Other unresident institutions	89	92	95	94	85
Total	290	295	300	290	271
Unassimilated to currencies	503	491	512	494	464
All currencies					
Central banks	357	362	361	338	330
Unresident banks	2.592	2.560	2.611	2.506	2.419
Other unresident institutions	1.899	1.915	1.913	1.881	1.821
Bonds issued	500	491	511	489	469
General total	5.349	5.328	5.397	5.213	5.039

Source: Bank of England, 2015

Table 6: Foreign operations of financial institutions registered in the UK by currency and sector (assets) in billion GBP

	2013	2014			
	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Pounds					
Central banks	7	2	4	5	5
Unresident banks	220	215	212	207	195
Other unresident institutions	214	250	258	244	236
Total	442	467	475	455	436
Dollars					
Central banks	14	19	14	11	11
Unresident banks	1.022	1.059	1.121	1.142	1.129
Other unresident institutions	985	999	1.015	1.035	1.020
Total	2.022	2.077	2.150	2.188	2.160
Euro					
Central banks	13	11	9	10	11
Unresident banks	1.005	1.016	939	862	805
Other unresident institutions	682	712	726	679	675
Total	1.700	1.738	1.675	1.551	1.491
Swiss francs					
Central banks	1	0	1	0	1
Unresident banks	111	104	91	106	89
Other unresident institutions	21	19	20	18	15
Total	132	124	112	124	104
Yen					
Central banks	1	2	2	0	1
Unresident banks	75	73	89	85	85
Other unresident institutions	121	120	124	111	112
Total	198	195	215	197	199
Other currencies					
Central banks	3	4	4	2	3
Unresident banks	226	235	242	221	205
Other unresident institutions	113	110	114	107	97
Total	342	349	360	329	305
Unassimilated to currencies	-3	7	5	3	1
All currencies	0	0	0	0	0
Central banks	40	38	34	28	33
Unresident banks	2.655	2.708	2.700	2.626	2.508
Other unresident institutions	2.136	2.211	2.258	2.194	2.156
General total	4.831	4.956	4.991	4.848	4.696

Source: Bank of England, 2015

According to an "Open Europe" report, a think tank analysis of the European issues, an exit from the European Union would cost the UK 56 billion pounds annually, if it will not open its borders to trade and immigration.

Table 7: Brexit's initial impact over the financial and insurance services

Sector	% of exports in Europe	The trade balance with the EU (billion pounds)	Potential barriers to EU markets	Risk level	Chance of same access to EU	Possible conditionalities
Financial services	41.4	16.06	Different regulations regarding the access to Single Market	High	Low	Equivalent regulations; Access - possible, punctual
Insurance	18.4	3.85	Different regulations regarding the access to Single Market	Medium	Medium	Equivalent regulations; Access - possible, punctual

Source: Open Europe (2015)[2].

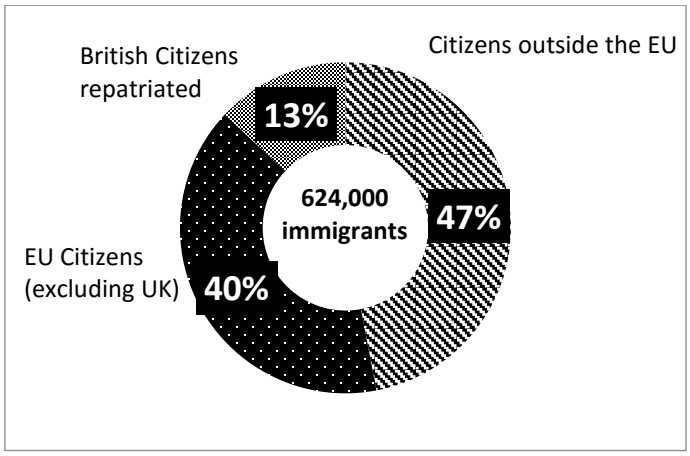
Lord Roger Liddle, Labour MP, former special adviser on European issues to the British Prime Minister Tony Blair and adviser to European Commission President José Manuel Barroso, asserted that out of the top priorities of UK, exiting the EU is not one of them, according to polls. The most important issues that will test the relevance, purpose and unity of the EU, are security threats to the EU borders, Russian nationalism, the fascism and the chaos in the Middle East North Africa.

4. Immigration and its impact on public finances

Immigration in the context of labor market liberalization in the EU has been and still is one of the main complaints of the British people and also one of the reasons why most British people support the withdrawal from the EU. The main concerns of the British government correlated with the rising immigration from the EU Member States, particularly from the eastern and southern Europe (Charts 6 and 7) are related to: (a) fewer jobs for the British workers and wage cuts in some sectors; (b) the conditions under which immigrants become beneficiaries of the public services provided by the British government.

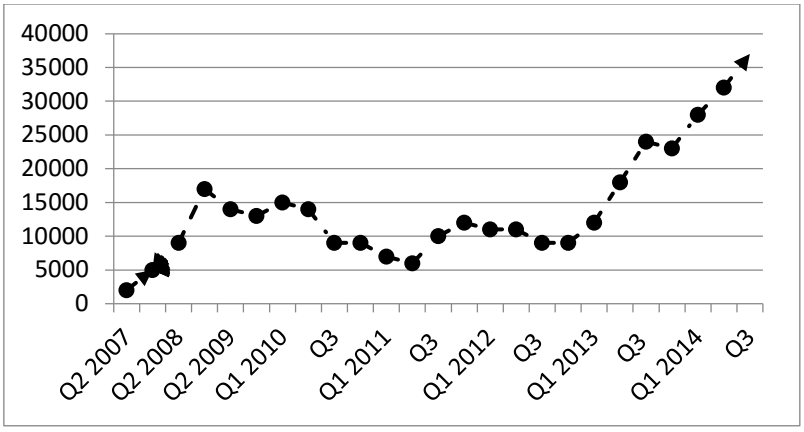
Chart 6: Immigration in the UK in 2014

[2]http://openeurope.org.uk/intelligence/britain-and-the-eu/securing-free-trade-eu-brexit-likely-goods-sectors-far-harder-services/



Source: National Bureau of Statistics, UK 2015

Chart 7: The immigration evolution of citizens from Romania and Bulgaria in the UK (2007-2014)



Source: National Bureau of Statistics, UK 2015

Numerous studies reveal, however, that, in economic terms, immigrants are not a burden but an asset. On the one hand, they represent the workforce needed to maintain a developed economy, given that Great Britain is facing an aging population. On the other hand, according to statistics, immigrants were found to be net contributors to the public finances of Great Britain. According to a recent study (Dustmann & Frattini, 2014) conducted by two researchers from the Centre for Research and Analysis of Migration (CReAM) immigrants from the EU (both from western and eastern Europe) have contributed more to Great Britain's public finance than they benefited from during 2000-2011. More specifically, immigrants from the EU (15)[3] have contributed to 64% more than they benefited from UK's public finances (15 billion pounds) while immigrants from EU countries in Central and Eastern Europe have contributed to 12% more than they benefited (5 billion pounds).
Last but not least, it is possible that on the long term, the demand for migrant workers in the British labor market will be on the rise, being rather complementary, filling low paid jobs that do not require high qualifications. Nevertheless, the British government does not intend to restrict the free movement of persons but to change EU rules regarding the immigrants access to social benefits, aiming to limit it.

[3]EU Member States prior to the enlargement from May 1st 2004.

5. External Grants provided by the European Commission to the United Kingdom

UK has an expenditure budget of 805 billion euros, which is five times higher than the EU, and represents over 42% of the cumulative GDP of all other Member States. Comparatively, Germany has an expenditure budget of 1.223 billion euros and Romania, of 28 billion euros.

At the end of 2014, the United Kingdom had an absorption rate of EU funds from the programming period 2007-2013 of 73,1% out of the 10.6 billion euros, which is a very high rate that gives the premises of a final rate of absorption of over 90%, based on a strong economy.

According to the Partnership Agreement for the programming period 2014-2020, the UK benefits of 16.5 billion euros, of which: EUR 4.5 billion ESF[4], ERDF[5] 6.5 billion euros, 5.2 billion euros for the CAP Fund and 0.3 billion for the Maritime Fund and Fishery. According to the official website of the British government, in 2014 the EC approved four implementing operational programs, and the first installments of pre-financing of 2% of their financial allocation were paid earlier, leading to a perfect start for the UK in European funds absorption from the new funding period.

The 2014-2020 period is characterized by a series of paradigm changes such as the access to EU funds by the beneficiaries from any Member State, transposing the Agenda of the simplified cost options approved by the Commission in the new European regulations for all EU structural and investments funds. In this context, UK companies are competitive and will follow the Commission's auction sites to get new important contracts with the beneficiaries of European funding.

6. Political consequences

The possible withdrawal of Great Britain from the EU could have significant consequences regarding the integrity and political unity of the UK. In England, Euroscepticism is more pronounced than in Scotland. Great Britain's withdrawal from EU is not supported by the Scottish National Party (SNP). In the event of the UK exit from EU SNP could demand a second referendum regarding the independence, that would offer the Scots the chance to decide whether to detach from the UK while maintaining relations with the EU.

England's withdrawal from the EU would not only change the domestic political climate, but it would have significant political consequences both within the EU and on the future relations between EU member states and other non-EU countries. For example, UK's exit from the EU could encourage other member states to re-evaluate the terms and conditions of their membership. The same applies if Great Britain succeeds to renegotiate these terms and conditions while keeping the status of EU member. At the same time Also, if Great Britain manages to negotiate (after a possible exit) a preferential agreement with the EU, this could lead to the renegotiation of EU's relations with other European countries that are not part of the EU (Switzerland, Norway, and Turkey).

Last but not least, from a geopolitical point of view, Great Britain's exit from the EU could be seen externally as a sign of decline, EU would lose the financial, economic, political and military powerhouse. From this point of view, the European Union itself would have a major political and economic interest to conclude a mutually beneficial agreement with Great Britain considering that it would want to terminate its EU membership.

Current political domestic situation and the problem of UK's from the EU

The most relevant domestic political event in the UK are the parliamentary elections hold in May 2015. In this context, the divergences between the Conservative Party and the Labor Party on the Brexit have become campaign issues. Also, for the current prime minister of the cabinet of London, the Conservative David

[4]European Social Fund
[5]European Regional Development Fund

Cameron, there was a post-election stake: to maintain its position as party leader and head of government. To get the votes from a significant part of the population that does not agree with the current European policy, the prime minister pledged to renegotiate Great Britain's terms of accession to the European Union. In this respect, he promises to organize a referendum concerning the country's withdrawal from the EU by the end of 2017. .
According to a survey conducted by Ipsos Mori in October 2014, 56% of respondents were for Britain's remaining in the EU, while 36% opted for leaving the EU. According to experts, it is the first time since 1990, when the British Eurosceptics are a minority. In 2011, 49% of the population expressed its desire for Great Britain to leave EU and only 41% were in agreement to stay.

Box 1 - Historical elements United Kingdom's relationship with the European Union

1949 - Britain signs, together with 9 other Western European countries (France, Benelux, Iceland, Italy, Norway and Portugal), the United States and Canada the Washington Treaty which commits signatory countries take the responsability to defend each other in case one of them is military attacked.

1960 - Along with Austria, Denmark, Norway, Portugal, Sweden, Switzerland, the United Kingdom signs the Stockholm Convention which establishes European Free Trade Association (EFTA) as an alternative to the European Economic Community (EEC). EFTA aimed to remove customs duties on industrial products for trade between Member States. The difference between EEC and EFTA was that EFTA was not a customs union, each State could established, in principle, certain customs duties and trade policies in its relations with non-member states.

1961 - The British government, led by the Conservative Prime Minister Harold Macmillan, decides to ask CEE accession to the European structure, however, French President Charles de Gaulle refuses to support Britain's request, considering the integration of the United Kingdom as a threat to the French goal to use EEC in order to amplify France's status in international relations. Also, EEC officials were concerned about the close ties between Great Britain and the United States, but also doubted the political will of the Kingdom to join the EEC.

1967 - United Kingdom once again calls joining the EEC.

1973 - United Kingdom joins the EEC, along with Denmark and Ireland.

1974 - Foreign Affairs Secretary James Callaghan states in front of the Council of Europe the policy changes related to working conditions in CEE, approves the proposal for European Parliament elections and asks the CEE for major changes within the EEC Common Agricultural Policy aswell as viable solutions regarding the Economic and Monetary Union.

1975 - The British government holds a referendum in which 67.2% of the citizens agree to stay in the EEC.

1978 - The Council of Europe constitutes the European Monetary System (EMS) based on the European

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THE LONG TERM GLOBAL CONTEXT AND ITS IMPLICATIONS ON INTERNATIONAL TRADE

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Abstract: The paper analyzes the long term factors of influence for international trade and includes among them: output measured by GDP as representing the supply, population as representing the demand, and a number of variables that influence supply and demand (purchasing power, institutional changes, technology, climate change, etc.). The conclusion is that the relative position of the major players in the world economy will change in the coming decades and that decision makers at macroeconomic level have to take into account all these factors of influence in order to participate in a competitive and efficient manner to the global trade flows.

Key words: international trade, world economy, world economic order.

JEL classification: F01, F14, F60, O19, O33.

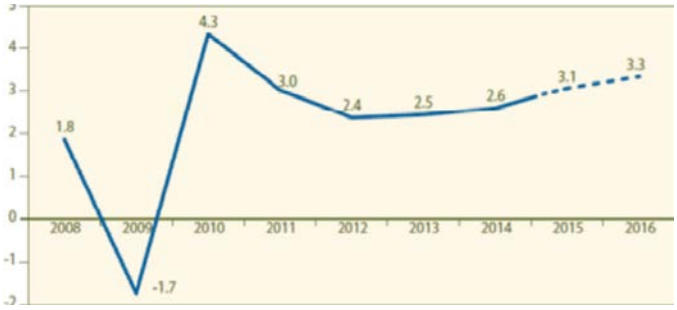
1. Introduction

The world economy presents a permanent fluctuation of its quantitative and qualitative characteristics but this fluctuation has periods of acceleration and periods of slow change or even of quasi-stagnation. The last decade of the 20th century and the first decade of the 21st century represented periods of accumulation for the globalization process, but also periods defined by significant changes, such as:

- the shift of the economic center of the world economy from the Atlantic to the Pacific Ocean, in fact from USA and Europe towards Asia (Quah, 2011, pp. 3-9);
- the full return of the Central and Eastern Europe to the global economic system once with the transition of the countries from that region from a centrally planned to a market economy and the accession of the majority of them to the European Union in 2004 , 2007 and 2013.

The beginning of a significant economic crisis in 2008 has affected especially the developed countries and generated a number of changes in the hierarchies of economic power. One interesting aspect is the fact that this crisis affected the world economy as a system from the point of view of Gross Domestic Product only in 2008, both in the previous years and after 2008 at the world level being no other decline whatsoever. This is why we state that in the world economy there was no long term systemic crisis, and not even a world crisis as the only decline of global GDP was recorded in 2009 (Figure 1).

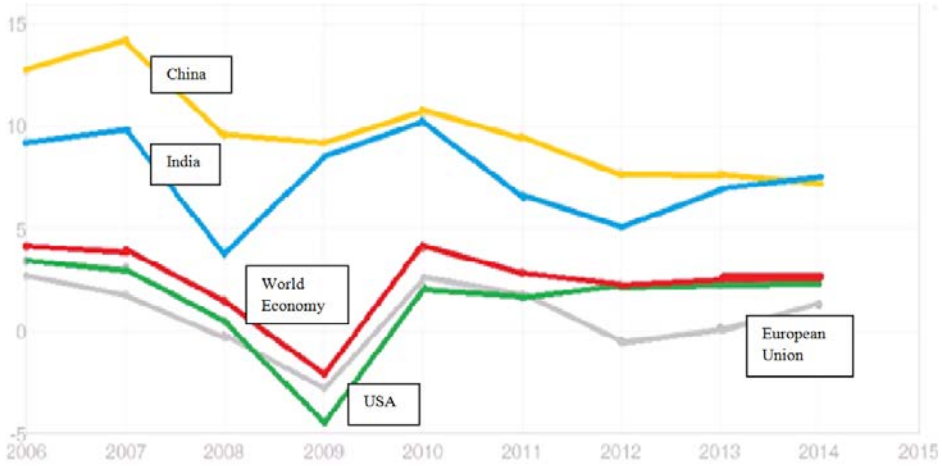
Figure 1: Evolution of world GDP during 2008-2016[1] - in %



Source: UN/DESA (2015), p.1. Note: [1] The growth rate for 2014 was partially estimated; the growth rates for 2015 and 2016 represents forecasts.

While at the level of the world economy system there was a decline of global GDP in only one year, at the level of the main groups of countries there were significant differences during the 2006 – 2014 period (Figure 2). As one can note, even in 2009 some economies (such as China, India, but also other which are not presented in the graph) recorded significant increases as compared to the previous year. This fact is a further proof that one cannot speak about a world crisis, but rather of a redesign of hierarchies.

Figure 2: Annual global GDP growth compared to GDP growth of USA, European Union, China and India during the period 2006-2014 - in %



Source: Graph generated by using the World Bank Databank software, on October 30, 2015, at page: http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG/countries/1W-EU-US-CN-IN?display=graph

1. The redesign of hierarchies: a new architecture of the world economic order

These different economic paths led us to the conclusion that the economic crisis that started in 2008 had in fact the role of a catalyst, accelerating the changes that determined a new architecture of the world economic order. These changes are anyway part of some much longer term trends because the world economy is characterized by an incessant movement of its center as it is indicated by a study of McKinsey Global Institute which analyzed the period 1 - 2025 (Dobbs et al., 2012, p. 17).

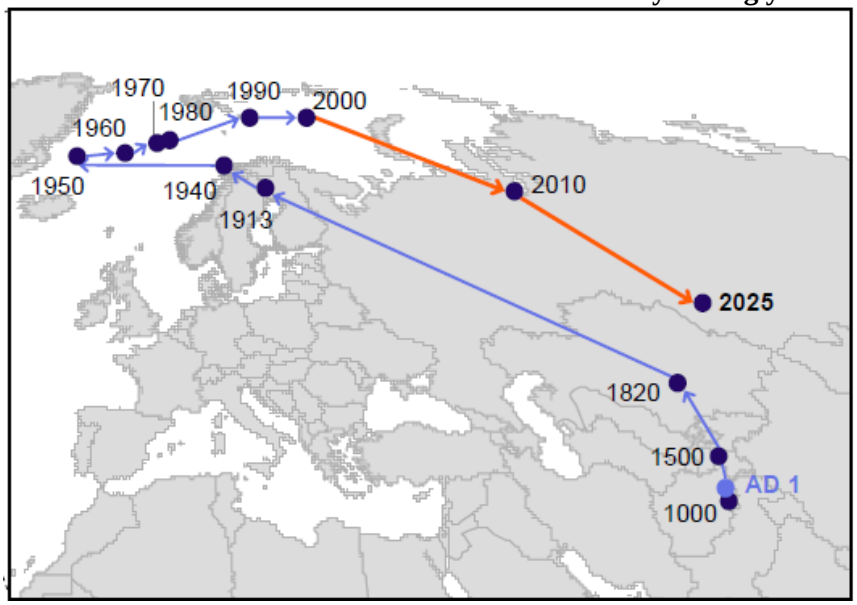
The research on the determination of the economic center of the world economy is based on the association of the GDP of each state to its geographical position, followed by the projection of the result on the world map (Figure 3). As results from Figure 3, for about 2000 years (between years 1 and 1820) the economic center of the world economy was relatively stable. This situation changed due to the industrialization and urbanization that took place in Western Europe and then in the USA which had as a consequence the shift towards Europe (from 1820 until the beginning of the World War II) and then towards the USA (from 1940 till 1950). The rapid recovery of Japan and the fast growth of the population in China and India determined a new change after 1950 when the economic center of the world economy returned towards East, but on different coordinates. The period 2000 – 2010 is characterized by the fastest movement of the economic center of the world economy ever recorded in history, that is faster by 30 % than the average recorded after World War II.

These changes have had and will continue to have significant consequences on the international trade due to the fact that trade flows are influenced from quantitative and qualitative points of view by factors such as:

- **Size of production**, expressed by Gross Domestic Product (which offers an image about what will represent the object of international exchanges), especially in case of the main global economic powers;
- **Size of population** of the states that form the world economy (which offer an image on the size of potential demand);

- **Evolution of purchasing power in different regions** of the world economy (which offer an image on the size of solvable demand);
- **Institutional changes** with reference to financial and banking institutions as well as to institutions that have regulatory attributions in the field of trade (which can influence the rules of the game and the possibilities to finance the international trade flows);
- **Technological evolutions with a significant impact on economy** (which can determine new geographical centers of supply or demand, can generate substitution products or facilitate transactions, etc.);
- **Climate changes** (that can affect both supply and demand, especially in sectors such as agriculture and tourism).

Figure 3: Shift of the economic center of the world economy during years 1 - 2025



Source: Dobbs *et al. (*2012, p. 17).

Regarding the size of production in its capacity of supply component, we appreciate as a reference moment (even from a symbolic point of view) the month of October 2014 when China became the first economy of the world (it is true that only in case of expressing the GDP by Purchasing Power Parity (PPP). We could say that in October 2014 the difference between China and USA was very small, but the significance was very big (the levels of GDP expressed by PPP were of 17,617 billion USD for GDP of China and of 17,419 billion USD for USA). The structural and not accidental character of this change of places between USA and China can be demonstrated by the existence of a growing trend for the Chinese economy that dated for at least 35 years, a fact that create the premises for an increase of this difference and even for a catching up by China, at a later date, of the nominal GDP level of USA (Table 1).

Table 1: The positions of USA and China in the global hierarchy based on GDP expressed by PPP during the period 1980 – 2015 - billion USD current prices

Country and place in hierarchy	1980	1990	2000	2011	2012	2013	2014	2015
SUA	1st place 2,862	1st place 5,980	1st place 10,285	1st place 15,518	1st place 16,163	1st place 16,768	2nd place 17,419	2nd place 18,125
China	10th place 298	6th place 1,091	2nd place 3,608	2nd place 13,482	2nd place 14,790	2nd place 16,173	1st place 17,617	1st place 18,976

Source: Data from IMF (2015), at page http://knoema.com/nwnfkne/world-gdp-ranking-2015-data-and-charts.

According to some recent estimates, presented in a study published by PriceWaterhouseCoopers in February 2015 (Hawksworth and Chan, 2015), even if we take into consideration the decline of the growth rates for the GDP of China, at the time horizon of 2050 the hierarchies will change even more substantially as compared to 2015. At that time USA might be on the 3rd place, being over passed by China and India (Table 2).

In fact, such a hierarchy of economic powers explains the position of Asia, and the more so of Asia – Pacific on the first position as regards production but also international trade. In this context we want to express the position that the slowing down of the growth rate in China in the last two years does not represent a crisis or a change of trend but rather a normal phenomenon for every economy that reached a certain level of development.

Table 2: The first 3 global economic powers in 2014 – 2030 - 2050 based on GDP expressed at PPP (in billion USD)

Place	Country	GDP 2014	Country	GDP 2030 (estimates)	Country	GDP 2050 (estimates)
1	China	17.632	China	36.112	China	61.079
2	USA	17.416	USA	25.451	India	42.205
3	India	7.277	India	17.138	USA	41.384

Source: Data grouped by author based on Hawksworth and Chan (2015, p. 3). The source of date is IMF WEO database (October 2014) for 2014 and projections of PwC for 2030 and 2050.

With reference to economic growth rates, it is well known for several decades that the developed countries, members of the Organization for Economic Cooperation and Development (OECD) had growth rates which did not exceed around 3 % per year, even during the best periods. We can ask ourselves why would China make an exception from this trend once it reached the status of the largest economy (measured as GDP in PPP terms).

From our point of view the special relevance of October 2014 when China traded places with USA as the largest economy consist in the conclusion of a historical period that started in 1870 and the return to a multi-millennial situation. As Angus Maddison presented, from the last 20 centuries, in 19 of them China was the largest economy of the world and in 1870 China was still on the first position (Maddison, 2007, p. 43). This return of China on the first position among the economies of the world, as well as the context of the increase of importance for the Asia – Pacific area redefines the balance of economic power at the world level, with consequences for the Western countries and especially for the USA. It is without doubt that no substantial changes will be visible in the short term, but it is clear that they have already begun.

From the point of view of the sources of supply for the international trade it is to be also noted a change regarding the contribution to world GDP by groups of countries. In 2013 the developing and emerging economies contributed for the first time with more than 50 % at the formation of global GDP, in PPP terms. The importance of this moment is given not only by the change in the balance of power, even if only in quantitative terms, but also by the very high dynamics of this group of countries. 25 years ago, in 1990, the developing and emerging countries represented only 33 % of the global GDP, while in 2013 this group over passed the 50 % threshold (The Economist, 2013).

An important aspect that gives new meanings to the interpretation of this change is that of the globalization of production and trade, as well as of the manifestation of the global value chains. This latter phenomenon means, among other things, that a significant part of the activities related to production and trade from developing and emerging countries is carried out by affiliates of multinational companies. But irrespective who is carrying out the production or trade activities, these economic activities as well as the corresponding jobs and monetary transactions moved to a significant degree towards the new dynamic markets which have a long term growth potential.

A distinct comment is necessary with reference to the European Union. Within the context of global economic hierarchies (be they about production or trade) European Union is mentioned, from a statistical point of view, as an important economic actor. But here some clarification is needed. European Union is not a country but an association of member states and its share in the global GDP or world trade is nothing but the addition of a number of national figures that gives a significant total. From this point of view, a consistent approach would be to compare European Union with other organizations of economic integration which contain

at least a free trade area, such as the North American Free Trade Agreement (NAFTA) or the Association of South East Asian Nations (ASEAN).

Beyond these methodological considerations, European Union (and particularly the Euro zone) has been characterized for a while by fragile and modest economic dynamism (as shown in Figure 2). From the long term perspective it is important to determine to which extent this weakness is circumstantial, maybe just a consequence of the economic crisis that started in 2008, or it is a more structural situation. The answer to this question can be found in a research published in 2012 under the heading of the European Commission (European Commission, 2012): „ In 1900 Europe (without Russia) represented approximately 40 % of world economic output. 100 years later, in 2000, the share of Europe in world output were less than 25 %. In 2050, function of the growth of China's and India's GDP, the share of Europe in world economic output will be of about 15 %, that is less than it was at the beginning of the industrial revolution."

In view of the above we appreciate that the changes in the hierarchies of economic powers can offer a relatively clear image of the future trends of international trade flows because production (as expressed by GDP) is a major determinant of the orientation and volume of international trade flows.

2. The impact of demographic factors

The future evolutions of international trade will be affected, without any doubt, by **the number of population and its purchasing power**. From this point of view the developing countries of today will represent in the coming decades an important growth pole and a destination of interest.

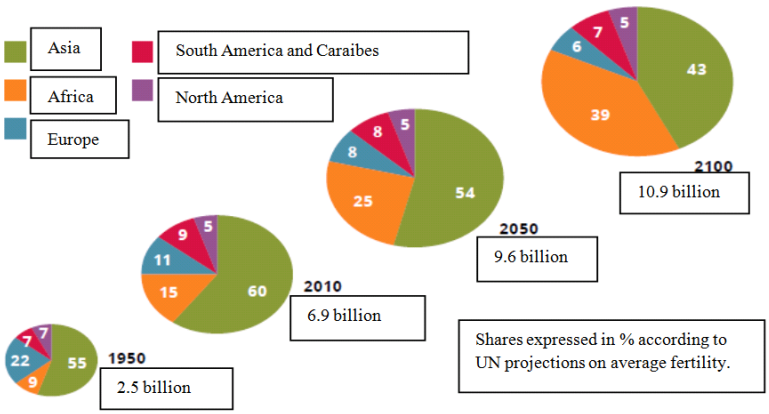
At a global level the population increased over 2 times since the 1960s, exceeding the threshold of 7 billion in 2013. According to United Nations Organization the world population will have in 2050 between 8.3 and 10.9 billion, function of the policies adopted by different states, especially those with a large population (United Nations/DESA, 2013).

According to these estimates the whole growth in global population will take place in the developing countries, especially in their urban areas. For this group of states the total population is expected to grow from 5.9 billion in 2013 to about 8.2 billion in 2050. As regards the developed countries, they will witness an important reduction of their share in the world population. At individual level the developed states will either face a decline of population or a stagnation, while the possibility of a slight increase appears only as result of immigration.

As reflected in Figure 4 the share of Asia in world population increases from 1950 to 2050, followed by a relative decline till 2100, while maintaining the first position. The most spectacular change of position is that of Africa which moves from 9 % of total population in 1950 to 15 % in 2010 and then to 25 % in 2050 and 39 % in 2100. In the same time interval North and South America are the only continents that maintains their share in world population with only small variations. Europe has a spectacular decline, from 22 % in 1950 to 11 % in 2010, 8 % in 2050 and only 6 % in 2100 (European Environment Agency, 2015).

Even if the number of population is just a quantitative indicator, one can expect that the number and the share of population of a region or continent in world total may influence in a significant way the volume and orientation of international trade flows. It is obvious that the international trade flows will be directed towards the regions and continents with numerous population and with a reasonable or high purchasing power.

Figure 4: Share in world population of continents in 1950, 2010, 2050, 2100 - in %



Source: United Nations (2013), quoted in European Environment Agency (2015, p. 21)

From the point of view of international trade even more important than the number of population is its purchasing power, especially manifested in case of the so called middle class. From the beginning of the 19th century till present the world economy recorded two major increases of the so called middle class. The first increase took place in the 19th century and at the beginning of the 20th century, in Western Europe and then in the USA, especially as result of the economic consequences of the Industrial Revolution. The second major expansion of the middle class took place after World War II in Western Europe, USA and Japan.

At present the world economy is at the beginning of a third major expansion of the middle class, this time in the emerging economies, especially those from Asia. In 2013 the middle class in Asia counted about 525 million people, that is more than the entire population of European Union. It was estimated that in the next 2 decades the middle class at the world level will increase with 3 billion people which will be located almost entirely in the developing countries (Ernst & Young, 2011). Such changes will not influence only the direction and content of the international trade flows, but also the modalities of trading as the consumption preferences of the new middle class from Asia and Africa will differ without any doubt from those of the middle class from Western Europe or USA.

3. Institutional changes

The changes that took place in the hierarchies of economic powers have led to a series of changes of international financial and banking organizations as well as of the organizations that regulate international trade, even if to a large extent such changes are nowadays just in their early stages. One can mention in this respect the growing role attributed to G-20, a group that reunites 19 countries plus European Union.

A major new stage in the building of this new institutional framework has been represented by the establishment of 2 new multilateral financial institutions, namely, the Asian Infrastructure Investment Bank – AIIB and the New Development Bank – NDB Bank which was known before as the BRICS Bank. Both banks are perceived as alternatives (in fact they are complementary institutions) to the World Bank and the Asian Development Bank which represent the Western approaches and interests. The establishment of these banks is in fact a recognition of the existence of a new world order that goes beyond the Bretton Woods system (which was founded on the International Monetary Fund and the World Bank). The project of the **Asian Infrastructure Investment Bank – AIIB** has been launched in October 2013 as a Chinese initiative and already reunites 57 states, among which there are allies of the USA that initially had some reservations (such as Germany, France, Italy and United Kingdom (Kenny, 2015). This bank has an initial capital of 100 billion USD and its headquarters located in Beijing. The first credits will be granted in 2016 for infrastructure projects in areas such as energy, transportation, urban buildings, logistics, health care and education, as well as for the support of interconnection of Asian countries (AIIB, 2015). **The New Development Bank** with headquarters in Shanghai will also start its activity in 2016, being founded on principles of equal vote for all members and the elimination of a veto power. It is to be noted that the BRICS countries that founded this bank represent 41.4 % of the world population and about 25 % of the world GDP (NDB, 2015).

By means of financing projects and by promoting new decision making mechanisms the two multilateral banks will contribute to the development of Asia – Pacific area, but also of the BRICS countries as a whole. The two banks will also contribute to the development or appearance of new international trade flows due to the supply and demand that will be created as result of the investment projects that will be financed.

These 2 institutions are not singular as regards the new mechanisms that will influence international trade. To the extend that they would become reality, the largest impact will be determined by 2 partnerships under negotiation and/or ratification, namely the Transatlantic Trade and Investment Partnership – TTIP (which has as partners USA and the European Union) and the Transpacific Partnership – TPP, project supported by the USA and which reunites 12 states from the Pacific area with the notable exception of China. The 2 partnerships represent to a large extent the Western countries' approach to globalization. Both partnerships aim at establishing new regulations for carrying out international economic relations, including trade, according to 21st century requirements. The 2 partnerships had as deadlines 2015, but the negotiation/ratification process will continue at least in 2016. The TPP has been agreed upon in October 2015 and will be debated in the US Congress in the coming months, until mid 2016. The negotiations on TTIP could be finalized in 2015 and will continue in 2016.

To these 2 partnerships one has to add the Regional Comprehensive Economic Partnership – RCEP which reunites 16 countries from the Pacific area and which represent the interests of China, but also of ASEAN countries (Chen, 2015).

Irrespective of the result of these negotiations, they imply a drift from the regulation of international trade centered on the World Trade Organization. One with these negotiations we note a new type of multipolarity or multi-level regulation in the field of international trade, a hybrid system in which the role of the WTO is shared with other institutions or agreements. Maybe there is a symmetry in this process, a multi-polar world economy generating multi-polar regulations and institutions.

4. Implication of technological developments

A factor that will influence significantly the volume, direction and structure of international trade flows will be represented by the new technological developments. The specialized literature is unanimous that technologies will determine major changes in the world economy by 2020 – 2030. In this context Roland Berger includes technology and innovation among the 7 megatrends that will shape the world economy by 2030 (Roland Berger, 2015, p. 4).

Because the challenges for humankind refer to securing the food, water, heath care, increase in the efficiency in using resources, energy and transport, reducing waste and pollution, the solutions cannot be found outside technology and innovation. This idea is supported by the approach that considers that wealth and welfare created by technology and innovation are more stable than those created by mere exploitation of resources.

In its turn KPMG International by its MOWAT center in Toronto included technologies among the 9 megatrends that will influence world economy and governance by 2030 (KPMG, 2014, p. 22). One of the most representative areas by means of which technology influenced economy and trade has been the information and communication technologies (ITC). Some convincing figures show that if in 1995 only about 1 % of world population had access to internet (that is 14.1 million people), in 2014 about 40 % of world population had access to internet - that is over 3 billion people - (Internet live stats, 2015). In the same context one can note that in 2014 China had about 22 % of the world internet users (about 624 million), which means more than the next 3 states together - that is USA, India and Japan - (Internet live stats, 2015). Although internet is not by far the only technology with impact on economy we appreciate that the above figures offer an image on the speed of penetration and also on the geographical orientation of the trade flows in the coming decades.

European Union, by means of ESPAS - The European Strategy and Policy Analysis System, which had in view to identify the main global trends, to assess their implications and challenges and to suggest adequate policies, stated in March 2015 that in the world economy an economic and technological revolution is underway, determined by the convergence of technologies and the mass proliferation of instruments and techniques that will transform economies and societies (ESPAS, 2015, p. 8).

This revolution will allow for increases of productivity and wealth, as well as for new means of individual expression. On the other hand, technological developments may generate social distortions as result of the

digital divide, increase of unemployment and inequalities and the decline of the middle class in developed countries, inclusively in Europe.

The impact of technological developments can be that big at the world economy scale that some authors speak about "a third industrial revolution" (Markillie, 2012). The first industrial revolution began at the end of the 17th century in England with the use of machines that allowed the production of a higher number of products compared to the individual shops of the Middle Ages. The second industrial revolution started at the beginning of the 20th century in USA once with the mass production and the assembly line. The impact on trade flows has been remarkable in both cases.

At present, a third industrial revolution is under way as result of the emergence of the information society and the digital production. Under these circumstances the products can be made efficiently in small series, production is much more flexible, with a low consumption of labor, raw materials and energy due to the usage of new materials, 3D printing, use of robots and crowd sourcing. On a dialectical spiral there is a return to individual production like in the pre-industrial era, of course under very different circumstances. This new industrial revolution will also affect considerably the production and trade, having among other potential effects the return of certain activities to developed countries where from they migrated in the previous decades in search of lower production costs.

5. Impact of climate change

Among the factors that will influence considerably international trade in the coming decades climate change has an important place. Climate change or global warming may generate numerous negative effects: the reduction of agricultural output in certain areas, negative implications on certain activities like tourism, the increase of medical conditions.

Recent studies indicated that in absence of major measures for climate change prevention until 2100 the average temperature will increase by 4.3 degrees Celsius while the world average revenues will decline by 23 % (Sterner, 2015). In this case the impact on international trade will be significant. What is more important is that the impact on revenues will be unequal, meaning that some regions may benefit from global warming (those that have today a colder climate), while others will be heavily affected (those that have today a warm climate and which are usually less developed). According to some studies it is possible that the countries that are today among the richest 20 % of the world will register some increases of revenues, while the countries that belong today to the poorest 40 % of the world will have declines of up to 75 % of revenues until 2100 (Geiling, 2015).

In during the last decade and especially during the 1990s the debates on global warming were present more in the international institutions and academia, at present there is a much higher awareness on the subject among large corporations.

Large companies such as Walmart, Goldman Sachs, Johnson & Johnson or Starbucks set for themselves deadlines until their activity will be 100 % based on renewable energies. Microsoft already uses only renewable energies and buys emission certificates for carbon emissions generated in other related activities, such as transport. In Great Britain, Marks & Spencer became neutral from the point of view of emissions in 2012 by reducing energy consumption or by compensating carbon emission by financing projects that reduce the carbon emissions (Worland, 2015).

The implications of climate change on international trade are numerous and they are not assessed post-factum, by their impact on agricultural output, on fisheries or tourism. The awareness of states about the implications of climate change may determine states to restrict certain technologies or to impose ceilings for the emissions. But the results can be very diverse, positive and negative, because not all states adopt the same measures at the same time. The adoption of some strict measures on greenhouse gases emissions in certain countries may determine delocalization of industries towards more permissive states (for example from European Union to Asia). The requirement in European Union for the inclusion of a percentage of bioethanol in fuels determined an increase of the agricultural surface cultivated with plants used for biofuels which, in turn, determined a reduction of the surface cultivated with cereals, the increase of food prices and the disadvantaging of the poor population in urban areas in developing countries (Banse, van Meijl and Woltjer, 2008).

The implication of such measures on the direction and content of international trade flows is direct and immediate. For quite some time it was noted the bi-univocal link between the level of regulation or relaxation of measures related to international trade and those related to environment protection. Measures of relaxation

regarding international trade can achieve their goal, increasing the volume of trade, but with the increased risk of exhausting some rare or strategic resources (such as the deforestation of large areas for exporting wood or timber) or, the other way round, measures concerning environment which are too restrictive for a given technological level may lead to limitations on international trade or to their deliberate use for discouraging some competitors (World Bank, 2008, p. 23). In some cases too restrictive environment protection measures may lead to large scale frauds for cheating environment regulation, as it happened in Volkswagen case in 2015 (Jordan, 2015).

6. Conclusions

The world economy is characterized in the first decades of the 21st century by numerous transformations that define hierarchies, mechanisms and institutions which can be completely new or just adaptations of existing ones. The world is already globalized, much more interconnected, multi-polar, witnessing new development models besides the Western ones.

Old as the world and permanent, international trade receives in different forms these changes, it is adapting, it diversifies the objects of trade and the partners or only their relative position. One can note here that in 2015 USA became again, after 4 decades, an exporter of energy as result of new technologies.

Beyond the sum of these transformations, the international trade will maintain some principles that decision makers will have to take into account. Among them, an important principle will be that relating the international prices with the level of value added included in goods and services. Those willing to participate in an efficient, competitive and profitable way to international trade will have to focus on high value added goods and services, be they bio food, biotechnology products, products based on new materials such as graphene or applications for smartphones.

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DYNAMICS AND NEW CHALLENGES IN THE GLOBAL COMMODITY MARKET

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Abstract: - Global economy and particularly the world production of goods depends to a large extent on the supply of raw materials, of resource inputs extracted from the environment as well as an easy access to them. Commodities play an important part in the growth of global production and in the world trade in goods and services. The access to raw materials is vital for sustaining the productive capacity of the economy and also for satisfying domestic demand for industrial goods. On the other side, increasing demand for commodities and the need for assuring a sustainable supply pose great challenges on the world economy. The issue of raw materials supply represents a high-priority theme in the political agenda of the European Union.

The Raw Materials Initiative launched in 2008 by the European Commission is based on three main pillars:

- *to ensure the access to raw materials on world market at undistorted conditions;*
- *to foster sustainable supply of raw materials from European sources;*
- *to reduce the EU's consumption of primary raw materials. (EC, 2008).*

To this end, EC has started to take action in order to ensure access to resources and avoid supply shortages. A great deal of attention is being paid to the study of recent developments in the global and particular commodity markets, taking into consideration fundamental aspects as supply concentration, governance of producing countries, the pressure of demand and its impact on prices, material's substitutability, stressing the role of resource consumption efficiency, recycling and substitution of vital raw materials and thus providing policy makers and industry with reliable information on how to efficiently manage resource inputs.

This paper is dealing with the main developments which occurred during the past decade or so in the global commodity market, a major driver of the world economy, with particular reference to selected key-markets - as: aluminium, copper, nickel; cotton; corn, meat-swine, rice, wheat, soybeans; oil - emphasizing the issue of price volatility and new challenges in the market.

Key Words: commodities, demand, supply, market, price volatility, challenges.

JEL Classfication: F 01, F 02, F 59, F 63, Q 02, Q 11, Q 31, Q 41.

1. Introduction

Commodity markets in general and particularly oil as well as minerals and metals markets were strongly affected, since the turn of the millennium, by the uncertainties of the world economy development, food markets being largely influenced, also, by the adverse effects of the climate changes (as severe droughts or rainfalls). The price volatility increased: after decades of stagnating or falling, prices of most primary commodities rose rapidly from about 2003 to reach record levels in 2008; there followed a crash in early 2009 and a rebound in the next two years. The price corrections in 2012 - 2014 might show a trend reversal in the price movement as compared to the first decade of the millennium. This unprecedented price instability combined with an increasing financialization of commodities markets for more than a decade has brought back to attention the case of commodities.

2. Recent trends in the commodity market

The global commodity market is characterized by **rapidly growing demand** at worldwide level. During the last years, world consumption increased for all major primary raw materials, selected as representative for this research and especially metals - aluminium (+78%), nickel (+48%), copper (+36%) - but also some agricultural products as corn (+40%) and soybeans (+36%). The consumption of other selected commodities also increased, though comparatively less (meat, swine +18%, rice +15%, oil + 13%, wheat +13% and cotton +10%, all between 2002-2012). (UNCTAD, 2013)

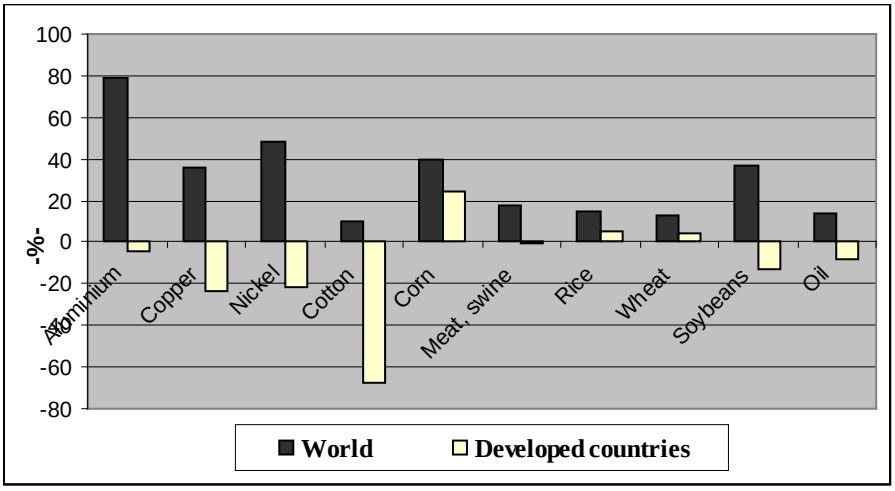
During the past decade, the commodity market was marked by **important structural shifts**.

- One major shift with a growing importance is the increasing financialization of the markets**.** The volume of the investment flows increased from 13 billions euro in 2003 to 170-205 billions euro in 2008 and continued to rise afterwards. (COM 2011). This factor has a significant impact on the price volatility, being able to cause large movements of prices on short term (as those of 2007 and the first half of 2008, which were considered as most probably linked to a speculative bubble that burst out with the collapse of prices in the second half of 2008 following the onset of the global financial crisis).

- Another major structural shift took place in physical market fundamentals, in the balance of the commodities demand and supply, that remain the main driving factors of price volatility, and consists of the rapid growth of demand for commodities particularly in the fast developing emerging markets and especially in China, a longer term acting factor that led to a reversal of country roles on the selected markets, to the detriment of developed countries.

Thus, unlike the general upward trend of the world demand for commodities during the decade, the consumption data for the selected commodities in developed countries showed significant declines for cotton (-68%), copper (-23%), nickel (-22%), soybeans (-13%), as well as oil (-8%) and aluminium (-4%), increasing slightly (less than the world total growth) for corn, rice an wheat. (Fig. 1)

Fig. 1 - Consumption growth of selected commodities in developed economies, 2002-2012



Source: developed by author, based on UNCTAD secretariat calculations, UNCTAD, TDR 2013, pg 54.

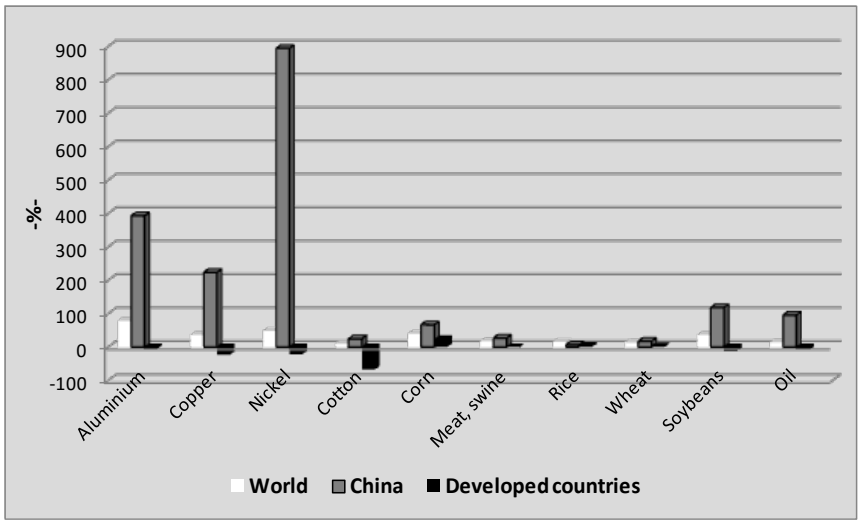
As a result, the share of the developed countries in the world commodities consumption declined during the decade, mainly for metals, essential resource inputs for the manufacturing and constructions (from more than 50-60% of the world total in 2002, the share of this group of countries decreased practically to half in 2012, that is to about 30% for copper, 32% for aluminium and 34% for nickel), as also for cotton (to 4% from 14%). The developed countries remained on top, but with also declining shares, for oil (45% in 2012 from 55% in 2002) and corn (41% in 2012 from 46% in 2002).

The growth of world commodities consumption was largely due to the rapidly growing demand in emerging markets (especially those of Asia, led by China and India), which represent the main driver of the world economic growth during the last years, as they make fast progress on the way of their industrialization and urbanization, including increasing percentage of urban population. According to the European Central Bank data, the emerging economies increased their GDP/capita, though from low levels, by more than 70%

between 2000-2009 and integrated themselves also rapidly into the international markets, increasing their share in the world export of goods and services by almost twice between 1990-2010, to about 35%. (BCE, 2014)

A major contribution to the increase of world primary commodities consumption belongs to China (Fig. 2), a large size economy, playing a remarkable role in the world economy and on the global market.

Fig. 2 - Consumption growth of selected commodities in China, 2002-2012

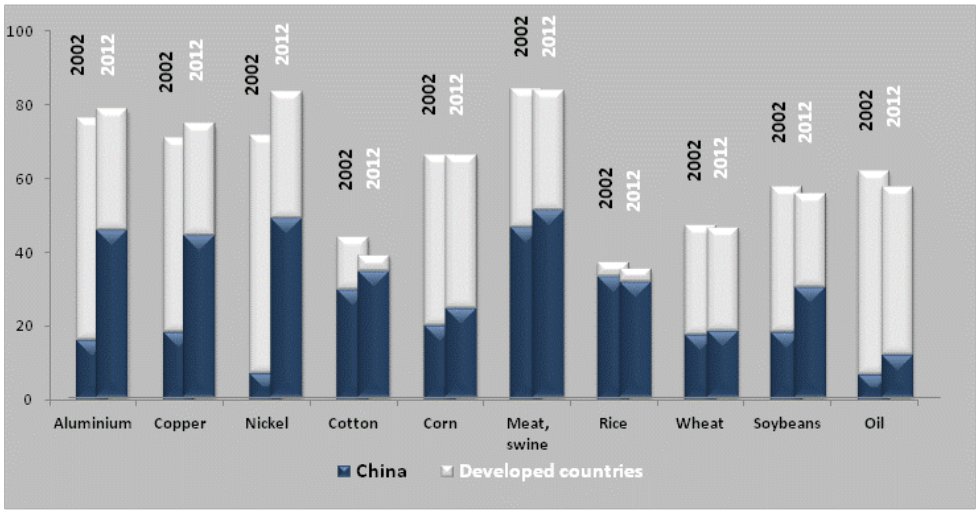


Source: developed by the author, based on UNCTAD secretariat calculations, UNCTAD, TDR 2013, pg. 54

During the last three decades, China's economy has been rapidly developing, at high growth rates, substantially increasing GDP and climbing fast up in the world hierarchy from the point of view of the economic power (becoming number 2, after USA, and in front of Japan). China has rapidly progressed in the field of economic and technological co-operation with other states. The sustained economic growth has created a favorable framework for a more intense participation of this country to the world economy and China turned into a major partner in the world trade in general, becoming the first world goods exporting country, before Germany, and the second importing country, after USA, and especially in the world commodities trade.

China's economic growth is extremely dependent on natural resources, reflecting high investment rates especially in the constructions and infrastructure and a high growth rate of manufacturing, sector generally requiring more primary commodities and energy as compared to agriculture or services. With an extremely dynamic economy, China has become the largest world consumer for commodities as aluminium, copper, nickel, meat and soybeans. (Fig. 3)

Fig. 3 - China's increasing percentage share in the world consumption, 2002-2012



Source: developed by the author, based on UNCTAD secretariat calculations, UNCTAD, TDR 2013, pg. 54

A matter of concern with respect to the global commodities market consists of China's commodities stocks policy. The experience of last years reveals that a big portion of the significant increase of China's commodities demand corresponds to periods of prices decline and aims at increasing stocks; on the other side, China does not publish full data regarding the real level of these stocks.

The high global primary commodities consumption put pressure on supply, unable to cover the increasing demand (as the historically low prices of '90s caused a long period of underinvestment in productive capacities) and, naturally, it led to the decline of stocks, paving the way for the **excessive price volatility** of the years 2002-2012 and especially after 2007, when prices varied unprecedently. (Table 1)

Table 1 - Movement of world primary commodity prices, 2007-2014

- percentage change over previous year -

Commodity groups	2007	2008	2009	2010	2011	2012	2013	2014
All commodities	13.0	24.0	-16.9	20.4	17.9	-8.3	-6.7	-3.9
• **All food**	13.3	39.2	-8.5	7.4	17.8	-1.4	-7.4	-2.0
- Sugar	-31.7	26.9	41.8	17.3	22.2	-17.1	-17.9	-1.8
- Beef	1.9	2.6	-1.2	27.5	20.0	2.6	-2.3	5.5
- Maize	38.2	34.0	-24.4	13.2	50.1	2.6	-12.1	-16.0
- Wheat	34.3	27.5	-31.4	3.3	35.1	-0.1	-1.9	-0.8
- Coffee	12.5	15.4	-6.9	27.3	42.9	-25.7	-23.6	25.5
- Cocoa	22.6	32.2	11.9	8.5	-4.9	-19.7	2.0	23.7
- Soybeans	43.0	36.1	-16.6	3.1	20.2	9.4	-7.9	-1.7
• **Agr.raw materials**	12.0	20.5	-17.5	38.3	28.1	-23.0	-7.4	-5.4
- Cotton	10.2	12.8	-12.2	65.3	47.5	-41.8	1.5	3.2
• **Minerals, metals**	12.8	6.2	-30.3	41.3	14.7	-14.1	-5.1	-6.8
- Aluminium	2.7	-2.5	-35.3	30.5	10.4	-15.8	-8.6	-5.0
- Iron ore	77.4	26.8	-48.7	82.4	15.0	-23.4	5.3	-17.6
- Tin	65.6	27.3	-26.7	50.4	28.0	-19.2	5.7	2.7
- Copper	5.9	-2.3	-26.3	47.0	17.1	-9.9	-7.8	-5.6
- Nickel	53.5	-43.3	-30.6	48.9	5.0	-23.4	-14.3	10.2
- Lead	100.2	-19.0	-17.7	25.0	11.8	-14.2	3.9	-1.9
- Zinc	-1.0	-42.2	-11.7	30.5	1.5	-11.2	-1.9	7.4
- Gold	15.3	25.1	11.6	26.1	27.8	6.4	-15.4	-8.5
• **Crude petroleum**	10.7	36.4	-36.3	28.0	31.4	1.0	-0.9	-7.5
Manufactures	7.5	4.9	-5.6	1.9	10.3	-2.2	1.7	

Source: worked out by the author, based on UNCTAD data (TDR 2010-2014), pg. 9

The high price volatility represents an important issue for the global primary raw materials market, along with the concentration of market structures, which limit the proportion of the final price that goes to the commodity producer.

The commodity price movement is influenced by a large number of interactive factors. It reflects, in the first place, the development of the market-related factors, being determined by the fundamentals of physical supply and demand of commodities, as well as by the greater participation of financial investors (as commodities are considered financial assets). Commodity prices are also determined by the movement of the US dollar exchange rate, as these goods are denominated in that currency. Empirical studies show that US dollar exchange rate impact is particular important for oil, gold and some metals (i.e. aluminium and copper).

The mix of world price determinants includes also other general or specific commodities market factors, as well as economic policies and political developments (see the geopolitics impacts on the oil prices dynamics).

The price volatility increased concern - at the highest levels, including the last G20 summits - for finding solutions in order to alleviate the negative impact of price volatility both for the commodity producers

and for the consumers. The goods prices and the primary raw materials prices are closely connected, affecting the policies on financial markets, economic development, industry, trade and foreign relations.

Current uncertain global economic environment makes it difficult to foresee the future evolution of the primary commodities prices. One thing is however clear and namely the dynamics of developing economies and mostly of the emerging markets will have a significant impact on the future development of the demand for commodities, both industrial raw materials and food and other agricultural commodities.

China will continue to play a major role on global markets, even in case of slowing GDP growth rate, and implicitly of declining commodities consumption, as also a series of developing countries with high demographic density and high economic growth rates, to the extent in which these countries will choose models for growth and industrialization based upon increasing consumption of industrial raw materials, especially metals, and for developing infrastructure along with increasing urbanization.

Overall, the primary commodities prices are expected to continue, as a general trend, to increase, but at slower rates compared to the beginning of the millennium, reflecting some short and medium term corrections. On a long term basis they tend to stabilize at relatively high levels.

Commodity trade and prices represent a major driver of the global economy dynamics. Generally it is considered that the primary commodities production and export offer limited opportunities for economic growth and development mainly as a result of a long term deterioration trend of the terms of trade of the above mentioned goods versus manufactures, reflecting declining prices of raw materials as compared to those of manufactures.

The dynamics of international prices between 2002-2012, marked by a change of trend for commodities - from declining to increasing prices - along with declining prices for certain, mainly labour-intensive, manufactures contributed to a significant improvement of terms of trade for the commodity exporters vis-à-vis exporters of manufactures, giving a notable impetus to the acceleration of economic growth in commodity exporting countries.

The terms of trade evolution in the case of developing and emerging countries is dependent on their foreign trade patterns, namely those countries exporting mainly oil and mineral and mining products experienced the largest gains from higher commodity prices versus manufactures since the beginning of the millennium. Oil exporters experienced a more than twofold increase of their terms of trade during the past decade, reflecting a more than double increase in their export versus import prices.

By geographical zones, the country groups with the largest terms of trade increases are the economies in transition, Africa and Western Asia. Significant gains in terms of trade were also obtained in Latin America, however on a smaller scale because of a more diversified pattern of foreign trade. The agricultural commodities exporters experienced a slower growth trend, reflecting a different performance of prices for the various products as well as the dissimilar share of food and fuel imports in their total import. At the same time, the major developing manufactures exporting countries, mainly from East and South Asia, experienced a decline of their terms of trade after the year of 2000.

3. New challenges in the global commodity market

Recent developments reveal the following 4 major challenges in the global commodity production and trade, generated by a number of long term factors:

● The advances in **shale oil and gas** technology in USA could pave the way for a revolution in the global energy power balance, that could shift back to North America by 2020's, as well as in the global mix of primary energy sources, favouring the decline of oil price and a geographical redistribution of the international energy trade. (COM 2011)

● **Climate changes** - global warming, extreme weather conditions as severe droughts or rainfalls - have a major impact on the demand/supply balance in the global primary commodities and especially mining and agricultural market, with adverse effects on the price movement, affecting both producers and consumers.

● The advances in the market of **renewable or green energy** (wind or solar power, biofuels), the fastest growing subsector in the global energy mix, show good prospects for the expansion of the supply and demand of alternative energy, being also encouraged by the high oil prices and increasing concerns about environment protection or energy security and independence.

● The considerable attention gained during the last years by **the rare earth metals,** strategic vital resources for some of the most dynamic world markets, as high-tech devices, petroleum refining, military and defence aplications, represents another major challenge for the short and medium term dynamics of the global commodity market.

4. Conclusions

Taking into account the recent commodity market trends, the above-mentioned four key developments identified as major challenges in the commodity economy are expected to change the landscape of the global commodity market and require adequate policies for sustainable development of all countries.

As for the main market actors in the new context, along USA - having large deposits of unconventional oil and gas, a major role in the global commodity market will continue to play China, the largest world producer of rare earths and metals, with a share of over 97.3% of total world supplies.

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RUSSIAN FOREIGN POLICY - INTERESTS VECTORS AND ECONOMIC IMPACT

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Abstract - In recent decades, Russia's foreign policy was shaped by both a number of internal factors (government strategy, political elites, culture, economics and demography) and external ones (international treaties, changes in the structure of the international power balance). In the post-soviet era Russian foreign policy was radically different from that of other major economic powers. One of the factors that influenced decisively Russia's external strategies was the collapse of the USSR as a superpower (phenomenon described by the president Vladimir Putin as "the most powerful geo-political catastrophe of the XXst century"). The shift from the former communist regime (a totalitarian one) to an authoritarian oligarchy (the current regime) was followed by the transition to a market economy, a phenomenon that coincided with Russia's military and political diminished influence in the international arena. Our research aims to assess the main interest vectors that shaped Russian Foreign Policy considering the main events that constitute milestones: Russia's emerging as a great energy power, the Crimean crisis and Western international economic sanctions that followed.
Our paper will base the main assumption on a joint analysis both qualitative and quantitative, using main international economic indicators (GDP, FDI flows, trade flows, general government balance and general gross debt) and the most relevant approaches in the literature in the field.

Key-Words: Russian Foreign Policy, Crimean crisis, geo-strategic approach

JEL Classification: F, F5, F 59.

1 Introduction

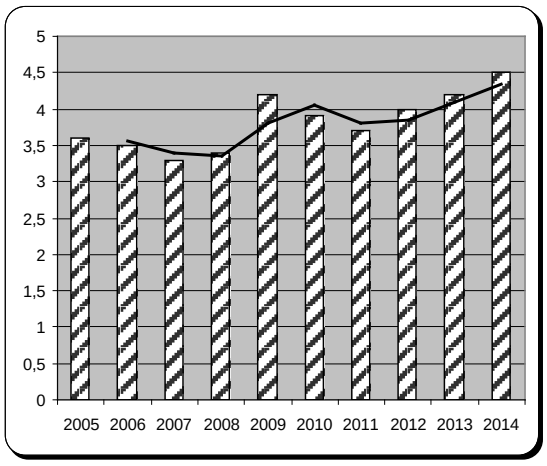
In recent years Russia's foreign policy has been driven by two major objectives: recovering country's status as a superpower in the global arena and regaining the same level of influence in international affairs as in the period previous to USSR's collapse. It should be noted that Russian efforts to be "reborn" as a major global actor has occurred amid significant changes of international political system[6]. Although during the Vladimir Putin's regime, military spending as a share of GDP have constantly increased (see Graph 1) and through the export of hydrocarbons (see Graph 2) Russia was able to maintain a stable economic growth, the country failed to exercise the same level of influence in the international arena as during the Cold War period.

Following these developments, Russia's foreign policy initiatives undertaken after the Vilnius Summit (culminating with the annexation of Crimea in 2014) should be perceived in the context of its efforts to rebuild itself as a geopolitical power at a comparable level to that registered during the Cold War era. Some analyses (Lo, 2015) show that the annexation of Crimea by the Russian Federation was "one of the biggest geo-strategic shocks" of the last 25 years. For the Western states, the annexation of Crimea has marked the end of illusions concerning the predictability of Russia's actions in the foreign policy field. Through its involvement in the Ukrainian crisis, Russia has demonstrated its will to reshape the geopolitical map of Europe, derailing the cooperation based on common economic interests with the West and regressing to the tensions during the Cold

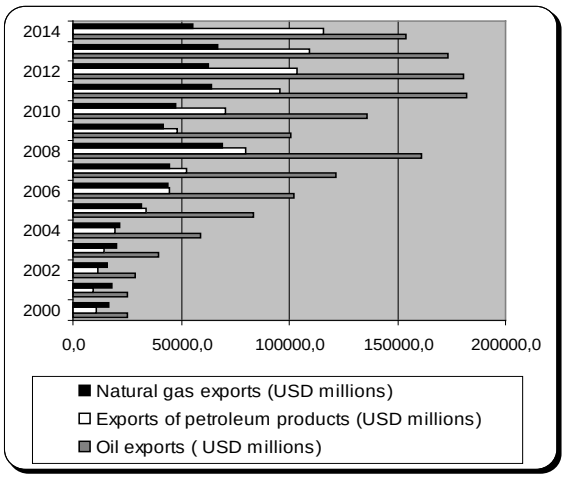
[6] After the end of the so called "Cold War" (conflict that occurred during 1945-1990 between the Soviet bloc and the Western states) followed by the disintegration of the Warsaw Pact, the international political system has been significantly reshaped, and Russia's influence as the second pole of global power has decreased.

War times. Hence, Russia has become the "central actor" in a global drama that started with the political and economic sanctions enforced by the West. Some analysts (Chifu, 2014) shows that there is a relationship of direct dependence between the foreign policy of Russia and the deepening of political and military tensions worldwide. Some analyses (Buzan, 2014) are emphasizing that the strategy of Moscow authorities regarding regional and international politics reflect a very different vision compared with the Western one. The Western states have counted on the pressure that Russia's isolation in the international arena might exercise, leading to the renunciation of its territorial claims in Crimea. On the other hand, the Russian authorities believed that by their actions they would achieve a new shape of the multipolar global order, diminishing the USA and EU leadership status worldwide. In this context, it should be noted that the Russia has proven itself to be capable of new strategic alliances and a new growth strategy as we will assess in the following sections of our analysis.

Graph 1: Russia's military expenses[7] during 2005-2014 (GDP %)



Graph 2: Russia's hydrocarbons exports during 2000-2014



Source: Author based on World Bank data.

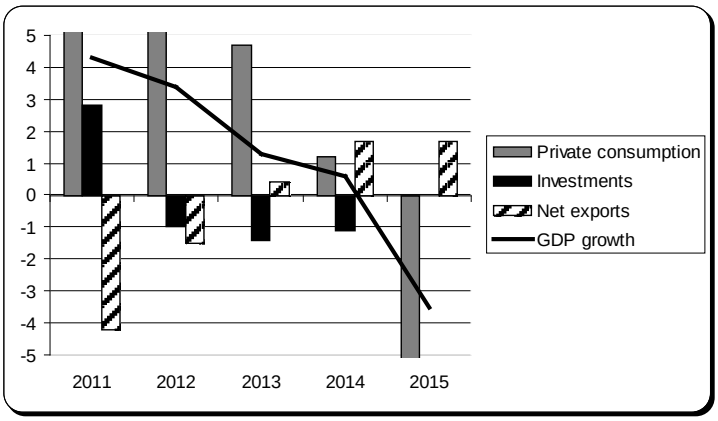
2 The impact of international geo-political tensions on the Russian economy

After a noticeable decrease of economic growth in the previous years, in 2015, the Russian economy registered a sharp decline caused by the downturn in net exports, investment and private consumption (see Graph 3).

According with some analyses (IMF, 2015) the new created geo-political tensions with the West risk to deep damage Russia's economy in the future, starving it of foreign funds and technological know-how (as the West has banned military and drilling technologies exports and closed the international capital markets for Russia).

Graph 3: The evolution of GDP and its main contributors during 2011-2015 (%)

[7] According to NATO, military expenditure as % of GDP refers to all expenses for armed forces, including peacekeeping forces, Defense Ministry and other government agencies engaged in various defense projects. These costs include gross wages for active military personnel and former military pension's Fund.



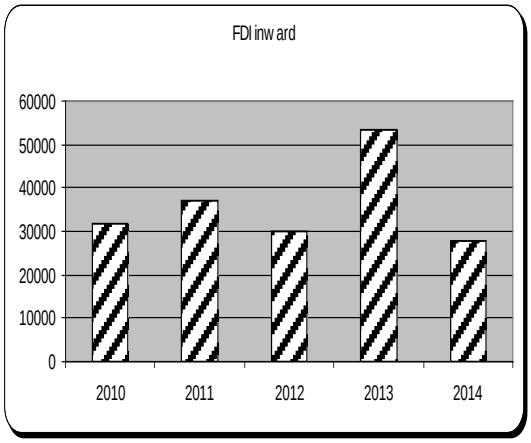
Source: Author based on World Bank and IMF data

It could be argued that Russia's new foreign policy of territorial claim occurred in a crucial moment when the country growth model based on energy exports proved its vulnerabilities. According to the latest IMF report (IMF, 2015), the evolution of Russian economy was set on a downward trend even before the onset of the crisis in Ukraine. Russian's economy decline occurred due to a lack of economic diversification and an increased dependence on oil and other energy products exports. The decline in growth occurred amid oil price collapse and the economic sanctions imposed by the international community, both phenomena leading to the instability of the Russian economy.

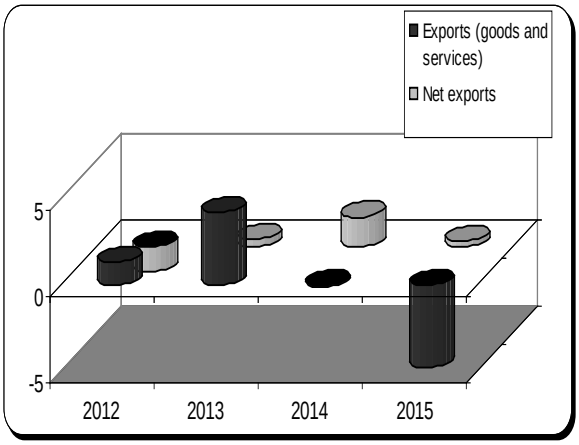
According to World Bank analysis, the investment and private consumption decline occurred amid withdrawal of massive external capital flows, as a consequence of the imposed sanctions, which have led to an increase of borrowing cost on foreign markets after the European Union "has closed" its financial markets for Russia. As some recent analyses pointed out (OECD, 2015) investments in Russia are expected to fall sharply in 2015 reflecting constrained access to Western capital markets, elevated borrowing costs and a deteriorated business environment.

Moreover, as the restrained access to foreign capital, reduced bank lending and deteriorated economic confidence weigh on the economy's export potential, export growth will turn negative in 2015, as structural bottlenecks and failing inward FDI prevent Russian firms to benefit from a weaker rouble (see Graph 4 and Graph 5).

Graph 4: Inward FDI flows in Russia (USD millions)



Graph 5: Exports growth in Russia (annual percentage change)



Source: Author based on OECD and EC data.

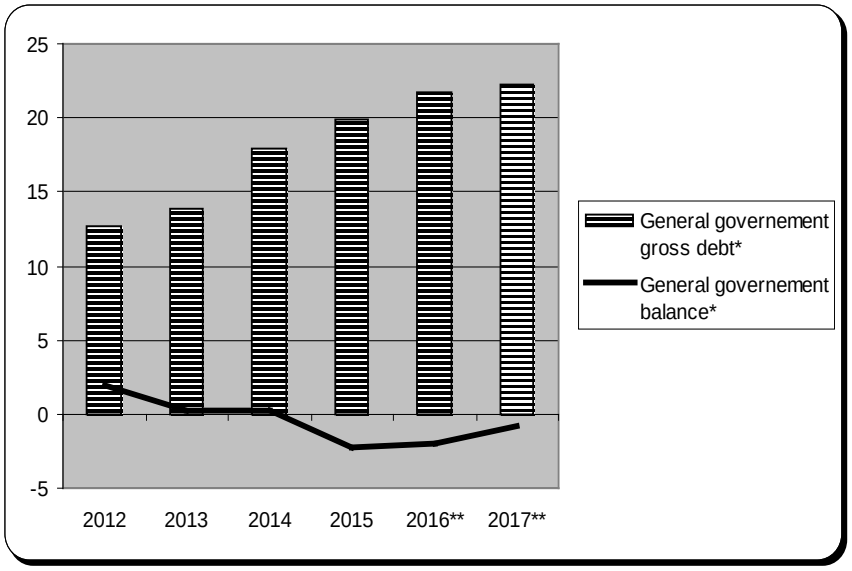
Moreover, in 2016, a further decrease in FDI inflows is possible to occur due to the downgrading of the Russian economy by Moody's from "unstable" to "junk" (not recommended for investors). Rating agency

Moody's downgraded the rating of Russian economy due to the economic effects of sanctions imposed after the Ukrainian crisis, the oil price decrease and the depreciation of the rouble.

As a result, it is possible that the outlook of the Russian economy continue to deteriorate throughout 2016, given that the state financial equilibrium will be challenged as a result of fiscal pressures and continuous decrease of foreign exchange reserves.

For the period 2015-2016, the European Commission (EC, 2015) estimates a worsening of the fiscal situation of Russia (budget deficits of 1.8% of GDP in 2015, and 1.4% of GDP in 2016) amid negative effects of the economic downturn, but also due to the national anti-crisis plan (with an increase of public expenditures) that will reflect negatively on the balance of public finances (see Graph 6).

Graph 6: General government balance and general gross debt (annual percentage change)



Source: Author, based on EC data. * As a percentage of GDP; ** Forecast

Faced with the difficult economic situation due to Western sanctions the Russian authorities are trying to find new ways to stimulate growth.

In the years before the Ukraine crisis, Russia simulated poorly the development of national industry and agriculture, basing its growth mainly on energy exports. As a result, Russia became dependent on imports of certain agricultural products and Western technologies. Hence, the export prohibition of certain goods (military products, weapons, drilling technologies) brought by the Western sanction is likely to jeopardize its economic development.

In order to stimulate domestic production and reduce technological imports dependence, Russian authorities have accelerated the modernization of industrial enterprises in the public sector and have also stimulated the local and foreign entrepreneurs in order to strengthen the business environment.

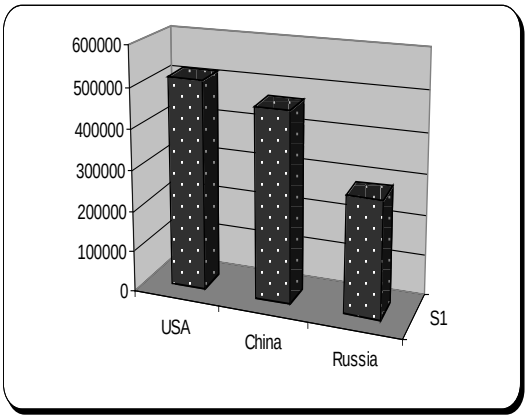
In 2015, the law creating a special fund to finance the scientific researchers and local builders entered into force. These funds may be used for obtaining advantageous loans, with a low interest rate. Also, in order to boost economic recovery, Russia has established (for the 2015–2018 period) a fund of 18.5 trillion rouble for stimulating national industry to replace by own production the technical components imported previously from the EU and other Western countries. Despite these efforts the situation of Russian economy remains volatile. Russia's biggest problem could be the risk of insolvency: while the external debt (public and private) amounts to USD 600 billion, the national foreign currency reserves are estimated only around USD 300 billion. IMF experts estimate that Russia's difficult situation illustrates the importance of cooperation between central banks and their crucial role in supporting expansionary policies of different administrations. Currently, Russia may not hope that other central banks will put pressure on their banking systems to provide a new financing for existing debt. Also, there is no possibility of an external loan from the International Monetary Fund, as happened in 1998 during the emerging markets crisis. The tense political relations with the EU and the USA have left Russia all alone and in need to find its own solutions to overcome the current economic crisis.

3 The new geopolitical game implications for Russia's new approach on external cooperation

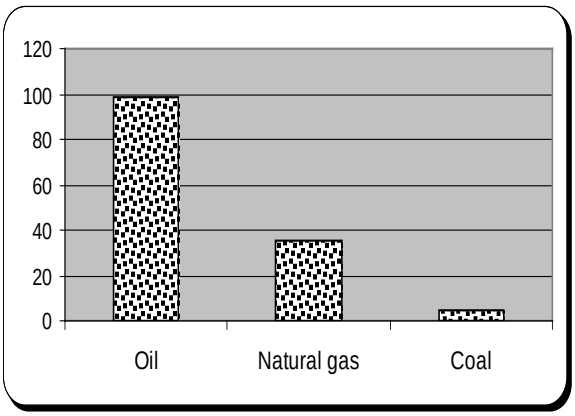
3.2. The European Union – Russia relations: A shattered cooperation

Russia's involvement in the Ukrainian conflict has severely affected the trade and political cooperation with the European Union. Consequently, although in 2013 (before the Ukrainian crisis), Russia was European Union's third trade partner (see Graph 7) and the main supplier of oil and natural gas (see Graph 8), in response to the illegal annexation of Crimea and deliberate destabilisation of a neighbouring sovereign country, the European Union has imposed restrictive measures against Russia.

Graph 7: European Union's main trading partners in 2013 (EURO million)



Graph 8: The value of European Union's imports of energy products from Russia in 2013 (EURO billion)



Source: Author based on EUROSTAT data.

One of the first measures taken by the European Union (EU) aimed at suspending new EU–Russia Cooperation Agreement. The EU-Russia summit was also cancelled and bilateral talks with Russia on visa matters were suspended. In addition, most of the bilateral and regional cooperation programmes were stopped, the only one maintained was related to the projects dealing exclusively with cross-border cooperation and civil society. Additionally, EU implemented a series of measures "targeted" against the Russian economy including: the blocking the Russian banks access to European capital markets, banning the export of military weapons, military goods and technology and non-military technologies susceptible to be used for military purposes.

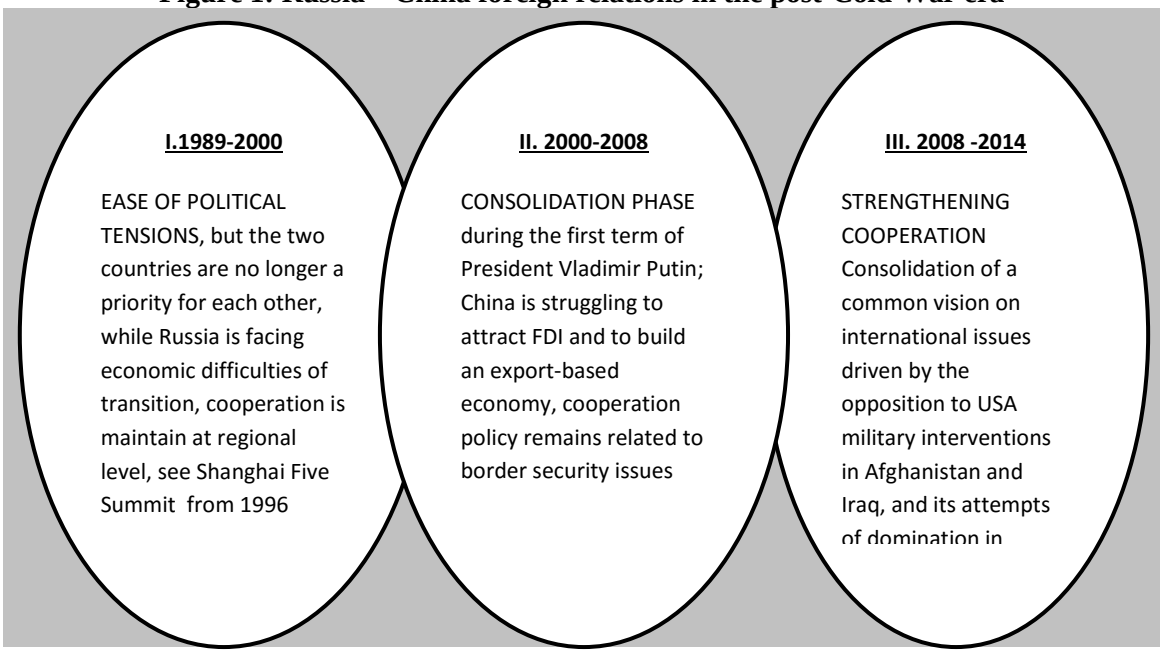
Both European Bank for Investment and European Bank for Reconstruction and Development have suspended their credit lines for Russia. Additionally, EU companies may no longer buy or sell new bonds, equity or similar financial instruments with a maturity exceeding 30 days, issued by major state-owned Russian banks or their subsidiaries outside the EU and.

In response to these sanctions, Russian authorities decided to impose themselves an embargo on the import of agricultural and food products from EU, US and Canada, this measure causing important losses for the European agricultural sector (approximately EURO 5 billion). Consequences of the import ban imposed by Russia are not to be neglected. Because of the loss of an important export market the European farmers were affected significantly (before the embargo, the Russian Federation imported 29% of total European production of fruits and vegetables, 33% of the cheese and 28% of the dairy). The embargo has generated a destabilizing domino effect on the European agricultural sector due to the fact that it occurred in full harvest season and the targeted products were perishable by their nature. The European Commission estimates that the restrictions imposed by Russia have affected the incomes of 9.5 million people.

3.2.” The soft alliance”: Russia – China cooperation

Some analyses (Gabuev, 2015) shows that because of the relative "freeze" occurred in foreign relations with both EU and USA after the Ukraine crisis, the Russian authorities turned their attention to strengthening economic and strategic partnership with China. To understand the complex implications of this new status we need to assess briefly the history of Russian-Chinese relations. While China and Russia (the former USSR) were in cold relations after the Sino Soviet conflict in the sixth decade of the twentieth century[8], this enmity began to lessen after the death of Mao Zedong in 1976, but relations were poor until the fall of the Soviet Union in 1991. After the end of Cold War, relationship between Russia and China may be divided into three distinctive periods (see Figure 1).

Figure 1: Russia – China foreign relations in the post-Cold War era



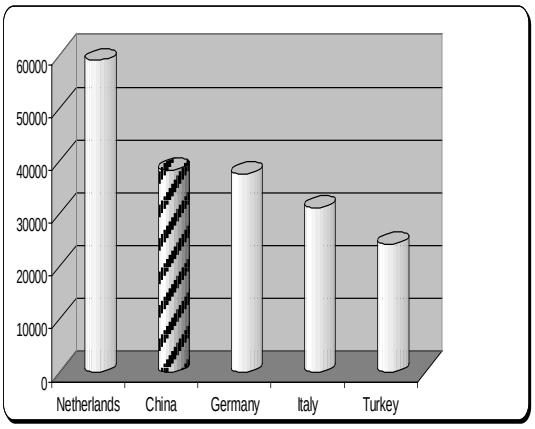
Source: Author based on studied literature in the field.

After USA and the European Union have imposed economic sanctions in response to Russian annexation of Crimea, the Moscow authorities have reoriented their foreign strategy to strengthen the trade partnership with China. It can thus be said that for China, the Ukrainian crisis represented a unique opportunity to gain access to the natural resources of the Russian Federation, especially those related to energy, natural gas, for example. Moreover, by strengthening the economic partnership with Russia, China has won several contracts on infrastructure, while Russia has gain an important market for the export of its products (see Graph 9 and 10). Gabuev (2015) shows that although it is unlikely to develop a military alliance in the future, China and the Russia could form a "soft alliance" that would allow Russian authorities to reduce the negative effects of the Western sanctions, supporting al the same Beijing authorities efforts to become influential both at regional and global level. In this respect, it should be noted that Russia dramatic turn towards China was obvious while a 400 USD billion deal to export gas to China and a 24.5 USD billion currency swap agreement were concluded between the two countries. This strategy is called by some authors (Gabuev, 2015) the “Asian pivot initiative” and represents Russia’s way to strengthen the vulnerable parts of its economy: dependence on the energy export on the European market, dependence on Western capital markets, and dependence on Western technologies. This new formed partnership could become more consolidated in the future if the USA and EU will push even further to isolate Russia on international arena. Some analyses (DIIS, 2015) have pointed out that if the United

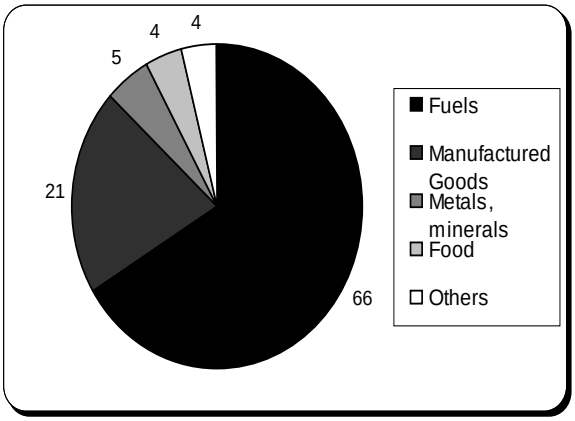
[8] They were competing for the control of the worldwide Communist movement. There was a serious possibility of a major war in the early 1960s and a brief border war took place in 1969.

States continuously pushes Russia through NATO and China through its "rebalancing" in the Asia Pacific, it will certainly drive Russia and China to become closer. Such an alliance could even cease to remain "soft" evolving toward a deepening economic and security cooperation between the two nations that will not only beef up their military capabilities, but will also create a military platform for alliance formation.

Graph 9: Russia's main exports destinations in 2014 (USD million)



Graph 10: Russian export structure by product group in 2014 (% of total)



Source: UNCTAD – *Key Statistics and Trends in International Trade*, 2014

It could be argued that the new strategy of Russia to strengthen the partnership with China is the effect of a series of analyses carried out by some Kremlin experts (Krasnopresnenskaya Embankment, 2014) who studied the systemic effects of other economic sanctions imposed by the West (for instance those imposed against North Korea and Iran). The analyses undertaken by the Russian experts have revealed the existence of some structural weaknesses of the Russian economy among which the most significant were: the critical dependence of imported technologies for offshore drilling, liquefied natural gas (LNG) plants or telecoms sector. In the same time, the Chinese authorities found that although the crisis in Ukraine could have some negative implications for Chinese interests[9], opportunities are still outweigh these risks. Some analyses (Cioculescu, 2014) have highlighted that the strategic alliance between China and Russia is based on a shared vision regarding a more balanced international system. It should be noted that both countries relate critically to international system "unipolarity" under the US dominium.

Moreover, even prior to the Ukrainian conflict, energy represented an area of major importance in the cooperation between Russia and China, while the revenues from the sale of oil on international markets represented (according to national estimates from 2013) 70% of Russia's federal revenues. Meanwhile, after becoming a net importer of oil (in 1994), China has been constantly interested in securing its supply of energy resources considered to be vital for the country's dynamic growth. The latest developments related to Russia – China cooperation in the energy sector are related to the acquisition by China National Petroleum Corporation (CNPC) of Russian oil fields from Vanke. Also, Chinese authorities' plans to secure country's energy supply involve building electricity factories in Eastern Siberia - a project that involves the Chinese companies Sanxia, Yangtze Power Group and State Grid Corporation.

But perhaps the most important aspect of the new Sino Russian cooperation is related to the gas production and respectively its export by the Russian Federation in China. The long-awaited agreement in the gas sector was concluded in May 2015 when Gazprom signed with CNPC a contract to supply gas from two fields of production in Eastern Siberia (Kovykta and Chayanda). The gas will be delivered via new pipeline "Sila Sibiri"

[9] Russian annexation of Crimea and the new postulated rhetoric of nationalism and self-determination were perceived as threats that could worsen the already complicated status of Taiwan and Xinjiang, given the fact that there is an important Russian minority in both provinces.

("The Power of Siberia" a.n.[10]) which will deliver 38 billion cubic meters annually, by 2030. Although the two countries did not disclose the transaction price, its total cost is estimated around USD 400 billion. It is important to note that such strategic economic agreement would not have been possible without political negotiations. However, some analysts warn that the contract could bring only a marginal profit for the Russian authorities because infrastructure costs are high. According to Gazprom estimations the new pipeline construction involves a total cost of 55 USD billion. In order to support this financial effort of the Russian company, president Vladimir Putin has committed to introduce a more favourable tax regime. This action is justified given the fact that the construction of this pipeline will be able to secure an adjacent income in the future (similar with case of Soviet-German pipeline construction from 1960 which currently allows Gazprom to obtain high revenues from selling gas to the European market).

Although China energy partnership with Russia will bring undeniable long-term benefits, the financial liquidity problem of Russia is of a much more pressing nature. By introducing sectoral sanctions in July 2014, the EU has cut Russia's access to Western capital markets. Hence, many state owned financial institutions from Russia faced real financing difficulties. This has increased the country's risk while driving away the foreign investors. As a result, Russian companies have been isolated from the financial centres of London and New York and faced with the need to find alternative capital resources. In May 2014, a Russian official delegation including Minister Igor Shuvalov visited China to discuss the possibility of replacing Western financial loans with credit lines from the Chinese financial institutions. Chinese partners, led by Vice Premier Zhang Gaoli, committed to support the Russian banks. During this meeting the necessities of increasing the role of national currencies in bilateral trade was also discussed, since such a future development could reduce both countries dependence on the US dollar. A solution was found through according some additional loans by Chinese state banks to Russian companies.

So far, this new cooperation in the financial sector has demonstrated both its benefits and limitations. The most important challenge is related to the possibility of using national currencies in bilateral transactions between China and the Russia. During the visit made by Li Keqiang in Moscow in October 2014, the Central Bank of the Russian Federation and the People's Bank of China signed a three-year swap agreement worth 150 RMB billion (approximately 24.5 USD billion). This Agreement is the 20th of its kind for China, which currently uses currency swap agreements with major trading partners to promote a stronger RMB worldwide. For both China and Russia, this agreement represents a step forwards in fulfilment the joint strategic goal of achieving at least 50% of their bilateral trade in their national currencies. The logic of this approach is not only a political one. Bilateral trade in national currencies can be advantageous for both Russian and Chinese avoiding risks related to currency conversion. However, the limited convertibility of the RMB, which still has a controlled exchange rate, represents an impediment to the full success of this type of transaction. In this context, it is not irrelevant to note that major Russian companies that have converted part of their foreign financial assets (because they feared that a new "package" of sanctions could lead to blocking them) chose rather to transform these funds in Hong Kong dollars (with an exchange rate linked to the US dollar) rather than RMB. However, it should be noted that in the event that both Russia and China would decide to trade goods of major importance (such as oil or natural gas) in their national currencies, the impact on the international capital flow will be a major one. Such a scenario seems possible given that, according to a statement made by president Vladimir Putin, from November 2014, Chinese authorities have already expressed their plan to purchase oil from the region Vanke paying with RMB, which the Russian side (the company Rosneft) might later use to purchase Chinese drilling equipment.

However, to reach such an agreement, it is necessary to find a solution regarding the exchange rates of RMB, establishing the type of exchange rate used, the "onshore one" (with an exchange rate more controlled) or the "offshore one" (with a freer exchange flotation used for trade conducted through Hong Kong). The benefits of achieving such an agreement are obvious for both sides. Such agreement would enable Russia to reduce the risk of being over-exposed to fluctuations of the euro and US dollar, while for China could be a step along the road to promote the RMB as a global currency

4 Conclusion

[10] Author's note.

One year after the Ukrainian crisis, it can be concluded that the Russian Federation has undergone strong isolationist pressures in the international arena coupled with economic sanctions. However, Russia's strategies for economic revitalization should not be underestimated, especially given that the Russian authorities have shown willingness to refocus on increasing strategic partnership with China - a global player with a growing importance. As regards to regional policy regaining economic and political influence in the former Soviet space remains a strategic priority for Russia. To achieve this goal, the Eurasian Union project (which became effective from 1 January 2015) remains a vital one. However, this project is subject to a series of centrifugal forces of which the most important is represented by the involvement of Moscow in the Ukraine (Moagăr–Poladian&Drăgoi, 2015). A major input for the Eurasian project success might be to secure Iran membership. With regard to this possible development, Iranian Foreign Minister Ali Akbar Salehi stated, in 2015, that Iran does not reject the possibility to join the Eurasian Union. Such outcome would allow Iran to break free of its isolationism, also contributing to strengthening the Russia – Iran cooperation in the energy field. However, in order to secure Iran as a Eurasian Union member, Russia should give priority to the principle of equality and renounce at its hegemonic claims, giving other members the ability to exercise significant powers (following the EU model of co-decisions and joint responsibility).

Russian efforts to overcome its isolationist status in the foreign affairs field are visible and if we analyse its recent militarily interventions in the Syrian conflict. Although during 2014-2015, the Russian economy has experienced a visible downturn, its recovery remains possible in the light of new cooperation with China in the field of energy trade and financial swap agreements. If the Russian authorities will manage to better capitalize their energy resources by targeting China, this outcome could boost Russia's economic recovery.

Another way to strengthen the global influence of Russia is represented by its catalytic role in BRICS. In 2015, the meeting of both BRICS and Shanghai Cooperation Organization (an alliance of an important economic and military significance) took place in Moscow. During those reunions Russia expressed its support for the launching of BRICS Bank conceived as a counterweight to the Western financial domination.

BRICS Bank will have an initial capital of 50 USD billion (which will later be expanded to 100 USD billion). It is stated that BRICS Bank could become second as global importance after World Bank and will play a crucial role in financing emerging economies, while reducing the founding countries' (Brazil, Russia, India, China and South Africa) dependence on Western capital flows.

We may conclude that in the new multipolar reality, Russia has directed its efforts toward finding new economic and political alliances, trying, even if indirectly, through its involvement in the Syrian conflict, a reconstruction of the relationship with the West. From all these strategies come off its major long-term goal: asserting itself as a powerful global actor, while regaining its influence in the former USSR geopolitical space. If the involvement in the Ukrainian crisis brought indisputable economic disadvantages for Russia, we cannot ignore the fact that some long-terms benefits could emerge from the new reinforced partnership with China. The power of the alliance between Russia and China should not be underestimated. In the new geopolitical game if the Western tries to isolate Russia even further will enable the success of soft Sino-Russian partnership rather than conserve their hegemony in the global arena.

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CHINESE RETAIL MARKET: REAL POTENTIAL TO BECOME THE GREATEST WORLDWIDE BEFORE 2020

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Abstract: - The present article tries to capture current market developments of the Chinese retail sales in the last 4-5 years, emphasising its tendency to become the first global market before 2020. The author makes a brief analysis of the Chinese retail market sales characteristics including growth rates, sales structure, influencing factors (population growing income, urbanization, consumer goods imports).
The characteristics of the constantly changing retail consumer market and the main challenges faced by the trans-national companies activating on the Chinese market represent distinct points in the analysis undertaken in this article.

Key Words: China, domestic economic growth, domestic consumption, retail trade, forecasts, trans-national companies.

1. Introduction

Starting with the crisis of 2008-2009 that affected most Western countries, the main markets for Chinese products, Chinese authorities began to increase domestic consumption as a solution to reboost growth based until then mainly on production and exports.

Increasing domestic consumption was a way to absorb the unsold production designated for Western markets, but also the consequence of increased revenue of native population. Urban population has grown with a steady trend in recent years contributing strongly on the increase of domestic consumption. Finally, strong investments in the last 20-30 years have led to increased labour productivity and, therefore, increased income, with the consequent enhance of the consumption.

There is therefore a virtuous circle between domestic consumption growth and overall economic growth, this shift in economic paradigm representing a path followed by other countries (Japan, South Korea, Hong-Kong), a few decades ago. As in these countries, the transition from the development model based on investment, production and exports to one based on production and domestic consumption is difficult. Some analysis show that such transition entails that compliance would be univocal from economic growth to domestic consumption growth, not vice versa - (Yukon Huang 2015). However, those countries have shown that this approach may be followed successfully.

The primary economic objective enshrined in 2011-2015 five-year plan of the Chinese government, directing the governing of the economy on a more sustainable direction is changing the country's development strategy from overdoing investment and exports to domestic consumption.

Considering, therefore, the assertion that the increase in domestic consumption in the longer term will lead to sustainable economic growth, we expose below the main trends and characteristics of the retail market in China. The market has experienced high growth in the last 6-7 years.

2. Evolution of the Chinese retail market in the last few years

The volume of retail sales in the Chinese market rose steadily, from 11.48 billion RMB in 2008 to 18.39 billion RMB in 2011 and 26. 20 billion RMB (approx. 4.30 billion $) in 2014 (China Daily 2014 and China Internet Watch, 2015-1).

Although the growth rate of retail trade declined gradually from a peak of 18.3% in 2010 to 8.8% in 2014, for China, however, the analysts forecast a large increase in annual retail sales, 8.7% both in 2015 and in 2016 (see Table 1). As will be observed from the table data, goods retail sales in China was consistently high during 2011-2015 and they are expected to remain so in the next three years, being the highest and constant annual increase registered compared with those of the presented Asian countries. According with the latest projections (China Internet Watch, 2015-2), in 2018, China will be the largest retail market in the world, surpassing almost two times the capacity of US market.

Table 1. Growth rates of retail sales in some Asian markets during 2011-2018

	2011	2012	2013	2014	2015	2016	2017	2018
					estimates	prospects		
China	9.1%	8.7%	9.3%	8.8%	8.7%	8.6%	8.0%	7.9%
Hong Kong	18.6%	5.5%	6.6%	3.1%	2.0%	-1.0%	0.4%	1.3%
India	5.7%	2.7%	1.7%	4.0%	5.6%	6.2%	6.2%	6.6%
Indonesia	6.0%	5.3%	4.3%	3.8%	5.1%	5.4%	5.0%	5.0%
Japan	0.1%	1.5%	0.7%	0.2%	0.0%	0.3%	0.4%	0.8%
Malaysia	4.6%	4.7%	6.4%	5.4%	5.3%	4.6%	4.6%	4.8%
Philippine	3.2%	5.4%	4.4%	4.2%	5.3%	5.4%	5.4%	5.5%
South Korea	2.1%	1.3%	-0.1%	1.6%	2.9%	3.1%	2.8%	2.9%
Taiwan	3.6%	0.6%	2.5%	2.9%	2.5%	2.4%	2.7%	2.3%
Thailand	1.4%	4.9%	-2.4%	0.6%	0.7%	3.6%	3.4%	4.3%
Vietnam	6.7%	3.9%	3.8%	9.5%	8.4%	7.6%	6.0%	6.5%

Source: China internet watch, China to Become World's Largest Retail Market by 2018, March 19, 2015

In the urban area, sales reached 22.6 billion RMB, 11.8% more than the previous year, while in rural areas it reached 3.6 billion RMB, 12.9% higher than in 2013.

Food and beverage purchases have increased in China in 2014.. In the first half of 2014, transactions in the sector have reached 17% of all retail transactions in the Chinese market. Sales of tobacco and alcohol must face austerity campaign promoted by the Government, but manufacturers have begun to implement measures to counter this trend. Revenues from sales of catering industry reached 2.8 billion. RMB in 2014 (9.7% vs. 2013) and the remaining consumer goods recorded sales amounting to 23.4 billion RMB with 12.2% more than the previous year.

It is estimated that sales of services will also increase due to increased consumption of products. Spending on information goods and services have become particularly important in the retail sales, the most dynamic segments of this market being Internet and mobile phones sales, which achieve an annual growth rate of approx. 50%.

Sales of real estate and vehicles are on a downward path.

Between national retail markets worldwide, China is becoming the biggest market for grocery products, luxury goods, as well as electronic appliances.

According to an article from China Daily, public expenditure decreased by approx. 10% annually in 2013 and 2014. An analyst [11]quoted in the China Daily article advised the government to stimulate consumer spending, by boosting the urbanization. It also suggested enhanced imports to meet increasingly diversified population needs (China Daily, 2015).

Regarding the Chinese retail trade share in GDP, it increased continuously. In 2014, final consumption expenditure accounted for 48.2% of GDP, 1.3 percentage points more than in 2013.

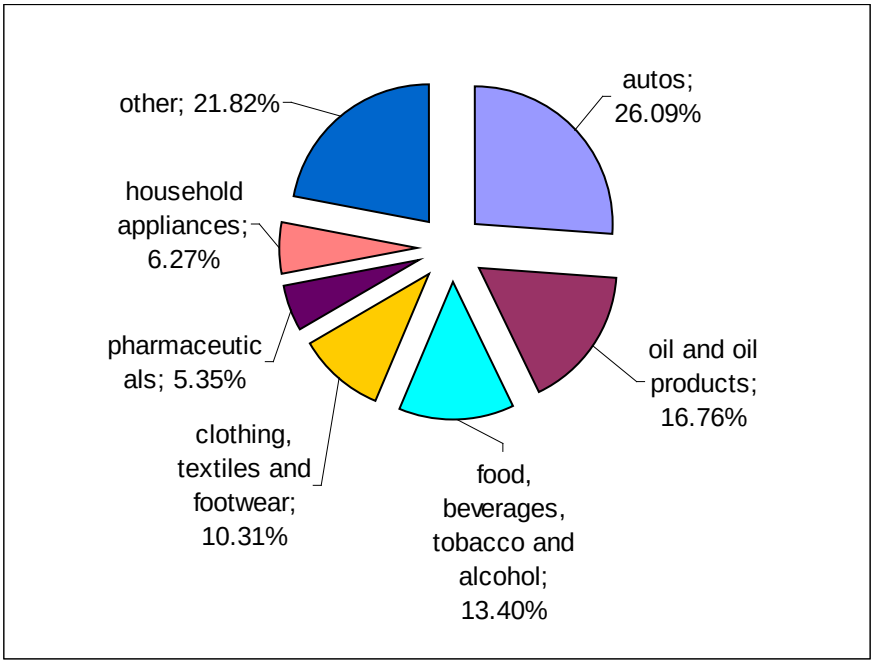
Structure of China's retail market is shown in Figure 1.

In 2014, it can be observed the overweight of vehicles (26%), oil and petroleum products (16.76%) and food, beverages and tobacco (13.4%) groups. The group „other goods" also has a significant weight (approx. 22%).

[11]Zhao Ping,deputy director of the Chinese Academy of International Trade and Economic Cooperation, which is under the Ministry of Commerce.

In the first half of 2015 (China Daily Europe 2015), China's total retail sales reached 14.16 billion RMB (2.32 billion USD). Only in June 2015, retail sales were 10.6% higher compared to the same month last year and 0.5% higher than in May (v. Table 2).

Figure 1. Structure of retail sales in the Chinese market in 2014



Sursa: Wang Zhuoqiong (China Daily), "Flat year" for consumer goods sales, 2014-04-23

Table 2 The monthly increase in retail sales of consumer goods of China, between June 2014 and June 2015 (% on annual basis)

2014							**2015**				
Month											
06	*07*	*08*	*09*	*10*	*11*	*12*	*01- 02*	*03*	*05*	*05*	*06*
12.4	12.2	11.9	11.6	11.5	11.7	11.9	10.7	10.2	10.0	10.1	10.6

Source: ChinaDaily Europe, China retail sales up 10.4% in H1, updated 2015-07-04

During January – June 2015, online retail transactions experienced an important increase 39.1%, compared to the same period in 2014, reaching 1.65 billion RMB. Such success in this market is mainly due to the rapid development of electronic commerce.

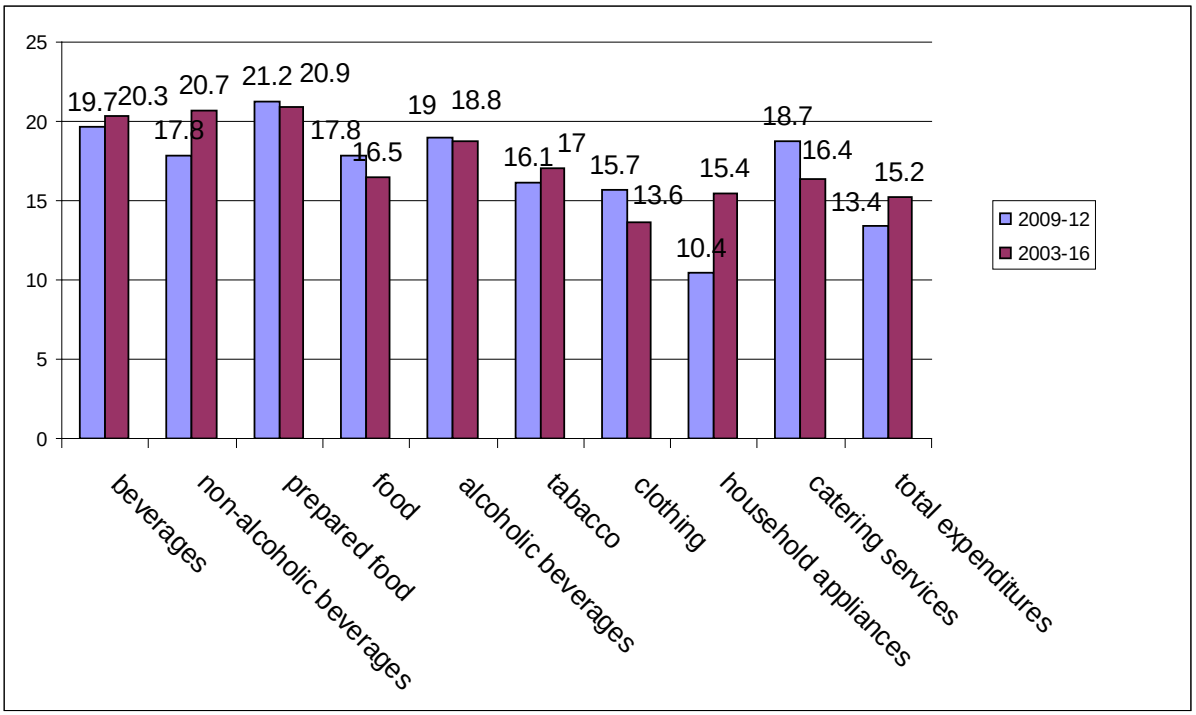
According to a governmental think tank (RetailWatch 2015), the Chinese state will not encourage increased in domestic sales by a certain policy; this growth will occur organically as population will spend more to improve their living standard once income will increase. Another driver for domestic consumption projected growth will come as a result of the relaxation of the one birth-child policy.

Evolution of the average annual growth rate of retail sales in different categories of consumer goods in the periods 2009-2012 and 2003-2016 is shown in Figure 2. As it can be noted, the largest increase in both periods is recorded by prepared foods (21.2% during 2009-2012 and 20.9% during 2003-2016), followed by beverages (all three categories of general beverages, alcoholic and non-alcoholic), catering, tobacco products and unprepared food.

According to a survey of firms Bain Company and Kantar Worldpanel, in July 2015 (South China Morning Post 2015), for the third consecutive year, the Chinese marks have gained significant market share from foreign competitors at fast moving (non-long-lasting) consumer goods (FMCG), due to the deficient presence of the latter in smaller cities. The study shows that domestic brands from foreign competitors have

gained about 70% of the market for some 26 FMCG groups. Foreign brands gained ground in case of 8 categories of goods. The cause is that foreign firms sell more in supermarkets in the big cities. However, in recent years it was an increased consumer preference for online sales and the smaller stores. In 2014, total retail sales in the markets of large cities increased on average by 2% compared to 7.7% in smaller towns.

Figure 2. Annual average growth of retail sales by category of goods, 2009-2012 and 2003-2016 periods, in %



Source: The Economist Intelligence Unit, Retail in China, 2014

Another trend highlighted by the authors of the cited above survey is the increase of the competitiveness of Chinese brands as result of investing more in marketing, better policy and better trade mark penetration on commercial channels, both online and offline. Chinese consumers started buying more and more categories of sound and high-quality goods, being willing to spend higher amounts on food and personal care goods.

3. Development of some indicators characterizing the retail market in China

A. Evolution of consumer prices in 2014

In 2014, consumer prices rose by 2% in China (China Internet Watch, 2015-1). Growth was 2.1% in urban areas and 1.8% in rural areas. For the major categories of goods, the situation is as follows:

- Food prices increased on average by 3.1%;
- Prices of cereals increased by 3.1%, oils and fats decreased by 4.9%, those of pork meat fell 4.3%, while those of vegetables decreased by 1.5%.
- Clothing prices rose 2.4%;
- Household goods, maintenance articles and services increased their prices by 1.2%;
- Health care and personal care items experienced a price increase of 1.3%;
- Prices for recreation, education and culture items and services increased by 1.9%;
- Housing prices rose 2%.

Among the goods with prices declining it is mentioned:

- Tobacco, liquors and other items related to them, which reduced their prices by 0.6% and
- Prices of transport and communication sector, which fell slightly by 0.1%.

In 2014 the average producer prices for industrial products fell by 1.9% compared to the previous year, while purchasing prices for industrial products fell by 2.2% in the same period.

B. Increase of Chinese residents' income in 2014

According to an integrated study on Chinese households, national income per capita available in 2014 was RMB 20,167 representing a nominal increase of 10.1% or a real 8% (after deducting price factors), compared to the previous year (China Internet Watch, 2015-1).

In the segment of permanent residents, per capita income of urban households was 28,844 RMB representing an increase of 9% nominal and 6.8% real one.

In rural areas, per capita income was RMB 10,489, i.e. 11.2% higher in nominal terms and 9.2% in real terms, compared with 2013. Average national disposable income in 2014 was RMB 17,570, with an increase of 12.4% over the previous year.

China's Gini coefficient for disposable national income in 2014 was 0.469. Income per capita in rural areas was RMB 9,892, i.e. 9.2% real growth.

The number of rural migrant workers in late 2014 was approx. 274 million, i.e. 5,012 (or 1.9%) more than in the previous year. The number of local workers and those from other places was cca.106 million and 168 million, i.e. 2.8% and, respectively, 1.3% higher in 2014 than the previous year. The average monthly income of migrant workers amounted to RMB 2,864, 9.8% higher than in 2013.

C. Imports of consumer goods - weak trend in the last 3-4 years

For China, import growth is an important goal targeted in the five-year plan launched in March 2011. In May 2012, the State Council issued guidelines in this regard which has emphasized the need to improve the structure of imports, and bringing into the country, advanced technology equipment, components and spare parts, raw materials and consumer goods„(US-China Business Council 2013). Increasing the availability of imported products may benefit to the Chinese economy in several ways, including through increasing domestic consumption.

In 2012, for example, under the agreement with the US, China agreed to reduce or eliminate its customs duties for consumer goods such as cosmetics, equipment of all kinds, accessories, jewellery, watches and cars.

In May 2015, BBC announced cuts in China's consumer goods import taxes, of 50%, on average, in the government's attempt to boost sales of foreign consumer goods (BBC, 2015-1). High customs duties on imported consumer goods led some Chinese consumers to shop abroad or through agents. By lowering import duties, the Chinese government hopes to persuade some of these consumers to purchase imported goods.

The government is particularly concerned with promoting domestic demand as an important driver of economic growth as the country experienced a weaker economic growth since 2011. The reduction in fees is „a measure to promote stable growth and continue structural reform" said a ministry official of the Chinese Finance Ministry (US-China Business Council 2013).

From 1 June 2015, western-style garments charges were reduced from 14-23% to 7-10% for the high-heeled and sport shoes and were halved to 12%, and for cosmetic products would fall from 5% to 2% (BBC, 2015-1).

However, import duties are not the only ones to determine the prices of consumer goods in China. VAT and other taxes also play an important role. Analysts (BBC, 2015-1) say that, on average, Chinese consumers pay 20% more on luxury goods than those in Europe.

However, the measures taken had not produced the expected result. In September 2015, the Chinese imports decreased for the 11th consecutive month, being a reason of concerns regarding the downturn of economic growth of the country. The decrease was 17.7% in RMB value (approx. 20.4% in USD value), compared to a decrease of 14.3% in August (Economy Watch, 2015).

The decrease in imports in China has many causes, but analysts emphasize the weak domestic demand, even when state policy is trying to make the transition from an economy based on export growth to one based on domestic consumption growth (the US and EU model of growth). This decrease suggests, according to analysts from BBC (BBC, 2015-2), the fact that domestic demand is not as strong as the government hoped.

4. Forecast of China's retail market in the next five years

From the retail perspective, the economic crisis of 2008 marked, according to a study of The Economist (EIU, 2014), a turning point in geo-economics. It not only highlighted the weakness of financial markets in America and Europe, but stressed a fracture that had begun to emerge between mature retail markets with a much higher growth dynamic and those of the emerging countries.

As a result, for the period 2012-2022, Latin America, Asia and the emerging countries in Africa and the Middle East will be at the forefront of retail trade growth globally, while the influence of North American and Western European market will decline. In this context, China's retail market has become increasingly important. In 2013, it was the second retail market worldwide after the USA.

Since 2014 the analysts of The Economist forecasted that, in the context of US market stagnation, the development of the Chinese market retail sales will lead in 2020 to the China's advance toward USA, hence China becoming the largest retail market in the world. It is also forecasted that in 2022 China will have a quarter from the global retail sales in the 60 analyzed markets by the EIU study.

The future of Chinese retail market is presented in Table 1, where the forecasted growth of these sales ranged between 7.9% and 8.6% between 2016 and 2018. Their volume will grow from about 2 billion USD in 2012, approx. 4 billion USD in 2016 and more than 8 billion USD in 2022 (EIU 2014).

Regarding the consumer goods sector, amid the transition of China from the earlier role, of global manufacturer, to that of economy of consumption, based on domestic demand, it is expected that the country will be at the forefront of the global demand for a wide range categories of FMCG.

This forecast has attracted the attention of many foreign retailers. Four of the major retail sales - the trans-national companies Wal-Mart, Carrefour, Metro and Tesco - have invested heavily in the Chinese market. They were joined by companies specialized in the sector of luxury products like Burberry, PPR and LVMH.

In a study covering seven major markets worldwide quoted by The Economist (China, USA, Canada, India, Japan, Russia, Brazil), China led on all categories of consumer goods, apart from one (household products). Drinks and food preparations are expected to experience a strong growth in China until 2018. The increase in wages in China will bring higher disposable incomes, particularly among consumers in rural areas and in towns of the size categories 3 and 4 (from the point of view of the total number of inhabitants) within the country that will determine the general consumption growth.

In the opinion of The Economist analysts there are, however, pitfalls associated with China. Despite the large number of companies that have invested in this market and the belief that investment growth is a guarantee, it is not always the case. Some key markets in China have experienced a decrease in the growth rate, and the careful government control of corruption and welfare display put pressure on luxury goods sales. What it is, however, essential, according to some analysts, is that foreign multinational companies are investing in China today not because of the cheap labour force, but, especially, for the future development prospects of the huge domestic demand absorption. The reasons for this confidence are the urbanization rapid growth and the continuous increasing of household incomes.

Regarding urbanization, its rate in 2011 already exceeded 50%, which, as per experts, is a huge percentage given China's population. According to a study cited by The Economist, during 2012-2022, more than 10 million people will move annually from rural to urban areas. In addition, there is a forecast that in China, in 2020, will emerge 13 mega-cities, defined as cities with population of over 10 million.

Currently, in China there are only three known megalopolis: Beijing, Shandong Peninsula and Greater Shanghai. Some of the future mega-cities will be in the centre of the country, the region where urbanization and GDP growth are now extremely fast. Therefore, it can be said that, in relation to all countries of the world, China is increasingly becoming a country with an average income per capita, and in this case, private consumption will begin to be increasingly important. Another very important feature for retail development in China is the developing infrastructure, not only that of transport but also the facilities for maintaining safety and food security.

5. Challenges for foreign companies (and local ones too) in the future Chinese retail sales market

Experts who study Chinese retail market highlight a very important idea: the fact that for the large dealers worldwide, China is a local business; 98% of the goods that they sell in the Chinese market are produced in China and for China.

In the perspective that income levels will double by 2020 along with an important increase in the urbanization process, many foreign companies will try to conquer the Chinese retail market, but there is a number of challenges for them. One of these challenges is the great success of Chinese companies. Such companies often have a huge advantage that Western companies do not have: a very good knowledge of Chinese consumers. For this reason, foreign companies must become more and more „Chinese. For example, Nestlé company has now come increasingly a Chinese business, on the market of this country.

Another challenge for foreign companies in China is that the legislation raises many problems. Also, the supply chain and procurement must be controlled entirely by foreign companies who have created and use it to ensure the quality of products sold (this must correspond to that of products sold in the west). An example is the work of the same company - Nestlé - which has founded an institute for the milk producers qualification, where they train approx. 10,000 farmers annually, to make them more efficient and to persuade them to remain in the dairy industry.

Equally important aspects are:

- Customer confidence. In certain context, many Chinese consumers do not trust the local brands and prefer the foreign ones. An example was the baby milk powder scandal in 2013 involving the production company Xile Lier.

- Customer behaviour and increased complexity of local demand. Foreign firms call it „multi-channel approach" (it is about the diversification through electronic commerce), which can ensure the success.

- Extremely fast innovation in the retail sector in China. In the West, analysts appreciate that companies are moving more slowly in this respect. In China, however, everything happens very quickly. Foreign companies must adapt to this situation, but it is a challenge for the Chinese companies too. There are numerous start-up firms that are beginning to develop new products, new ideas. „It's one of the amazing things in China: you have a great idea and you can open a factory or even more with a single successful product", stated a participant in a panel consisting of representatives of foreign companies operating in the Chinese market (EIU 2014).

- The site of a commercial retail company. For example, in the province of Inner Mongolia, in northern China, where there are many mines, the population is quite rich and comes to make purchases in Beijing. In this situation, luxury goods stores, for example, can be located so as to be accessible to all segments forming cluster - cities[12].

Being the second largest consumer market in the world, businessmen from home and abroad are increasingly interested in China. In this light, the Committee of Experts of the General Chamber of Commerce in China, with Fung Group and China Business Herald Research Institute released the 12th report series "Ten highlights of China's commercial sector 2015" (RetailWatch 2015).

These ten features that should be considered by all companies operating on the market are:

-Consumer market is growing steadily; rational consumption remains the norm;

-Institutional reform of the distribution sector is underway; the key is a better regulatory environment;

-Catering market transformation and modernization; the new trend of meal at a restaurant;

-The luxury market slows down while 'affordable luxury' is gaining popularity;

-Department stores - big supermarkets restructured; convenient, quotidian stores, in the spotlight;

- Online-offline competition is intensifying; 'O2O' a trend of the future;

-Wholesale markets meet the transformation and upgrading;

-Express delivery firms multiply, promoting the development of logistics;

-Innovation drive operational transformation, creating new business models;

-Towards a new era of consumerism.

6. Conclusions

The main conclusion of this paper is that the Chinese retail sales market will continue to expand in the coming years, to place itself first at global level by 2020 (as some forecasts show), primarily as a natural

[12] Cluster-cities are urban settlements consisting of several cities by developing infrastructure ties to get them together, or a big city which, by development, comes to include other neighbourhood settlements.

tendency, correlated with increases in standard of living and with efforts to change the development model of the Chinese economy from one based on production and export to one sustained by domestic consumption.

In 2014, final consumption expenditures accounted for 48.2% of GDP, 1.3 percentage points more than in 2013.

In the period 2008-2015, sales on the Chinese retail market have experienced significant and constant increases, year by year, between 8 and 18%. In the next 3 years these increases will be, according to forecasts, of approx. 8%.

In 2014, the volume of retail sales in the Chinese market reached about 26.2 billion. RMB (approx. 4.3 billion USD). It is expected that in 2022 the volume will go beyond 8 billion USD, double than in 2014. The market structure, in 2014, was dominated by some products groups such as vehicles, oil and petroleum products, food, beverages and tobacco.

An important trend is the clear preponderance of Chinese sellers and brands, as a consequence of investing more in marketing, better policy and better trade mark penetration of the commercial channels, both online and offline.

Among the factors that contribute greatly to the development of retail sales in the Chinese market may be included: increasing competitiveness of the Chinese brands, growth of the Chinese residents income, increasing consumer goods imports, fast urbanization, increased confidence for China products, change of consumption habits (such as growing preference for luxury goods, catering industry and smaller sized stores), e-commerce growth, extremely fast innovation.

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THE ROLE OF FOREIGN DIRECT INVESTMENT IN SUSTAINING CHINA'S ECONOMIC GROWTH

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Abstract: - In over three decades and a half of spectacular economic growth – starting in 1979 with the launch of reform processes and with the dynamic mutations from an autarchic to a global model – the introduction and implementation of the policies targeting the use and attraction of foreign direct investment (FDI) represented an exceptionally important stage in China's history of international "openness," playing an active role in the promotion, support and enhancement of its economic development. The aim of this article is to outline China's sinuous investment path, from the autarchic pattern followed by the stage of economic openness characterised by the application of the "open doors" policy and up to the rethinking of the development paradigm and the country's affirmation on the market as a new powerhouse in the global economy. Our research also aims to outline the implications that all these stages had on China's current position of world leader in terms of inward FDI. As such, by means of comparative, quantitative and qualitative analyses, we will examine the evolution in time and the external impact of policies regarding the attraction of FDI, as well as the strategy aiming at incentivising Chinese outward investment – a relatively recent phenomenon – and the related support measures, in order to identify the country's current development stage and its position in the global landscape, as well the possible challenges that China might face in the future.

Key-Words: China, foreign direct investment, economic growth, inward/ outward FDI

JEL Classification: F21, F43, F62, F63.

1. Introduction

The paradigm change and the gradual evolution of the national policies and legislation concerning the inflow of foreign direct investment (FDI), from restrictive to passive attractive and then to approaches that promote active selection and encouragement of FDI inflows, have made foreign investors a primordial driver for China's economic growth, for its technological and industrial development, and also a beneficial factor for the creation and preservation of a dynamic competitive environment (Chunlai, 2011). As such, if in the beginning, in the starting phase of reform programmes launched in 1979,[13] the main objective of attracting foreign capital was the deficit of local capital and the stimulation of foreign trend in order to speed up transition and economic development, at present, China is seeking increased competitiveness by enabling market access for its main foreign competitors and thus the improvement of the national economic climate (Sussangkarn et. al, 2011).

As a result, due to the continuing progress of reform and economic openness, in conjunction with the huge market potential, the relative low labour cost and the increasingly comprehensive policy encouraging

[13] After the long period of economic stagnation during Mao Zedong's ruling, the Chinese planned economy adopted a new development approach based on "reform and openness," characterised by the attraction of foreign direct investment, in correlation with a strategy that stimulates exports (Economist Intelligence Unit, 2012). *The open doors policy* was initiated in 1978, once Deng Xiaoping became the country's leader and was based on a set of measures meant to generate openness to foreign investors and international trade. This policy is considered the "cornerstone" of China's economic modernisation (Sussangkarn et. al, 2011).

foreign investment applied by the national authorities in recent years, FDI inflows have increased at an accelerated pace, and China is now the first main beneficiary of FDI worldwide (overcoming the U.S. in 2014, which had held the position up to then)[14] and the second destination of FDI targeting developing countries, after Hong Kong (UNCTAD, 2015).

Also, if until 2000, due to legislative impediments that aimed at restricting outward direct investment (ODI), China was not in a favourable position in the hierarchy of world investors (Rosen&Hanemann, 2009), upon the beginning of the new millennium, the national authorities started implementing an initiative encouraging local companies to invest outside the country, by adopting a new "going global" strategy"[15] (Hong&Sun, 2004). Given China's unmatched economic performances the recent decades due to the "targeting" of newly designed outward orientation, the Chinese Government saw the necessity of affirming the country's economic profile at international standards but also of conquering other outlets for local production which would implicitly contribute to acquiring new skills, advanced technology or high-value intangible assets (management and organisational transfer, trademarks, etc.) (Bellabona&Spigarelli, 2007). Furthermore, the launch of this Government initiative also took into account the perspective of reducing the high trade surplus that China constantly registered during the years preceding the launch of the reforms. According to specialists (Palley, 2006; Williamson, 2005), FDI stimulation was able to restore the domestic balance, in the sense that the speeding up of exports as a policy supporting growth, corroborating by a fixed exchange rate and increased control on capital movement, as well as the gradual opening of the national economy contributed to the accumulation of trade surplus and huge foreign currency reserves, which generated pressure on the exchange rate and tensions among the main trade partners (Otani, 2005).

Therefore, this recent policy that encouraged orientation towards foreign markets determined Chinese firms to redirect their multinational activity, because of reasons that are related to obtaining access to new resources and technologies or in order to expand the scope of their competitiveness in the global economic landscape.

The new strategic directions have generated both an unprecedented amplification of China's outward investment flows[16], but also geographic and sectoral diversification, as now, outward investments are no longer limited to state enterprises but, to an increasing degree, they have extended to the increasingly dynamic private sector (Davies, 2013).

2. Foreign direct investment – a supporting factor for China's growth

As the literature points out (Davies, 2013), over the recent decades, foreign direct investment has been considered by economic analysts and decision-makers as representing both a fundamental driver for the globalization process, and a "catalyser" of economic growth and development.

Capital inflow adds up to the internal resources of the host country and helps cover the investment needs, generates the mobilisation of the national economy and urges it to involve in more productive and competitive activities, thus representing an important vehicle for the transfer of technology and know-how, a vital aspect for raising the technical standard of production, and at the same time a promoter of growth through the creation of new jobs and the expansion of the knowledge pool existing in the host economy through the qualification of workers, the acquiring and dissemination of skills, as well as through the introduction of alternative management and organisational architecture practices.

[14] As we will show in the analysis conducted in this article, in 2003, China again overcame the US and held for a year the first position among FDI beneficiaries worldwide.

[15] Although the *Going Global Strategy* was initially referred to in a document of the Chinese State Department launched in 1999, which presented a set of measures aimed at encouraging Chinese companies (in particular those owned by the state) to invest on the foreign market and engage in assembly and processing activities outside the country's border, it was adopted only in 2000, based on the *Programme for the development of the national and social economy, an integral part of the 10th five-year* (Freeman, 2007).

[16] At present, China is third worldwide among countries that export capital (after the U.S. and Hong Kong), therefore being second in the top of investments generated by developing countries (UNCTAD, 2015).

At historical scale these theories have been fed into and additionally confirmed by the experience of the recent financial crises[17] which illustrated and proved the risks and increased uncertainty associated with portfolio investment, emphasizing the importance of FDI as an alternative flow of capital.
Thus, in the present economic landscape, foreign direct investment is one of the most wanted "products" of the global economy (Braunstein&Epstein, 2002) and a permanent challenge for the authorities and decision-making bodies at national level which make constant efforts in order to attract and diversify the sources of foreign financing.

In this context, given the evolution of China's policy concerning FDI, which is an attentively supervised and managed experiment, an attempt to use foreign capital to stimulate at the same time both a growth strategy based on exports, and a way of substituting imports, the analysis of the dynamics of the inflow of investments in China may be representative for understanding the investment mutations that occurred in the global economy as a whole.

If 35 years ago, before the trade and investment liberalization reforms were launched, China was practicing an inefficient economic policy that was keeping the country in a state of economic stagnation and relatively isolated from the global economy, since it opened to international trade and foreign capital, in 1979, it became one the economies with the fastest growth, the second largest economy of the world (after the U.S.),[18] and the first international destination for FDI flows, also acquiring the title of "the world's factory" and that of main holder of foreign currency reserves (Morrison, 2014).

Although since the very launch of the programmes of openness to the "outside world," the national authorities have started seeing the promotion of exports as a key-component of the economic growth strategy and foreign investments as a means of development and facilitation of this outward orientation, due to ideological considerations, but also due to a certain precaution caused by the lack of experience in the field (Wei, 2003), China opted for a gradual liberalization of the foreign investors' access on the national market.

Therefore, as regards the adoption of the policies aimed at attracting FDI, China decided on a moderate and gradual approach, which sought to minimise risks and was based on regional pilot-projects that, once successfully implemented, were to be extended at national level. According to Chinese economic analysts (Jing&Song, 2003), the preparation of the related legislation, followed by the necessary reform of the institutional infrastructure and, implicitly, the specific policy adopted for the regional openness to FDI represents a particularly complex and laborious process, consisting of *four successive stages.*

2.1 The limited openness stage (1979-1986)

After Deng Xiaoping took over the reins of the economic policy at the end of the 1970s, China decided to start a national modernisation and economic development process, by increasing the volume of its trade with other countries. In order to achieve this, one of the main directions proposed by the former Chinese leader was attracting foreign investment and the establishment of foreign partnership companies, a direction that was leading to the capture of advanced technology, know-how and management skills, increased access to foreign markets and, implicitly, the promotion of exports.

Therefore, this early age of outward openness was an experimental stage in which, in order to achieve rapid industrialization, the government issued new regulations[19] that allowed the establishment of *joint ventures with a majority held by state companies.*

Later on, as far as FDI was concerned, the Government gave total control to authorities of Guandong and Fujian provinces where four *special economic zones (SEZ)* were created and where the establishment of joint ventures was (temporarily) limited to export-oriented activities. The main purposes for the creation of SEZs were the development of controlled experimental enclaves in China's coastal area which would attract and exploit foreign capital, representing at the same time a "window" towards the outside world.

[17] Note: here, we refer not only to the latest financial crisis that shook world economy (the Great Recession), but we are also taking into account the Asian Crisis, as well as the one that occurred in Latin America.

[18] In terms of nominal GDP (measured at current prices in US dollars) the U.S. is the largest economy of the world reaching USD 17.41 trillion, approximately 22.44 percent of the gross world product, while China ranks second with USD 10.36 trillion in 2014 (World Bank Data, 2015).

[19] The promulgation in 1979 of the *Law on the establishment of joint ventures* is considered the "cornerstone" of China's openness programme in the specific FDI field. Later on, an ample legislative package was adopted with regard to the registration of companies, the organisation of work, the accounting system, exchange rate, etc.

All these unprecedented incentives with an explicit role of enabling the absorption of FDI, correlated with China's comparative advantage consisting in the abundance and low cost of work force, generated the rapid growth of the experimental regions – which became leaders of Chinese exports – and were genuinely successful from the very beginning. However, the Government noted that foreign investments were predominantly directed towards the light industry sectors and to sectors using low technology, and therefore extended its objective towards attracting high-end technology (including for hardware and software), but also towards extending the "investment policy laboratory"[20] to the south-eastern coastal region where, because of its location, the investments could have relationships with Hong Kong, Macao and Taiwan.

Consequently, in 1984 the Government announced additional decentralisation of decision-making authority with regard to the investment policy for 14 other port cities that were to be opened to the inflow of foreign capital, gaining also autonomy for the creation of the FDI legislative framework. Initially created in order to remedy the deficiencies found at SEZ level, they later became *technological and economic development zones (TEDZ)*, inside which investments were given preferential treatment and import facilities.

Although in this first stage of the change foreign investment grew constantly, reaching a total volume of around USD 8 billion according to national statistics – Table 1 – [or USD 7 billion (Graph 1), according to the statistical data provided by UNCTAD[21] - UNCTADStat, 2015], because restrictions were maintained with regard to market access or relating to the equipment procurement or the exchange rate, together with other organisational barrier,[22] the annual average growth remained at a relatively low level at this stage, reaching around USD 1 billion USD.

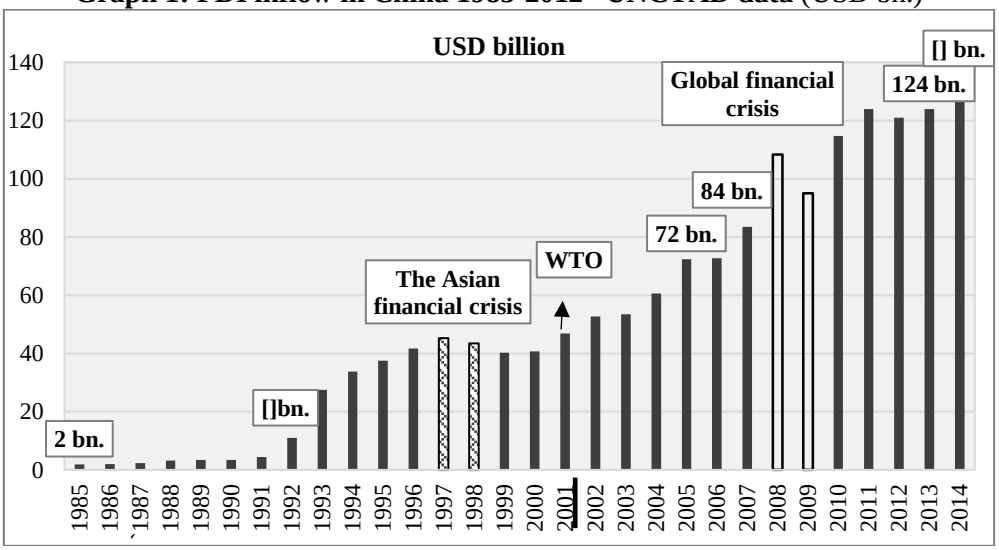
Table 1: Direct foreign investment inflow in China 1979-2013 (in USD bn.)

Period 1979-1990			Period 1991-2000			Period 2001-2013		
Year/ period	**Contracted FDI value**	**Actually used FDI value**	**Year**	**Contracted FDI value**	**Actually used FDI value**	**Year**	**Contracted FDI value**	**Actually used FDI value**
1979 - 1984∗	9.8	4.1	**1991**	11.9	4.4	**2001**	62.4	46.9
			1992	58.1	11.0	**2002**	69.2	52.7
			1993	111.4	27.6	**2003**	82.8	53.5
			1994	82.7	33.8	**2004**	115.0	60.6
1985	6.3	1.9	**1995**	91.3	37.5	**2005**	153.5	60.3
1986	3.3	2.2	**1996**	73.3	41.7	**2006**	189.0	63.0
1987	3.7	2.3	**1997**	51.0	45.3	**2007**	193.7	74.8
1988	5.3	3.2	**1998**	52.1	45.5	**2008**	**…**	92.4
1989	5.6	3.4	**1999**	41.2	40.3	**2009**	**…**	90.0
1990	6.6	3.5	**2000**	62.4	40.7	**2010**	**…**	105.7
						2011	**…**	116.0
						2012	**…**	111.7
						2013	227.8	117.6
						2014	**...**	119.6

Note: ∗ For the period 1979-1984, the statistical data provided by the National Bureau of Statistics of China are not broken-down by years, but cumulated for the entire reference period;
Sources: National Bureau of Statistics of China (2015) – "2014 China Statistical Yearbook" and the Chinese Ministry of Commerce (MOFCOM, 2014).

[20] The name comes from the fact these were regions created for the testing of investment policies that, if proved successful, were to be implemented in other Chinese regions as well (Ho, 2004).
[21] Generally, the statistical data regarding foreign investment provided by UNCTAD and other international databases are different from those published by the National Bureau of Statistics and the Ministry of Commerce of China, because the latter only include FDI for non-financial companies. For the period we refer to, the UN statistical databased does not present the data related to years 1979.
[22] Among others, the legislation required the managers of joint venture companies established to have Chinese nationality (Ho, 2004).

Graph 1: FDI inflow in China 1985-2012 –UNCTAD data (USD bn.)



Source: UNCTAD (2015).

Also, the legislative framework that was still in an incipient phase and the uncertainties generated by the lack of communication with the national authorities, the low level of transport infrastructure development and the scarcity of highly-qualified workforce were factors that were adding to the lack of confidence of foreign investors. Because by mid 1980s the results obtained through the application of reform programmes proved to be below the initial estimations of the national authorities, the Chinese Government decided to initiate a more "aggressive" policy aimed at capturing new inflows of FDI (Zang, 1999).

2.2 The stage of the active promotion of foreign direct investment (1987-1991)

This stage was characterised by the extension and/or adjustment of the specific FDI legislation and the opening of more regions to foreign capital. Therefore, in 1986, the state promulgated the *Law on the establishment of 100% foreign-owned companies (100% FOEs)*, which gave companies from other countries the right to open subsidiaries in China, but also the *Order on encouraging foreign investment*, with a particular focus on companies established with 100% foreign capital.

The entry into force of the new regulations eliminated the restrictions regarding the prohibition of foreign companies from exercising full ownership rights and implemented new incentives that also eliminated investor uncertainty. Among the measures adopted, of particular relevance are those that concern the protection and guarantee offered by the state to FOEs with regard to ownership, in the sense that foreign investors legally acquired the right to transfer the profit abroad and the right to dispose of the funds left in the event of a possible liquidation of a company established in China (Fu, 2000). Also, joint ventures were ensured access to utilities for the same tariffs as state-owned enterprises, as well as additional tax relief (if the activity carried out was based on the contribution of advanced technologies), or the possibility to contract low-interest loans.

The newly-created investment context triggered unprecedented historic mutations that paved the way to cross-border processing and generated a complete division of the workforce between China and Hong Kong (Jing&Song, 2003).

Also in this stage, the massive inflow of FDI from Hong Kong, Taiwan and Macao, as well as from other developing countries, helped China gain international confidence regarding the consistence of its investment policy. Nevertheless, it must be mentioned that due to the persistent national limitations on the exchange rate – which hindered the withdrawal of capital by investors in developed countries – it is possible that the inflows from developing countries were overestimated as a result of "round-tripping" (a disguise of

local capital investment into foreign investment,[23] for the purposes of circumventing certain legislative restrictions or for benefiting from incentives and the privileged treatment reserved to foreign capital. As such, for example, because investments from these latter regions referred to were mainly targeted towards export, they could avoid the exchange rate restrictions.[24]

The positives effects of the new regulations adopted by the Chinese Government in the period 1987-1991 are also reflected by the national and international statistics (presented in Table 1 and Graph 1), which illustrate that the FDI inflow actually used by the Chinese economy significantly increased, reaching a total amount of USD 16.8 billion, corresponding to an average annual amount of around USD 4.2 billion (Table 2).

Table 2: Evolution of FDI in China in relation to the stages of the national policy in the field
(USD bn. and %)

Stage/years	Total FDI value/stage	Average annual increase	Growth pace compared to previous period (%)
1979-1986	8.2	1.2	**….**
1987-1991	16.8	4.2	51.2
1992-2000	323.4	36.0	94.8
2001-2014	1164.8	83.2	72.2
TOTAL	**1513.2**		

Source: Drawn up by the author based on statistical data published by the National Bureau of Statistics of China (*Statistical Yearbook*, different years) and the Chinese Ministry of Commerce (MOFCOM, 2015).

2.3 The stage of FDI policy adjustment and consolidation (1992-2000)

The third stage of China's investment openness progress started in 1992, when the Chinese leader Deng Xiaoping visited the southern regions and the special economic zones, and aimed at extending the reform and the scope of the "open doors" policy and the promotion of national commitment to the creation of the socialist market economy, which had proved to be a real success in gaining the trust of foreign investment.

In its attempt to redirect capital flows from the eastern part of the country towards the western territories, the government decided to adopt a new strategic approach, proposing a departure from the procedure of granting a certain special treatment in certain regions, to that of applying nationwide policies for attracting foreign investment, with a particular focus on the intensive capital and high-end technology investments (Nicolas, 2008).

Year 1995 saw the publication of the *Guidelines of foreign investment projects*[25] which permitted and encouraged investments dedicated to industries that introduced advanced technologies, increased production quality and increased export capacity, as well as to those oriented towards the use of local resources located in the country's central and western regions.

The launch of the new programme for the development of the national and social economy, as an integral part of the 9th five-year plan (1996-2000), represented the starting point towards a new approach of local governments which, by applying proactive investment policies would intend to transfer FDI flows from the workforce-intensive processing industry towards the capital-technology-and know-how intensive sector, as well as towards the sector service and from public to private ownership (Chen&Song, 2004).

[23] This phenomenon occurs when foreign investment capital leaves the country and returns in the form of FDI, either in order to circumvent certain restrictions, or to benefit from tax incentives or other privileges granted to foreign investors.

[24] According to the data presented by an OEDC report (2008), although a considerable part of FDI inflows in this period in China came from Hong Kong companies, they represented investment from companies registered in the UK. Moreover, certain Chinese enterprises have adopted this policy in order to benefit from the privileged status granted to foreign investors – as such, domestic capital sources exited the country to return later "disguised" as foreign investment and benefit from the preferential policy applied to foreign investment and avoid the immobility of local capital.

[25] The Yearbook published in 1995 and then modified in 1997 and 2002 comprised an ample set of rules on the review and approval of FDI projects, by classifying them into three categories: *encouraged, restricted and prohibited*, clearly determining the limitation of foreign ownership in certain specific fields. Also, by classifying investments into three distinct groups, the catalogue established whether the investment would be permitted or not, what type of tax or other incentives would be applied in case of an approval, as well as the complexity and duration of the approval process.

2.4 The stage subsequent to the accession to World Trade Organisation (WTO): 2001-present

After 15 years of de negotiations, China became in 2001 a full-fledged member of the WTO, which has transformed the country into a participant in the multilateral trade arrangements with the other members , but at the same time comprised a series of obligations regarding the national FDI policy, in the sense of a wider opening of the market to foreign competitors and the elimination of trade barriers, such as the geographic restrictions that had previously limited the expansion of foreign companies.

As such, joining the WTO had a positive impact on the liberalization of FDI inflow into China, in particular in terms of the national treatment and increased transparency, and was an incentive for the improvement of the country's competition policies, industrial policies and intellectual property protection measures. The development of the national legislation and policies regarding foreign direct investment rapidly materialised in the systematic evolution of the FDI regulatory and promotion framework, through the establishment of rules or the amendment of existing ones in accordance with the international provisions in force. Also, a particularly important aspect of the accession agreement was the fact that China undertook to further open the service sector to foreign investment (including financial[26] and professional services – consultancy, accounting, etc.).

Beginning in 2001, the Chinese Government started a comprehensive process for the relaxation of restrictions imposed on FDI, through the complete modification of the legislation on the establishment of joint ventures and 100% foreign-owned enterprises.

According to the objectives set out in the *12th Five-year Plan (2011-2015),*[27] the future actions to attract FDI will pay particular attention to the technological consolidation, innovation, industrial restructuring and modernisation process, to the financial sector reform and to the development of the service sector, with an increased focus on the promotion and support of economic growth mainly based on internal demand.

All these ample changes in China's investment policy after joining the WTO proves the complexity and intensity of the action taken at national level both in order to stimulate the inflow of foreign investment, and in order to permanently improve their sectoral orientation and regional distribution and therefore in order to increase the impact of FDI inflows on economic growth.

The creation and preservation of an attractive investment climate, the relatively-efficient public services, the abundance of workforce resources, a huge market characterised by political and macroeconomic stability are only a few of the factors that opened for China the perspective of becoming in a relatively short period of time one of the favourite destinations of FDI inflows worldwide. As such, in this stage of the country's evolution, the annual volume of inflows of FDI constantly has increased from USD 46 billion in 2001, to USD 119.6 billion in 2014 (Table 1).

Also, in accordance with the international hierarchies based on the ***foreign investment confidence index***, calculated by the American consulting firm A. T. Kearney,[28] in 2014, China was second in the top of foreign investment confidence, only surpassed by the U.S.[29] – which proves that despite the major competition from other favourite destination that are traditionally focused on attracting FDI, the investors opted for the stability and perspectives for sustained growth of the Chinese economy.

2. Position in the global investment landscape – recent developments of FDI inflows in China in the dual statistical analysis[30]

[26] So far, the government authorities had considered that intense competition from foreign banks could contribute to the fast-track development of trade loans in the local banking system (Yueh, 2012).

[27] These objectives are also found in the *13th Five-year Plan (2016-2020*), approved at the end of October 2015 by the Chinese Communist Party.

[28] Beginning in 1998, the consulting firm A. T. Kearney computes a *FDI Confidence Index*, which reflects the opinions and perceptions of the managers of representative transnational companies.

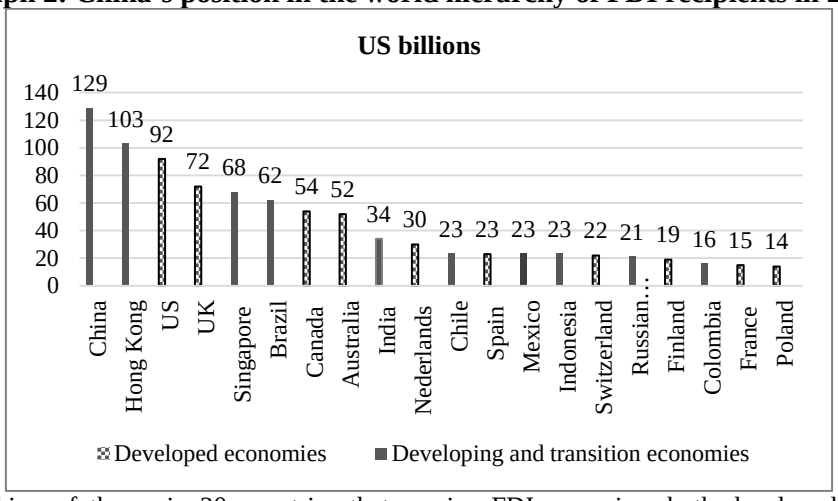
[29] It is interesting to note that in the period 2000-2012, China constantly ranked first in this classification, and the fact that it has been recently surpassed by the U.S. (2013) was mainly caused by the increased lack of confidence among investors in the national business environment as a result of the decrease of the growth pace beginning 2012 (A.T. Kearney, 2012).

[30] For a uniform and accurate presentation of the data, in the comparative international analysis of this sub-chapter, we have used the statistical data published by the de UNCTAD, instead of those drawn up at national level, which are calculated differently.

The success of the Chinese policy of attracting and mobilising foreign capital and the country's increasing attractiveness, reflected by international classification – based on all the arguments showed above – are also confirmed by the statistical data presented in the latest UNCTAD report (2015), which shows that FDI flows received by China in 2014 have increased to around USD 129 billion USD,[31] compared to USD 124 billion in 2013 (Graph 1), but also by reference to the annual average value of around USD 77 billion registered during 2000-2011.

Although the progressive growth of FDI inflow volume seen in the period 2000-2008[32] was interrupted in 2009, as a result of the negative consequences of the international financial and economic crisis (when the value of FDI flows received was reduced to around USD 95 billion, compared to USD 108 billion in 2008), that were seen in the deterioration of the global investment climate and the reduction of investment capacity, China managed to remain on the top position among developing countries reached in 2000 (Davies, 2013), in terms of attraction of FDI. Moreover, during the same period, China managed to rank first in the world top of best placed countries that absorb FDI, as China surpassed the U.S. (Graph 2). This result may be explained on the one hand by the fact that the in the U.S. and the European Union the perception of the crisis phenomenon and the major related risks were present until mid-2012, but in particular by the fact that the Chinese economy maintained a high growth pace even during the global recession (albeit lower than in the previous year),[33] which contributed to the increase of confidence and to the undertaking of the investment decision among the large transnational companies (Morrison, 2014).

Graph 2: China's position in the world hierarchy of FDI recipients in 2014



Note: The world ranking of the main 20 countries that receive FDI comprises both developed, and developing and transition countries;
Source: UNCTAD (2015).

In 2010, foreign capital inflow in China saw a new spectacular evolution as a result of an annual leap of 17.2 %, totalling USD 114.7 billion, followed by an increase by 7.4 % in 2011, materialised in a volume value of USD 124 billion, which represents a first historical "peak" so far (as we have mentioned, the same value of investments was also recorded in 2013), which was only exceeded in 2014 (Graph 1).

Although in 2012, for the second time since the onset of the global financial crisis, the investment flow targeting the Chinese market decreased by around 2%, totalling an annual level of USD 121 billion – a moment

[31] Managing to beat its own record of 2011, the maximum investment level reached by China so far.

[32] In 2003, China had even managed to slightly surpass the U.S. with regard to FDI inflows, with a value of USD 53.3 billion, compared to the USD 53.1, of the U.S. (UNCTAD, 2014).

[33] Because during the international financial and economic crisis, Chinese inflows of FDI only decreased in 2009 – when the reduction was of 10%, while at global level, the reduction in 2009 was of 32% compared to 2008 (when the contraction had been of 11.5%, UNCTAD, 2012) – specialists have compared this evolution with that during the period of the Asian economic crisis (1997-1998), when the country also managed to keep a relatively stable level of FDI inflows, despite the collapse in the region. For this reason, China gained the name of "paradise of investment risk avoidance" (Davies, 2013).

when a large part of international analysts (Devonshire-Ellis, 2013) launched theories according to which this phenomenon was due to the loss of the comparative advantage given by the processing industry – this proved to be a decline caused by the junction of several circumstantial factors. On the one hand, the decrease was caused by the reduction of inflows from EU countries that are still facing major internal tensions and imbalances, correlated to the increase of the interest of Latin American investors for alternative destinations on the Asian continent. Added to these external causes, internal determinant factors reflect China's re-orientation in terms of economic and investment policy, aimed at supporting FDI inflows for high-technology industries and the service sector, and at discouraging those intended for low added value processing sectors.

3. China's outward direct investment

Although the intensity and sudden emergence of Chinese outward direct investment gave the impression that this is a recent phenomenon, in fact such investments have been present since the early 1980s, but at that time ODI had an insignificant value, it was carried out solely by state-owned enterprises and was focused mainly on Hong Kong (Freeman, 2007).

With the launch of the "going global" government programme in 2002 – a programme whereby the authorities encouraged local enterprises to invest abroad – China rapidly became an important source of investments at international level, and its strategic motivations in this regard evolved progressively from the simple focus on natural resources to the conquest of new outlets for local production, finding new RD&I resources that favour the rapid absorption of high technology and the rapid improvement of competence and skill standards.

This policy was consolidated in 2004, when the National Commission for Reform and Development, together with China ExIm Bank announced measures for the support of outward investments in four specific fields, in connection with the basic necessities of the Chinese economy in full expansion: i) investments for attracting natural resources and raw materials for which the necessary supply is limited; ii) investment in processing sectors that promote export or involve new technologies and equipment; iii) the performance under a foreign partnership of certain R&D projects based on high technologies, management experience and skills; iv) mergers and acquisitions involving the increased international competitiveness of national companies and the extension of production and sale markets.

Consequently, the spectacular economic development that characterised the last decades and the progressive intensification of the Government's going global policy encouraged an increasing number of Chinese companies to adopt an expansion strategy on new markets both in order to gain access to new resources and in order to increase their domestic competitiveness.

4.1 The implications of economic rebalancing on China's outward direct investment

Initially, based on the economic growth model applied by the governmental authorities until 2000, the outward direct investment had a limited role, targeting only two strategic development directions (Lardy, 2007):

- *first of all,* ODI flows represented the instruments used mainly in order for China to be integrated in the global trade system and for the improvement of the national logistic structures, seeking the establishment of Chinese commercial company offices abroad;
- *secondly,* given the speeding up of the increase of the domestic demand for natural resources and raw matter insufficient at national level – stimulated by the ample urbanisation process, the increased production and internal consumption – the decision-making authorities saw the opportunity of obtaining them from foreign markets.

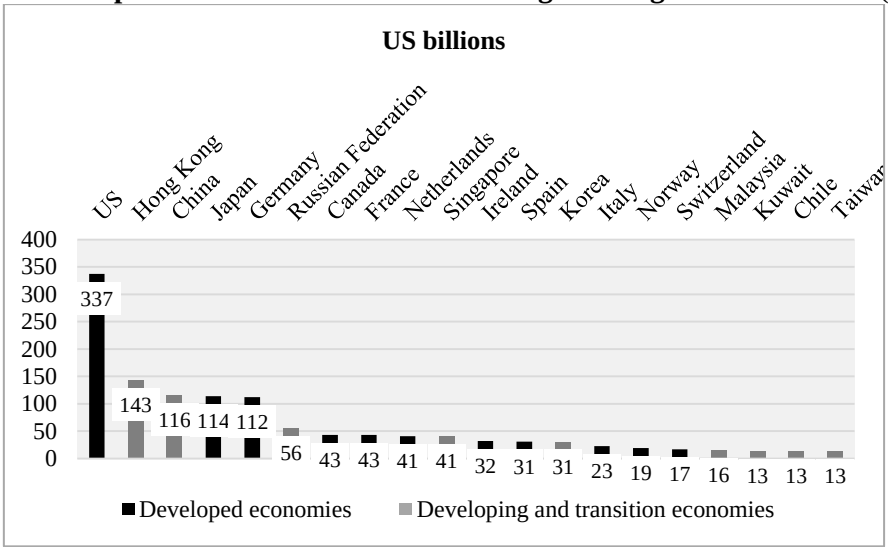
Because in this first stage of evolution, China's economic policy was mainly oriented towards increased production and exports, which led to the build-up of massive trade surplus and foreign currency reserves, once the country affirmed itself on the global stage, an alternative development strategy, based on growth adjustment and rebalancing was required.

In order to achieve this, the Chinese Government has been considering the preparation of new measures that would lead to the increase of population income and the stimulation of internal consumption, as well as to the focusing of production on value added sectors – making the transition from quantity to quality.

4.2 China's current role and investment position at global level

If at the beginning of the new millennium, Chinese outward investment flows had an almost insignificant share in the global total (below 1%), they have grown constantly since 2002 and have had outstanding results even during the economic and financial crises. In 2012 China ranked on the third position in the top main investment capital sources worldwide (after the U.S. and Japan)[34] and on the first position among developing countries. Although this ranking was maintained in 2013, in 2014, although China managed to remain on the third position among world investors (this time after the U.S. and Hong Kong), it became the second main source of investments among developing countries.

Graph 3: China's position in the world value ranking of FDI generated in 2014 (USD bn.)

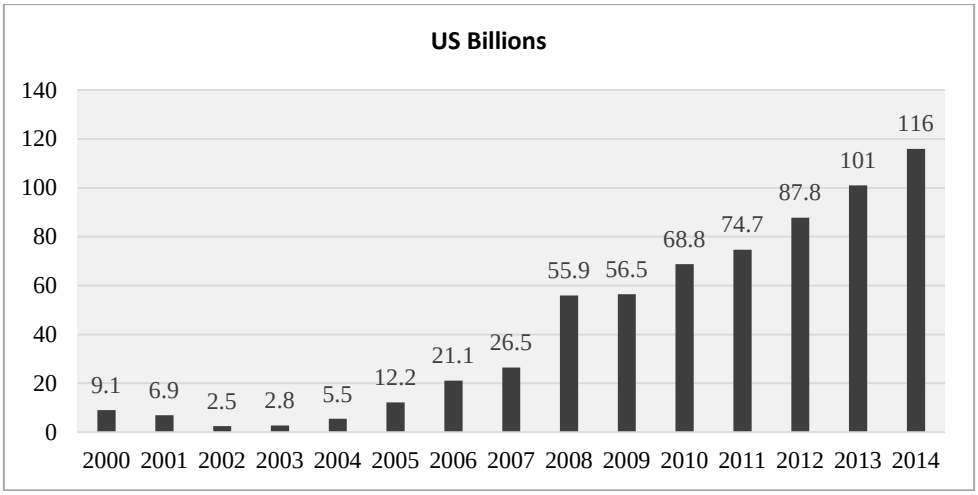


Note: The world ranking of the main 20 countries generating FDI comprises developed, developing and transition countries;
Source: UNCTAD (2015).

Although as a result of the onset of the global recession, which generated an increase of investor concern with regard to the sustainability of certain regions, as well as powerful internal tensions in the main developed countries, the global foreign direct investment flows suffered serious contractions (around 10.4% in 2008 and 40% in 2009 – UNCTAD, 2014), compared to the level in 2007, China doubled its outward investments in this period, becoming an increasingly important source of capital.

Graph 4: China's outward investment flows 2000-2014 (USD bn.)

[34] In 2011, China was fifth after the U.S., Germany, France and Hong Kong.



Source: UNCTAD (2015).

The upward trend of China's investment activity abroad continued until 2014, when the FDI volume registered a new historic high of USD 116 billion (compared to USD 101 billion in 2013), which corresponds to a share of around 9% of the world total.

As it may be seen from the statistical data presented, China is now a net importer of FDI, but the net investment flows (the difference between inward and outward investment) has an accelerated downward trend. According to certain specialists, based on the sustained economic growth and China's spectacular investment appetite given by its present economic force and also encouraged by the national policies in the field, this trend will be maintained on the long run and, in 2020, outward investment will even be able to exceed the inflow of foreign capital (Hanemann&Rosen, 2012).

5. Conclusions

In the past 35 years China has passed through a number of historical economic stages and succeeded to completely change its role in the world economy: from a large country with a huge population, lagging behind and characterized by numerous shortages to the status of the largest economy achieved in 2014 (measured in Purchasing Power Standard); from a minor participant in the international flows of foreign direct investment to the largest recipient in the world (in 2014); and from a totally negligible position as outward investor to that of a growing source of capital for the rest of the world.

Such unprecedented changes have been possible due to a consistent and at the same time prudential policy promoted by the Chinese decision-makers that combined experimenting with prudence, openness with control and market economy with a planned and therefore stable business environment. From this point of view even the most skeptical analysts cannot explain 35 years of achievements only by chance or randomness.

These consistent and objective results may represent in our opinion a proof that foreign direct investment combined with a flexible but at the same time firm economic policy may represent a viable option for over passing the underdevelopment status and even for accession to a leadership position in the world economy. At a much smaller scale than that of China a similar historical evolution has been experienced by Ireland that also based its accession to the status of developed country almost entirely on foreign direct investment.

At the same time China is an interesting case study for analyzing the impact of foreign direct investment on economic development because it has passed through a full circle, from the position of an almost entirely closed economy that was a minor host country as destination for FDI inflows to that of premier destination of foreign investment in a global economy and from no participation as source of capital to that of a dynamic and important investor abroad.

These decades long transformation journey of the Chinese economy has been accompanied by qualitative transformations of the Chinese business environment, first in the Special Economic Zones and then in all the economy, as well as by a transition of the foreign investment orientation from low value added activities to an ever increasing share of the high value added ones.

Based on all the above mentioned aspects the conclusion is that at least in the case of China foreign direct investment has represented a successful factor for economic growth and development. The in-depth analysis has also revealed that this factor alone could not have contributed to such a large extent to the economic success without a permanent, flexible and strategy oriented policy that adapted and oriented the external input (foreign direct investment) to the internal characteristics and needs of the Chinese economy.

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CONSIDERATIONS REGARDING THE MANAGEMENT STRATEGIES OF BANK RISKS

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Abstract: - The study summarizes what it means banking risks, the main risk management strategies. The complexity of the business environment, liberalization and internationalization of financial flows, brings rapid innovation, diversified financial markets, new opportunities but multiplied risks. Banks establish the types of risks they are prepared to take and the threshold at which risk is considered significant. The process of determining the risks that are taken includes the nature, the scale and the complexity of banks.

Key-Words: banks, banking risks, the strategy of the banks, profit, credit risk, credit risk management.

1. Considerations regarding the types of banking risks

The bank's strategy regarding management of relevant risk should determine the significant relation between risk and profit which the bank considers acceptable.

Banking risks are determined by the manifestation of a complex of factors that depend on: the overall evolution of the economy, changes related to the bank's organization and structure, taking financial decisions, political and economic conditions. Production of banking risks may cause fall in profits and income of shareholders, ultimately exiting the business of the bank or by taking her to a stronger bank, either through bankruptcy, according to banking theory differing risk typology by the intensity of action and consequences that they generate.

Identifying, assessing, monitoring and managing risks, besides the analysis of financial records and verification of compliance with prudential limits imposed entails permanent and open communication between the bank subdivisions.

Banks establish the types of risks they are prepared to take and the threshold at which risk is considered significant. In determining the risks are taken into account the nature, scale and complexity of banks.

Risk represents "the potential damage that is incurred by the heritage, interests and activity of the entity." [1]. In a minimalist definition, the risk is defined as the "probability of occurrence of an event with adverse consequences to the subject"[2]. Other specialists present the risk being "a potential adverse deviation from the expected results." In the paper "Le gestion bancaire et financière control" specialists Michael Rouch and Gerard Naullen defined risk being an uncertainty given a commitment, with a probability of gain or loss or degradation or loss latter.

National Bank of Romania classifies risks into the following categories [3]:

- Credit risk
- Risks associated with credit risk - in which there are the following subdivisions:
  - The counterparty risk
  - The country risk
  - The concentration risk
  - The residual risk
  - The settlement risk

The market risk - there are the following subdivisions:

- Interest rate risk of trading book (in the trading book activities)
- Interest rate risk of the banking book (from non-trading activities)
- The risk of price changing
- The currency risk

- The cash flow risk
- The operational risk
- The reputational risk

The exposure limit represents the maximum capacity of the bank to make commitments in/off balance sheet, over a period of time determined capacity in conjunction with:

- the level of own funds existing and projected;
- the structure and level of resources and existing and planned investments to achieve;
- the level of estimated profit to be achieved.

Committee on Banking Supervision established in Basel regulated the role and organization of the risk management function. According to documents published by it, there are four main functions in risk management: identification, assessment, monitoring and controlling / reducing risk.

2. The bank's strategy regarding management of banks risk

The banks appetite for to certain investments (with a high level of risk) increases the risk but banking prudence should be the fundamental principle governing banking.

An efficient bank management should include bank strategies and bank risk management programs in order to minimize them.

Risk identification, and their location is the first step in a comprehensive risk management process within its associated risks must be determined for each type of product and banking service.

Once identified the associated risks is necessary to develop scenarios in order to determine frequency and amplitude of each type of risk associated [4]

Thus, credit institutions must assume all risks arising as a result of the process of obtaining the profit knowing that:

- must comply with prudential measures imposed by the national regulatory authority;
- expected profit is commensurate with the risk exposure;
- potential losses should not affect credit institution in a precarious financial situation, knowing that they must be covered by provisions or profit;

The risk should be sized so the suffered loss could be considered as normal and the image bank (national and international market) does not suffer.

Risk management involves prevention, monitoring and limiting banks' exposure to risk and determining the level of assumption of some risks, so that, at the time of their impact, the banks should have the capacity to overcome the negative financial impact that they may cause.

Risk management processes involve specific techniques for quantifying and monitoring risks, based on a set of risk management principles harmonized with international best practices.

We can say that the process of risk management is a continuous process, designed in close connection with the business strategy, with active involvement of the management structure, taking into account current and potential risks that may affect the Bank's activities and in particular its capital adequacy.

3. The strategy regarding Credit Risk Management

The bank's strategies must be based on prevention and mitigation policies of banking risks and default bank losses. To manage credit risk in the loan portfolio a bank has to consider the risk assessment for the portfolio of loans and financial instruments, including derivatives, and comply with the limits of exposure to credit risk, namely:

- ceilings and limit exposure to domestic and foreign banks and registered in balance sheet assets and off-balance;

- exposure limits on the guarantee funds and insurance companies;

- limits on concentration risk arising from non-banking operations recorded in the balance sheet clientele and outside it [5].

The credit risk strategy establishes:

- general policy requirements and procedures on lending through the credit risk approach, having regard to the acceptable between risk and profit, whilst ensuring business continuity are sound and prudent

- lines to follow in order to implement the risk profile chosen by the policies and procedures of lending and credit risk management.

In order to obtain the profit, according to specialists in the field of credit institutions can implement a number of principles of credit risk management:

- checking and monitoring loans - the ambiguity of information is present on lending markets because lenders have little information about investment opportunities and activities borrowers. To achieve effective checks, credit institutions shall collect solid information from potential borrowers. Effective checks and collecting information is together, an important principle of credit risk management.

- establishing a long term relationship with customers - past activity analysis of a customer who has had a current account or savings account or other credit from a bank, for a long time, it enables the creditor to know certain aspects about it. A long-term relationship and customer benefits not only the bank. A customer who has a previous connection with the bank will easily get a loan at a lower interest rate because the bank assessment of whether the debtor future low credit risk and therefore lower costs for monitoring records borrower.

- loan commitments: the commitment of the bank to provide to a firm lending a certain amount at an interest rate predetermined requires that firm obligation to consistently provide bank information on its financial situation, thus reducing bank to collect information, as well as credit risks involved. The advantage of the company is to have a constant source of lending, and the advantage is that bank lending commitment develops a long-term relationship with the customer, facilitating wider access to customer information.

- rationalizing credit: This principle is the bank's refusal to grant credits even if customers are willing to pay fixed interest rate, or even a higher rate. Streamline loans is twofold: the first is when the creditor refuses to grant loans of any value to a client, even if it is willing to pay a higher interest rate; the second occurs when the lender restricts the size of the loan at a lower value than desired by the customer.

Preventive management of credit risk involves the organization of the lending process, from defining the credit policy and ending with monitoring and controlling credit granted based on anticipating risks in order to reduce or eliminate their undesirable effects. As not performing loans continues to grow, reaching over 24% in the first quarter of 2015, banks are concerned with the quality of their loan portfolio and the availability of capital.

The activity of managing loan risks is referring both to global and individual lending, each component having its specific role in the lending business and general management.

4. The strategy regarding Liquidity Risk Management

Liquidity risk expresses the current or future risk of the process of negatively affecting profits and capital and is determined by the bank's inability to meet its obligations at their maturity since the source of deposits that provide funding increases the volatility of the fund, as some creditors are more sensitive to events market than others; liquidity risk lies in the bank's inability to meet its payment obligations in the short term, without this resulting in costs or losses that cannot be supported by the Bank[7].

Among the causes that leading to the risk of bank liquidity could be mentioned: the real economic situation, influence of the mass-media, financial indiscipline of the customers, dependence on the financial market, the maturity mismatch between deposits and loans.

The main objective of the bank in the event of a liquidity crisis is to honor its commitments under optimum cost / benefit and ensuring setting minimum reserve requirements.

The main objectives of the strategy in liquidity risk management are:

- prevention and prevention of crisis situations, by defining liquidity risk profile of the limited time horizon and monitor the liquidity indicators in both the level of risk accepted by the NBR regulations, and by internal regulations.
- developing / adopting action plans for contingencies and identifying solutions for action to overcome / remedy possible period of liquidity crisis the bank by maintaining liquidity in the short and medium term to an optimal level, coupled with its strategy of risk so it can ensure prudent asset growth and honoring its obligations without inducing unacceptable costs.

The objective of liquidity risk management is to maintain sufficient liquidity and to compensate for expected and unexpected fluctuations of balance elements and permanent coverage of the bank's outstanding payment obligations.

In Romania, liquidity risk management has been improved, mainly by completing the regulatory framework in the second half of 2010, detailing existing requirements regarding liquidity reserve in the context of new international requirements. Liquidity indicators of the banking sector shows appropriate values, where Basel III introduces two new standards for liquidity risk: *the liquidity coverage ratio* and *the net stable funding ratio***.**

5. The strategy regarding risk market management

According to the NBR Regulation no.18 / 2009 regarding the management of the activities of credit institutions, the internal assessment of capital adequacy and conditions for outsourcing their activities, with additions and changes:

- Market risk is the current or future risk of adverse outcome on earnings caused by market fluctuations in prices of equity securities and interest rate in respect of the activities belonging to the trading portfolio and exchange rate fluctuations and commodity prices for all bank activity;

- Interest rate risk is the risk of negatively affecting current or future earnings and capital due to adverse changes in interest rates.

Risk strategy (in terms of market risk) mainly envisages the major components of market risk, namely:

- the interest rate risk;

- the currency risk.

Risk strategy (in terms of market risk) envisages, mainly, the major components of market risk, ie: interest rate risk; currency risk; daily management of foreign exchange positions and framing in the regulated limits on each currency; permanent monitoring of market developments that may affect the risk profile of the Bank; measuring the loss in terms of vulnerability to market volatility through analysis based scenarios and stress tests; predicting and limiting potential losses due to volatility in exchange rates using the model Value at Risk (VaR); limits "stop-loss" established at transaction-level, on the dealer and total transactions over a period of time that are regularly reported in the Bank's management.

Banks should consider a proper management of lending and deposit rates combined with action to promote products assets and liabilities, to achieve both an increase in workload and ensure a gap of interest optimally and ensure a balanced adjusted individual currency positions and the total currency position.

The market risk strategy aims to achieve a portfolio with low sensitivity to changes in interest rates and the exchange rate and achieving the targets set in the risk profile. These goals are achieved by managing interest margin calculation and analysis of indicators of interest rate risk management and foreign exchange position of banks' foreign exchange risk ratio analysis.

The process of analyze the market’s risk:

- to be coherent with the risk appetite, risk profile and level of capitalization systemic importance of the credit institution;

- to take into account market and macroeconomic conditions, and the risk of significant deterioration in market liquidity;

- to describe clearly the roles and responsibilities of identifying, measuring, monitoring and controlling market risk.

The market risk strategy aims to achieve a bank portfolio with low sensitivity to changes in interest rates and the exchange rate and achieving the targets set in the risk profile. These goals are achieved by

managing interest margin calculation and analysis of indicators of interest rate risk management and foreign exchange position of banks' foreign exchange risk ratio analysis.

6. Conclusion

The bank's strategy regarding the management of significant risk should determine relation between risk and profit which the bank considers acceptable in terms of ensuring the continuity of prudent banking on base [8].

Banks must have, as I mentioned before, relevant information on economic and financial situation of borrowers, the economic nature of operations, the moral reputation of debtors, their creditworthiness etc.

In order to prevent banking risks, banks must respect a number of regulations. Risk management must link between overall management and internal management. The continued growth of bank risk in the contemporary era, along with intensification of cooperation led to the internationalization of the regulations for the purposes of drawing up national rules according to the principles accepted by many countries, such international groups study organized by the Bank for International Settlements in Basel or application Community rules, developed as European directives and European Economic Union system.

Basel III is the third agreement concluded in Basel and present regulations that improve communication and cooperation between supervisor authorities in strengthening management practices liquidity risks that come from payment obligations and the settlement both internally and externally. The new standards are designed to improve the ability of the banking sector through a higher risk management under the coordinates of enhanced governance and increased transparency conditions. The impact of Basel III on the European banking system is significant.

In conclusion, we can say that the risk is not an isolated event; it is basically the foundation of all business because our world, without borders and strongly globalized causes rapid transfer of risk from one country to another.

In order to obtain profit, commercial banks have to assume the specific risks of this process, under caution to consider prudential requirements imposed by the national regulatory authority, justification exposure to the risk assumed, sizing risk so the loss produced by its materialization could be deemed normal for the activity and the bank's internal and external image. Banks must do permanent monitoring of risks. Any bank have to adopt decisions related to the results and the risks it wishes to undertake to reach these levels, the knowledge and the application of key measures for deciding the future of the relationship profit-risk, a relation that must be a central objective of bank.

Risk managers take risky decisions because "the future is not unique and perfectly predictable". [10] Connection with subjects as Economic Statistics and Economic Forecasts can help reduce the risk by using explorative models [11].

Banks and financial institutions need to improve their understanding and practice of bank risk management in order to be able to successfully manage different types of products. If the process of bank risk management and global management system are effective, then the bank will be successful. Banks can successfully manage bank risks if they recognize the strategic role of risk if they use the paradigm of analysis and management to increase efficiency.

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A ROMANIAN TOURISM MARKET ANALYSIS – DEVELOPMENTS AND TRENDS AFTER THE EU ACCESSION

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Abstract: - In Romania, a country of rich touristic heritage, the total contribution of tourism to the 2014 GDP was 4.8% and, according to the country report published by the World Tourism and Travel Council (WTTC), this contribution is expected to rise to only 5.1% over the next decade. Obviously, for an emerging economy with a high touristic endowment this current condition cannot be satisfying. In this paper we intend to accomplish a specific analysis of the tourism market evolution after its EU accession. Our undertaking starts from two complementary questions: How did the Romanian tourism market develop, following the country's EU accession? Are there any tourism development gaps between the country's counties? Our research includes assessments of both the touristic demand and supply by counties and the municipality of Bucharest, as well as of the county groupings resulted from a cluster analysis using 6 indices (2 for demand, 2 for supply and 2 aggregate ones). The assumptions we start from are that a positive impact has been induced on Romania's tourism after its accession into the EU, but in terms of its regional development, major development gaps between counties still persist and even deepen.

Key words: - tourism market, tourism demand, tourism supply, cluster analysis, Romania

JEL Classification L83, L89, Z 32, Z39, O52

1. Introduction

The Romanian tourism market evolution following the country's transition to the market economy is a topic approached by many researchers, both Romanian and foreign, in their studies. Mazilu (2007) analyzes the Romanian tourism market after the global economic crisis from the tourist's typology viewpoint, considering how the tourists' flows are formed. He is highlighting the fact that Romania has a limited tourism offer and a quite poor infrastructure, both in general and specific terms. Furthermore, Mazilu contends that Romania has ceased to be an attractive tourism and travel destination in terms of its price to quality ratio. "*According to the market researchers, more than half of the 1100 hotels from Romania operate in compliance with European standards and 45% of them are open only during the summer season"* Mazilu (2007). Rabontu and Vasilescu (2012) look at the Romanian tourism market considering a number of specific indices: total number of employees, tourism-generated GDP, accommodation capacity, index of the net usage of in-function touristic accommodation capacity (CUC)[35], by ownership type, destinations and categories of specific structures.

[35] In this paper the Index of the net usage of in-function touristic accommodation capacity is named, for short, CUC (capacity usage coefficient)

On the other hand, there are research papers that start from the assumption that the evolution of the tourism industry may trigger changes in the entire economy of a country. As such, we notice that there are various authors that have scanned the rural tourism market over the years preceding Romania's and other ex-communist countries' EU accession. For instance Hall (1998) stresses upon the part played by tourism in the Eastern and Central European countries' (ECEC) economic restructuring process. Against the backdrop of the relationship between tourism and sustainable development, he explores rural tourism in South-Eastern Europe. Also, in the context of the relationship between the rural development strategies and tourist activity, Naghiu et all (2005) show that rural tourism might become a domestic demand growth factor in Romania.

The regional gap issue has been tackled from the socio-economic angle, either by looking at one country's regions – as for instance Greece's, where the economic activities' inequitable spatial distribution has been demonstrated by Ioannides and Petrakos (2000) -, or by considering tourism as a regional development determinant, as in the case of the Baltic coastal areas research, by Spiriajevas (2008). It is also worth mentioning a decade-old study by Seckelmann (2002) which sheds light on the Turkish mass tourism concentration in the Western and Southern parts of the country that has contributed to deepening the regional development gap through large-scale touristic flows.

Although our research is unique in approaching the chosen topic from the spatial angle - by looking at the tourism development disparities between the Romanian administrative units, the counties – the method used by us can be traced in various other studies: Lupsa-Tataru (2007) performed such a comparative analysis on the industrial development of the Romanian regions, while Sandu (2011) looked at the regional development disparities from the social point of view. Trying to answer questions such as: What is the current configuration of the development disparities in Romania? Have they been increasing, or decreasing in time? To what extent the regional development policies play a part in the dynamics of these disparities? - the author reaches to the conclusion that *"… the spatial development issues in Romania cannot be solved solely by regional-type changes, but also by local administration ones."* (Sandu, 2011).

With a view to analyzing the tourism activity in Romania's counties, six indices, specific to the tourism demand and supply have been considered for the 2007-2013 time lapse: two of them featuring demand, two featuring supply and the other two defining the demand/supply relationship. To assess the evolution of the Romanian tourism market, firstly by grouping the counties on touristic activity criteria and then by identifying the developed ones from the others, we used a cluster analysis. This is a research tool the purpose of which is "*…to identify a set of homogeneous groupings, by clustering the elements so that the variation within the group is minimized, while the variation between groups I is maximized"* (Babucea, 2007).

The research is two-step structured:

- **First step**: We perform the empirical analysis of the statistical data available for the 2007-2013 time-span:
  - Tourism demand indices – number of tourists; number of overnight stays;
  - Tourism supply indices – tourist accommodation in use; establishments for tourists' reception with accommodation function;
  - Calculation and analysis of the aggregate indices – the average stay; index of net usage of in-function touristic accommodation capacity (CUC):

(Eq.1) $$\text{The average stay} = \frac{\text{number of overnight stays}}{\text{number of tourists}}, \text{ in number of days}$$

(Eq.2)
$$\text{CUC} = \frac{\text{number of overnight stays}}{\text{tourist accommodation in use}}, \text{ in \%}$$

- **Second step:** We perform the cluster analysis and the Romanian counties' grouping in the first and last years of the chosen time space, that is in 2017 and 2013.

The Statistical software was used for the cluster analysis, while the grouping was done using the hierarchic aggregation technique (the Ward method) which confers homogeneity to clusters. The Manhattan distance (City Block) which is calculated as a sum of the absolute values of the differences between the coordinates of the

analysed variables was used to form the clusters. The above mentioned indices were the main components. Further, the results obtained have been interpreted.

1. The static and dynamic analysis of the tourism-specific indices

Nationally, in 2013 the **total number of tourists** reached 7 943 153 people, that is 14% more than in 2007, when just 6 971 925 tourists had been registered. While in 2007 the most visited county in Romania was Constanta, followed by Bucharest and, at considerable distance, by Brasov, Prahova and Cluj, in 2013 - as the number of tourists visiting Bucharest has been considerably growing - the capital city ranked first, replacing Constanta (Table 1). As such, the 2013 new hierarchy placed Bucharest first, followed by Constanta and Brasov in the second and third positions, respectively. While Brasov ranked third just as it did in 2007, the county of Mures was a new entrance in top five, ranking fourth, ahead of Prahova, which climbed down a step, in the fifth position. At the other extreme, the least visited counties were, both in 2007 and in 2013, the counties of Calarasi and Teleorman. It is worth noticing here that the disparity between the most visited and the least visited counties has increased by 44% (or, in real terms, by 404 878 tourists) in 2013 (1 317 155 tourists), as compared to 2007 (912 227 tourists), signalling a further deepening of the regional tourism development gap.

Table 1. Romania: Tourist arrivals, extreme levels by counties, 2007 and 2013

Top 5	The lowest levels (number of tourists)				The highest levels (number of tourists)			
Rank/year	2007		2013		2007		2013	
#1	Călăraşi	13 927	Călăraşi	11035	Constanţa	926 204	Bucharest	1 328 190
#2	Teleorman	14 693	Teleorman	13176	Bucharest	908 921	Constanţa	859 634
#3	Sălaj	16 337	Giurgiu	24983	Braşov	556 816	Braşov	834 979
#4	Olt	16 461	Botoşani	33349	Prahova	416 220	Mureş	394 834
#5	Giurgiu	22 842	Sălaj	33367	Cluj	372 007	Prahova	366 276

Source: The authors, using the National Statistics Institute database (www.insse.ro)

As to the evolution in terms of **number of arrivals**, significant increases have been registered in the counties of Olt and Salaj - where the number of tourists has doubled - but also in Alba, Covasna and Mures, with the last county mentioned having accomplished an over 55% growth in its tourist numbers over the seven years considered (Table 2). In real terms, this accounted for over 250 thousands more tourists, who raised the total to about 400 thousands over the whole time lapse. On the other hand, important decreases in tourist numbers have been recorded in the Ialomita, Calarasi and Hunedoara counties over the same interval, as well as in Prahova, where the absolute decline cumulated 50 thousands tourists.

Table 2. Romania: Tourist numbers, extreme changes by counties, 2007 and 2013

Top 5	Negative developments				Positive developments			
Rank	County	Changes 2013/2007 (%)	2007	2013	County	Changes 2013/2007 (%)	2007	2013
#1	Ialomiţa	-25.9	54 232	40 189	Olt	+116.7	16 461	35 678
#2	Călăraşi	-20.8	13 927	11 035	Sălaj	+104.2	16 337	33 367
#3	Hunedoara	-19.0	109 054	88 306	Alba	+ 88.5	54 054	101 869
#4	Prahova	-12.0	416 220	366 276	Covasna	+ 59.1	52 458	83 468
#5	Vrancea	-11.1	38 471	34 196	Mureş	+ 55.8	253 454	394 834

Source: The authors, using the National Statistics Institute database (www.insse.ro)

The total number of overnight stays has declined in Romania by 6%, from 20 593 349 nights in 2007, to 19 362 671 nights in 2013 (Table 3). Both in 2007 and in 2013, Constanta and Bucharest ranked first by the criterion of overnight stays, followed by Valcea, Brasov and Bihor. At the other extreme, with the lowest number of overnight stays, we found the counties of Teleorman, Olt and Calarasi, in 2007, and Calarasi, Teleorman and Vrancea, in 2013.

Table 3. Romania: Tourists overnight stays, extreme levels by counties, 2007 and 2013

Top 5	The lowest levels (nights)				The highest levels (nights)			
Rank/year	2007		2013		2007		2013	
#1	Teleorman	31 965	Călăraşi	34 313	Constanţa	4 469 418	Constanţa	3 418997
#2	Olt	49 915	Teleorman	39 434	Bucharest	1 866 217	Bucharest	2 224629

#3	Călăraşi	52 120	Vrancea	55 898	Vâlcea	1 257 688	Braşov	1 754320
#4	Sălaj	54 213	Botoşani	58 801	Braşov	1 191 469	Vâlcea	1 049399
#5	Botoşani	57 286	Vaslui	61 570	Bihor	1 139 245	Bihor	952 163

Source: The authors, using the National Statistics Institute database (www.insse.ro)

Looking at the dynamics of the overnight stays we found that the balance between the extreme values of this index has diminished in Romania by over 1 million nights, from 4 437 453 in 2007, to 3 384 684 in 2013, but that is not a sign of improvement, as it might seem. In fact, on the contrary, it reflects a negative development, because it results almost entirely from a reduction of the overnight stays in Constanta, which has kept ranking first, recording the largest number of overnight stays both in 2007 and in 2013 (Table 3). On the other hand, we also notice considerable increases of the overnight stays (Table 4) in the case of Alba, Gorj and Salaj counties, which have ranked low in touristic activities, but have slightly improved. Still, the most remarkable growth was registered in one of the champion counties (ranking 4th in 2013, see Table 3), where the total number of nights increased with over 550 thousands, accounting for an almost 50% growth over the considered time span.
On the negative side, we spotted unfavourable evolutions in the Bistrita-Nasaud, Ialomita and Calarasi counties, but we found as very significant in terms of absolute loss the cases of Arges (with over 100 000 nights lost over the considered time lapse) and Braila (with an almost 100 000 tourist-days loss).

Table 4. Romania: Tourists overnight stays, extreme changes, by counties, 2007 and 2013

Top 5	Negative evolutions (nights)				Positive evolutions (nights)			
Rank	County	Changes 2013/2007 (%)	2007	2013	County	Changes 2013/2007 (%)	2007	2013
#1	Bistriţa-Nasăud	-44.6	253 267	140407	Alba	+81.0	117 665	213 012
#2	Ialomiţa	-39.2	331 604	201762	Gorj	+62.3	105 492	171 171
#3	Călăraşi	-34.2	52 120	34313	Salaj	+57.6	54 213	85 465
#4	Argeş	-32.1	348 637	236807	Brasov	+47.2	1 191 469	1 754 320
#5	Brăila	-31.2	297 680	204760	Olt	+35.9	49915	67 810

Source: The authors, using the National Statistics Institute database (www.insse.ro)

Between 2007-2013 the **tourist accommodation in use** at the national level has grown by 34.5%, from 57 137 649, to 77 028 488 number of beds - days. The county of Constanta (10 000 beds - days), but also the county of Brasov, the Bucharest municipality, Prahova and Valcea counties have the largest accommodation capacities in use (Table 5).

In contrast, in 2007 the counties of Olt, Giurgiu and Calarasi ranked the lowest in terms of tourist accommodation in use, position which they have preserved by 2013 too, with a minor switch in rankings between themselves in the negative top 5, in spite of some capacity increases that have been recorded meanwhile. (Calarasi came in first position, followed by the newcomer Teleorman, ranking the second, and further, by Giurgiu Olt and Vaslui with slight improvements of their accommodation capacities, over the considered time lapse).

Table 5. Romania: Tourist accommodation in use, extreme levels, by counties, 2007 and 2013

Top 5	The lowest levels (beds - days)				The highest levels (beds - days)			
Rank/year	2007		2013		2007		2013	
#1	Olt	145 712	Călăraşi	223 363	Constanţa	9 981 146	Constanţa	9 979 198
#2	Giurgiu	194 967	Teleorman	278 040	Braşov	4 704 712	Braşov	9004497
#3	Călăraşi	199 284	Giurgiu	278 774	Bucharest	4 332 982	Bucharest	6 908 584
#4	Vaslui	225 159	Olt	304 078	Prahova	3 177 920	Prahova	4 174 990
#5	Sălaj	225 524	Vaslui	312 076	Vâlcea	2 625 499	Vâlcea	3 377 184

Source: The authors, using the National Statistics Institute database (www.insse.ro)

As to the disparity between the best and the worst equipped counties in terms of tourist accommodation in use, this has remained almost unchanged over the time-frame of our analysis, because the loss of 79 599 accommodation beds - from 9 835 434 in 2007, to 9 755 835 in 2013 - was quite insignificant (just -0.8%). With the exception of Ialomita (where the capacity declined by -3.4%) and Constanta (which was stagnant), all the other counties were on the rise during the period from this point of view. As such, we notice the doubling,

or more than doubling, of the number of beds - days in the counties of Salaj, Olt, Alba and Harghita and the remarkable rise, with over 4 million beds - days, accomplished by Brasov.

Table 6. Romania: Tourist accommodation in use, extreme changes, by counties, 2007 and 2013

Top 5	Negative evolutions (beds - days)				Positive evolutions (beds - days)			
Rank	County	Changes 2013/2007 (%)	2007	2013	County	Changes 2013/2007 (%)	2007	2013
#1	Ialomiţa	-3.4	579 716	560 153	Sălaj	+128.7	225 524	515 686
#2	Constanţa	+0.0	9 981 146	9 979 198	Olt	+108.7	145 712	304 078
#3	Bistriţa-Năsăud	+4.5	766 878	801 563	Alba	+103.8	558 806	1 138 574
#4	Sibiu	+4.9	1 752 319	1 837 630	Harghita	+100.3	977 173	1 956 867
#5	Bihor	+7.0	2 426 194	2 596 329	Braşov	+ 91.4	4 704 712	9 004 497

Source: The authors, using the National Statistics Institute database (www.insse.ro)

The number of establishments for tourists' reception with functions of accommodation have substantially grown in Romania - by 28%, from 4 694 to 6 009 units - although not as much as the accommodation capacity. If in 2007 Constanta ranked first, with almost 1000 units, followed by the counties of Brasov, Harghita, Suceava and Prahova, in 2013, following a decline in Constanta's number of units, coupled with an increase in Brasov's, the two counties switched positions in the hierarchy, and Brasov took the lead. At the antipole, the counties lagging behind most were Olt (in 2007) and Giurgiu (in 2013), followed by Calarasi, Teleorman and Botosani.

Table 7. Romania: Establishments for tourists' reception with functions of accommodation, extreme levels, by counties, 2007 and 2013

Top 5	The lowest levels				The highest levels			
Rank/year	2007		2013		2007		2013	
#1	Olt	6	Giurgiu	13	Constanţa	998	Braşov	750
#2	Călăraşi	8	Călăraşi	15	Braşov	471	Constanţa	745
#3	Teleorman	9	Teleorman	17	Harghita	397	Harghita	322
#4	Botoşani	11	Botoşani	18	Suceava	236	Suceava	295
#5	Vaslui	11	Olt	19	Prahova	223	Prahova	293

Source: The authors, using the National Statistics Institute database (www.insse.ro)

Developments over the recent years have determined a 255 units drop (-25.7%) of the disparity between the highest and the lowest endowment levels in 2007 (992 accommodation units) and in 2013 (737 accommodation units), respectively. Only five counties have recorded declines in their number of establishments for tourists' reception having functions of tourist accommodation, but out of this group Constanta stands out with the worst evolution in this matter. The most significant rise (by over 200%) took place in the counties having a small number of accommodation units, and, out of this group, the most remarkable evolutions were the ones of the Covasna and Alba counties, which have recorded important increases in both real and relative terms.

Table 8. Romania: Establishments for tourists' reception with functions of accommodation, extreme changes, by counties, 2007 and 2013

Top 5	Negative Evolutions				Positive Evolutions			
Rank	County	Change 2013/2007 (%)	2007	2013	County	Change 2013/2007 (%)	2007	2013
#1	Constanţa	-25.35	998	745	Vaslui	+281.82	11	42
#2	Harghita	-18.89	397	322	Sălaj	+262.50	16	58
#3	Sibiu	-18.25	137	112	Olt	+216.67	6	19
#4	Giurgiu	-13.33	15	13	Covasna	+168.42	38	102
#5	Cluj	-2.37	211	206	Alba	+163.04	46	121

Source: The authors, using the National Statistics Institute database (www.insse.ro)

The **first aggregate index** is the **average stay,** which has been falling by 17.5% between 2007-2013, country-wide, accounting for a half-a-day loss, from almost 3 days in 2007 (2.95 days, to be more accurate), to

under two days and a half (2.44 days) in 2013. The longest average stay was recorded in Covasna, both in 2007 (over 8 days) and in 2013 (over 5 days), high levels of this index having been also identified in Caras-Severin, Ialomita, Valcea and Bihor in 2007, and in Ialomita, Valcea, Caras-Severin and Constanta, in 2013 (Table 9). In contrast to these, the counties of Sibiu, Satu Mare, or Vaslui recorded average stays below 1.7 days. These values fell further to 1.4 days in Ilfov and 1.6 days in Arges, by 2013.

Table 9. Romania: the average stay, extreme levels, by counties, 2007 and 2013

Top 5	The lowest levels (number of days)				The highest levels (number of days)			
Rank/year	2007		2013		2007		2013	
#1	Sibiu	1.6	Ilfov	1.4	Covasna	8.2	Covasna	5.3
#2	Satu Mare	1.6	Argeş	1.6	Caraş-Severin	7.2	Ialomiţa	5
#3	Vaslui	1.7	Vrancea	1.6	Ialomiţa	6.1	Vâlcea	5
#4	Vrancea	1.7	Sibiu	1.6	Vâlcea	5.6	Caraş-Severin	4.5
#5	Ilfov	1.8	Bucharest	1.7	Bihor	5	Constanţa	4

Source: The authors, using the National Statistics Institute database (www.insse.ro)

This adverse evolution has determined the narrowing of the disparity between extremes by 2.7 days (or by 40%), from 6.6 days in 2007, to 3.9 days in 2013. Extremely negative evolutions of the average stay have been identified in counties such as Bistrita-Nasaud, Olt, Caras-Severin, Arges or Covasna, where the drop was in the range of 35%-40%, which in the case of Caras-Severin or Covasna was the equivalent of more than two and a half days (see Table 10). Other counties, such as Teleorman, Gorj and Tulcea seemed to have recorded quite important percentage increases of their average stay, but that was only the base effect, as the values of reference had been very low (average stay around 2 days).

Table 10. Romania: The average stay, extreme evolutions, by counties, 2007 and 2013

Top 5	Negative Evolutions				Positive Evolutions			
Rank	County	Changes 2013/2007 (%)	2007 (zile)	2013 (zile)	County	Changes 2013/2007 (%)	2007 (zile)	2013 (zile)
#1	Bistriţa-Năsăud	-39.4	3.5	2.1	Teleorman	+37.6	2.2	3
#2	Olt	-37.3	3	1.9	Gorj	+25.4	1.8	2.3
#3	Caraş-Severin	-37.1	7.2	4.5	Tulcea	+19.5	2	2.4
#4	Argeş	-36.9	2.5	1.6	Satu Mare	+ 5.1	1.6	1.7
#5	Covasna	-35.8	8.2	5.3	Vaslui	+ 3.7	1.7	1.7

Source: The authors, using the National Statistics Institute database (www.insse.ro)

The **second aggregate index** is the **Index of net usage of the touristic in-function accommodation capacity (CUC)**. Nationally, this coefficient had a negative evolution over the considered time lapse, losing almost 11 percentage points (pp), from 36%, to 25,1%. This pictures a substantial downfall of the touristic activity. The highest levels of this coefficient in 2007, of around 50% (Table 11), were recorded in Ialomita, Covasna, Braila, Valcea and Bihor. In 2013, besides Bihor, Ialomita and Covasna - which have preserved their top positions, but with much lower levels of CUC (35%-36%) – we also found the county of Constanta and Bucharest, the capital-city. We would like to point out, here, that there are different reasons why these two groups of counties rank high in terms of their CUC levels: while in the case of Constanta and Bucharest, both of which benefit from relatively large accommodation capacities, this positioning in the top 5 is the reflection of a truly intense touristic activity, for the first three counties in this hierarchy (Bihor, Ialomita and Covasna), this ranking is not resulting from their intense tourism, but rather from their insufficient accommodation capacity endowment.

Table 11. Romania: CUC, extreme levels by counties, 2007 and 2013

Top 5	The lowest levels (%)				The highest levels (%)			
Rank/ year	2007		2013		2007		2013	
#1	Teleorman	13.6	Maramureş	11.2	Ialomiţa	57.2	Bihor	36.7
#2	Vrancea	16.1	Vrancea	12.4	Covasna	56.0	Ialomiţa	36.0

#3	Maramureş	17.4	Teleorman	14.2	Brăila	49.2	Covasna	35.8
#4	Alba	21.1	Botoşani	14.8	Vâlcea	47.9	Constanţa	34.3
#5	Buzău	23.4	Călăraşi	15.4	Bihor	47.0	Bucharest	32.2

Source: The authors, using the National Statistics Institute database (www.insse.ro);

Looking at these coefficients, we notice that the disparity between the best and the worst performing counties in terms of CUC has declined by over 18 pp, from 43.6%, to 25.5%; in absolute terms this accounts for a 41.5% reduction.

Table 12. Romania: CUC, extreme changes, by counties, 2007 and 2013

Top 5	Negative Evolutions				Positive Evolutions			
Rank	County	Changes 2013/2007 (%)	2007	2013	County	Changes 2013/2007 (%)	2007	2013
#1	Bistrita-Nasaud	-47.0	33.0	17.5	Tulcea	13.3	25.7	29.1
#2	Arad	-46.2	35.2	18.9	Teleorman	4.2	13.6	14.2
#3	Arges	-44.6	27.8	15.4	Sibiu	-2.8	30.3	29.4
#4	Harghita	-41.7	28.0	16.3	Alba	-11.2	21.1	18.7
#5	Calarasi	-41.3	26.2	15.4	Gorj	-14.5	26.1	22.3

Source: The authors, using the National Statistics Institute database (www.insse.ro)

The counties of Tulcea and Teleorman have recorded a positive evolution of CUC, but only in the case of Tulcea the change is significant enough, with an increase from over 25%, to nearly 30% (Table 12). On the other hand, important decreases, by over 40%, have taken place in the Bistrita-Nasaud, Arad, Arges, Harghita and Calarasi counties, where CUC has declined with 10pp-17pp.

2. The cluster analysis

The results of the cluster analysis for 2007 and 2013 reveal the following cluster features:

- **Clusters 1 and 2** bring together the counties with unsatisfactory levels of tourism indices;
- In the counties included in **cluster 3**, touristic activity may be considered average as the aggregate indices, the average stay and Index of net using of the touristic accommodation capacity in function, score relatively high;
- **Cluster 4** includes counties with tourism indices situated near the country's averages;
- **In clusters 5 and 6** there are counties having an intense tourism activity. They only differ in terms of the average stay, which is low in the counties included in cluster 6.

Table 13. Cluster description

CLUSTER	DEMAND	SUPPLY	AVERAGE STAY	CUC
1	LOW	LOW	LOW	LOW
2	AVERAGE - LOW	AVERAGE - LOW	LOW	AVERAGE - LOW
3	AVERAGE - LOW	AVERAGE - LOW	HIGH	HIGH
4	AVERAGE	AVERAGE	LOW	AVERAGE
5	**HIGH**	**HIGH**	AVERAGE	AVERAGE-HIGH
6	**HIGH**	**HIGH**	LOW	AVERAGE-HIGH

Source: The authors

Hereunder is how the counties clustered in 2007 and 2013:

Table 14. Cluster composition[36]

[36] AB – Alba Iulia, AG - Argeş, AR – Arad, B –Bucharest, BC – Bacău, BH – Bihor, BN – Bistriţa-Năsăud, BR – Brăila, BT – Botoşani, BV – Braşov, BZ – Buzău, CJ – Cluj, CL – Călăraşi, CS – Caraş Severin, CT – Constanţa, CV – Covasna, DB – Dâmboviţa, DJ – Dolj, GJ – Gorj, GL – Galaţi, GR – Giurgiu, HD – Hunedoara, HR – Harghita, IF – Ilfov, IL –

CLUSTER	2007	2013
1	AB, BT, BZ, CL, DJ, GJ, MH, OT, SJ, TR, TL, VS,VN	AB, **BC, BN**, BT, BZ, CL, **DB**, DJ, **GL**, GJ, **HD, IS**, **IF,** MH, OT, **SM,** SJ, **SB,** TR, TL,VS, VN
2	AR, AG, **BC, BN, DB, GL,** HR, **HD, IS, IF,** MM, NT, **SM**	AR, AG, HR, MM, NT
3	BH, BR, CS, CV, GR, IL, VL	BH, BR, CS, CV, GR, IL,VL
4	CJ, MS, PH, **SB**, SV, TM	CJ, MS, PH, SV, TM
5	CT	**BV**, CT
6	B, **BV**	B

Source: The authors

Looking at the two columns of Table 14, we notice the following changes of cluster composition, over the 2007-2013 time-frame:

- Following a CUC drop, some of the counties migrated from cluster 1 to cluster 2, namely: Bacău, Bistriţa-Năsăud, Dâmboviţa, Galaţi, Hunedoara, Iaşi, Ilfov, Satu-Mare;
- Following an unsatisfactory evolution of its specific tourism indices, the county of Sibiu moved from cluster 4, to cluster 1, which is the most crowded of all. This is the most abrupt fall among all Romanian counties, over the considered time span..
- The Brasov county moved from cluster 6, to cluster 5. This was due to the changes in its touristic supply. In its case, the indices suggest a certain closeness to Constanta taking shape, although index of net using the touristic accommodation capacity in function levels still don't confirm it. Another reason of the re-grouping that took place in clusters 5 and 6 resided in the more pronounced drop of the Bucharest average stay as compared to Brasov's.

3. Conclusions

Returning to our initial question – How did the Romanian tourism market develop between 2007-2013? – we found out that:

- During the considered time-frame the tourists number has grown in Romania by almost 14%; the total number of overnight stays has decreased by 6%; the tourist accommodation in use has increased by 34.5%; the number of establishments of tourists' reception with functions of tourists' accommodation has grown by 28%. On the other hand, between 2007-2013, the average stay was considerably diminished, by 17.5%, and Index of net using the touristic accommodation capacity in function also had a negative evolution, from 36% to 25.1%, losing almost 11 pp.
- There are a few exceptions to the above at county level, such as: a favourable evolution of both tourism demand and supply identified in Bucharest and in the county of Brasov; remarkable average stay and CUC evolutions in the county of Tulcea.

Therefore, our first hypothesis should be rejected. Romania's EU accession of 2007 did not produced a positive impact on Romanian tourism, at least not yet traceable until 2013.

As to the second question we have been trying to answer – Are there any tourism development gaps between the country's counties? – we notice the following:

- Clusters 5 and 6 include the counties of Constanta and Brasov and Bucharest where tourism market is developed, with both demand and supply at high levels. High touristic traffic and a satisfactory efficiency level measured by average-to-high of index of net using the touristic accommodation capacity in function place Bucharest and Constanta county in top position, quite detached from the rest of the country.
- Cluster 3 brings together counties (BH, BR, CS, CV, GR, IL,VL) in which the aggregate indices (average stay and Index of net using the touristic accommodation capacity in function) have levels

Ialomiţa, IS – Iaşi, MH – Mehedinţi, MM – Maramureş, MS – Mureş, NT – Neamţ, OT – Olt, PH – Prahova, SB – Sibiu, SJ – Sălaj, SM – Satu Mare, SV – Suceava, TL – Tulcea, TM – Timiş, TR – Teleroman, VL – Vâlcea, VN – Vrancea, VS - Vaslui

which indicate a relatively efficient touristic activity. The composition of this cluster has remained unchanged, the counties of Bihor, Brasov, Caras – Severin, Covasna, Giurgiu, Ilfov and Valcea recording relatively high levels of the average stay and of Index of net using the touristic accommodation capacity in function, against the backdrop of a low-to-average tourism demand'

- In 2007, in clusters 1 and 2, where tourism is undeveloped, there were 26 counties (13 counties in each cluster), accounting for 62% of the total 42 administrative territorial units in Romania (41 counties, plus the municipality of Bucharest).
- In 2013 the number of counties with low level tourism specific indices increased to 27, of which 22 (52%) in cluster 1 and 5 in cluster 2.
- Within clusters major differences may be detected for each of the specific indices. For instance, in Valcea there are 230 establishments of tourists' reception with functions of tourists' accommodation, while in Giurgiu there is only one. In Arad the number of arrivals is almost double the one in Maramures, etc.
- For each of the analyzed indices, there are major differences between the highest levels reached by the best performing counties and the average of the worst performing cluster. For instance: the number of arrivals in Bucharest in 2013 (1 328 190 tourists) was over16 times higher than the average number of arrivals of cluster 1 (80 638.23 tourists); the number of overnight stays in Constanta in 2013 was almost 27 times larger than the average of this index in cluster 1; the tourist accommodation in use in Constanta was over 13 times higher than the cluster 1 average, in 2013; also in Constanta, and also in 2013, the number of establishments of tourists' reception with functions of tourists' accommodation (998 units) was 16 times larger than that in cluster 1(62); the average stay in Covasna (5.3 days) was much above the one in Bucharest (1.7 days) or the cluster 2 average (1.9 days); the index of net using the touristic accommodation capacity in function in Ialomita was of 57.2% in 2013, also much above the cluster 2 average (15.7%).

Therefore, according to our analysis the second hypothesis is confirmed: there are major tourism development gaps between Romanian counties.

To conclude, we would only like to add one remark, namely that the main limitation of our research resides in its recourse to only quantitative variables. It is our belief that adding some qualitative components would improve the methodology and generate better results. This and maybe establishing some correlations with tourism investments might become the topic of further research.

Acknowledgements

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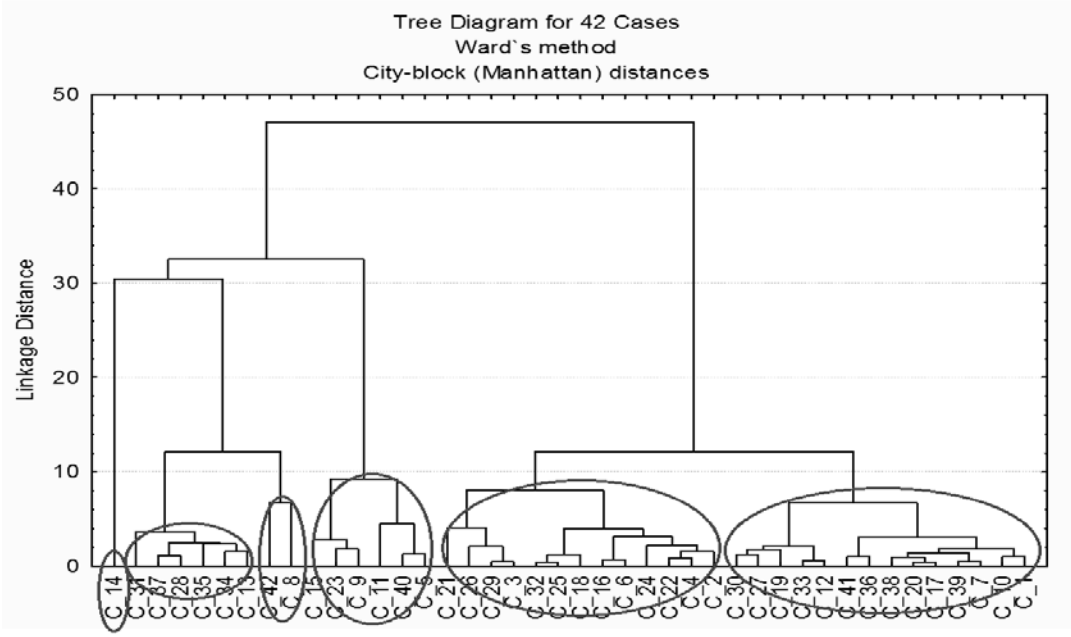
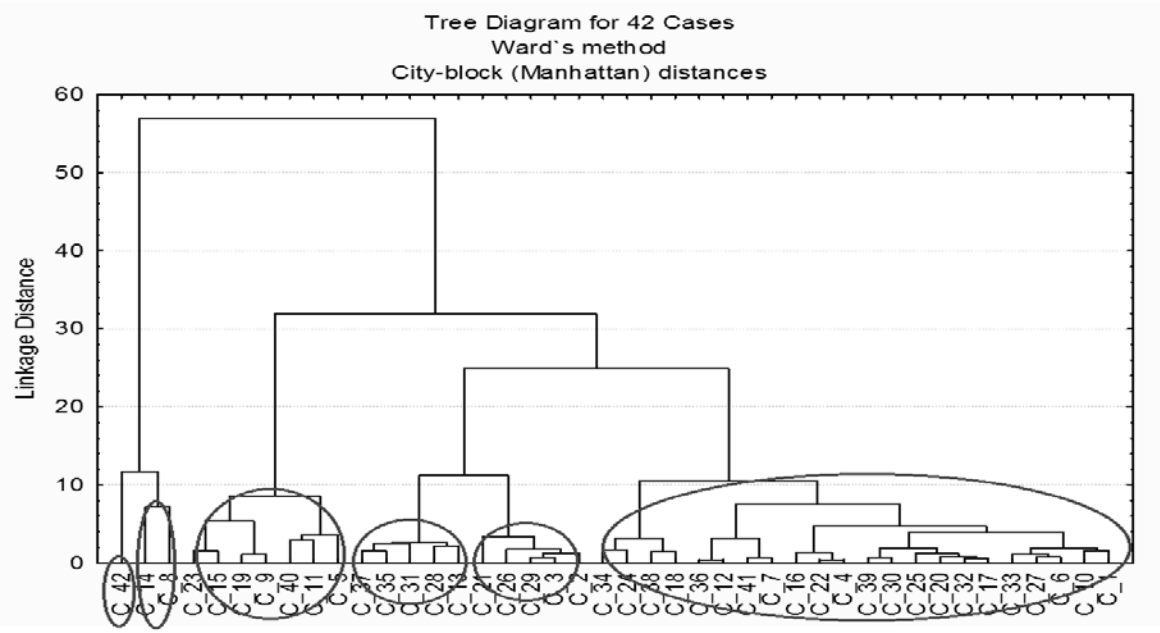
Annex 1. **Cluster analysis - 2007**



Annex 2. **Cluster analysis - 2013**



THE WELFARE AND THE ECONOMIC GROWTH: TWO FACES OF THE SAME COIN[37]

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Abstract - The research starts with review of the evolution of the concept of welfare. The model of economic growth and social welfare of the European Union continuously adapts to social and economic changes of contemporary European society. As a result of the financial and economic crisis and its impact on the EU's economy, including economic contraction and rising unemployment, European Commission has launched the Strategy "Europe 2020". The study will focus on the analysis of the strategy "Europe 2020" as a tool for economic growth and welfare.

Key-Words: welfare, growth, reform, strategy, model, employment.

JEL Classifications: D6, I38, P51.

1. Introduction

[37] The article is based on author research study, which has been a part of the IEM's Study plan 2015, with theme: "Valences and challenges of the three dimensional economic growth" coordinated by Dr. Alina Ligia Dumitrescu and Dr. Petre Prisecaru, under the Program of the Romanian Academy: "The new conditions of European integration and globalization. Nominal and real convergence".

The model of welfare expresses the values of social welfare (universalism, solidarity, social justice) and reflects the state's role in social protection. The state is the guarantor of a fairness social protection and has a founding role of an effective system which answers to the needs and the social realities of each society. The influence of the mechanisms regulating the economy, the size of the private and public sector, and the balance between market and state define the different models of social welfare.

Along with the establishment of democracy and the market economy, expanding social protection systems are an essential component of the European model of society. Since the last decades of the nineteenth century, the welfare systems have played an important role in the modernization of European countries in order to reduce constraints resulting from the economic cycle, to stimulate population growth and, last not least, to support the transition from agriculture model to the industrial society.

The development of the extensive social protection systems in order to protect people at risk and to answer to the social needs has been a predominant feature of postwar European societies. European systems have been set differently in terms of organization and financing methods, reflecting the cultural, historical, and institutional differences. The sequence in the evolution and the development stage of every European nation's social policy have influenced the current stage of the social protection systems.

2. The evolution of the concept of social welfare

Great economists like Adam Smith, John Keynes were concerned about the "wealth of nations". The promoter of classical economics, Adam Smith, analyst of competition and growth, emphasized that both market and competitions play an important role in improving the welfare of nations, by giving motivation and economic force. Thus, the productive and innovative potential of the economy can be fully used for achieving growth and wealth.

It is obvious that the concept of market economy arises from socio-economic legitimacy of the competition involving everyone in the production and consumption of wealth. It raises the question whether the distribution or the redistribution of wealth boost productivity. Therefore, to fulfill this purpose the state must allow and promote resource distribution both efficient and equitable.

Representing the modern stage in economic science, Leon Walras (1874) has reformed the idea that the role of each individual and the state do not oppose each other, but complement each other, each having its scope. According to Walras (1874), the state is responsible for ensuring the general conditions of common existence to all citizens, and the individual must obtain through its work and skills and his own welfare. Walras (1874) underlined that state should balance the rights of the individual with the state functions.

Subsequently, in the evolution of economic thought an important role had John Stuart Mill, who is one of the promoters of the social market economy. Mill (1888) is committed to reforms and even proposes a social-liberal social policy. It shows that a propriety system that ensures increasing material wealth at the expense of freedom is doomed sooner or later to failure.

In the modern stage, John Keynes has revolutionized the entire economic theory by promoting an active state intervention in economy. The advocates of the welfare state that are based on Keynesian solution, propose high public spending to finance important public investments for economic development.

Keynes's followers underline the importance of the salary in the distribution of goods. Securing a job is a first step in improving living conditions. Membership in a union provides individuals the opportunity to participate in decision-making system at the micro level. So, the employment on the one hand provides the foundation for a decent standard of living and on the other hand the socio-economic rights. The Keynes's followers point of view is that the salary is the main channel of distribution of goods in the welfare state, and the essence of the welfare state is creating jobs to ensure a high quality of life for all.

According to the Keynesian model, the welfare state assumes that full employment can be achieved only through stable economic growth. Economic growth is seen as a necessity for fair distribution and for the development of social protection. So, stimulating economic growth is the primary mean of achieving the welfare state. Only by increasing production can be achieved a balance between supply and demand on the labor market and can ensure the financing of a complex social protection system, that meets current social needs.

After the Second World War, have appeared neoliberals, which economic doctrine maintains a limited intervention in the economy in order to establish a legal framework allowing the organization of competition, the harmonious functioning of the price mechanism and curbing abuses of monopolies. Neoliberals have opened the contemporary economic theory, which has spread mainly in Germany. The main drivers of German neoliberals were known as the School of Freiburg. Then it has been named ordo-liberal doctrine, after the magazine Ordo, where were published the basic ideas. Ordo-liberal doctrine has emerged through the collaboration of three specialists: W.Euken, an economist, F.Bohn, a lawyer, and sociologist W.Röpke. The characteristic feature of Neoliberal Freiburg School is that the state role in economy is very well established, but to such an extent as do not control the economic relations between businesses. It means that, the state guarantees the existence of a market economy, ensures the legal and institutional market functioning and provides "public goods" such as: public safety, environmental protection, health, social security. In these circumstances a social state intervention is minimal, because the proper functioning of the economy ensures the wellbeing of individuals. In the same time, in their opinion the state must create equal opportunities to defend and protect the poor.

The neoliberal doctrine promotes the fundamental idea of the theory of free market economy that each individual works more effectively to provide personal welfare. Also, the market mechanisms: the price and profit are those that stimulate the activity of each company and each economic agent is acting in his own interest better than any state authority. The basis of the market economy is private property, which creates the premise act freely in economic life.

The Romanian school of economics, in the interwar period, was also preoccupied with the study of social issues, generically social policy. The term was used by economists and sociologists like: Madgearu, Ioniţescu, Tasca, Răduceanu, Bazilescu, Matheescu. As a result of radical political and social changes that took place during the period 1918-1923, the formation of the “Greater Romania” and the country's rapid industrialization have determined the creation of a legal framework, by adopting numerous laws to protect employees. Also, it took place important changes on the organizational plan by creating the Romanian Ministry of Labor in 1920.

During this time, it is noted that George Tasca, representative of liberalism, has published “Romania's social policy in 1940”, where are presented theoretical concepts as: property, rent, wages, trade union organization, work contracts and social security. In his study, Tasca stresses “the importance of capital in the form of individual ownership, because it is the lever to raise the productivity and its individual form is the only pushing to increase this production tool” (Văcarel, 1996).

Subsequently, traditional theories on increasing economic growth and welfare have evolved based on fundamental changes in the economic and social foundations of the modern society. Of particular importance is the comparative analysis on the structural differences of the various social welfare systems. Study on similarities and differences are important for classification, analysis and conceptual synthesis of different systems. Eckstein (1992) in “Comparative Politics, Past and Present”, show that “comparison is not a simple classification, but a method of determination of the theories in the welfare field”.

The socio-economic differences between various countries have led to different models of social welfare. One of the most remarkable attempts to describe the differences between countries regarding social policies was made by Richard Titmuss. He defined three major forms of social welfare models in developed countries:

1) The **conservative model**, which is characteristic of countries like Austria and Germany;

2) The **liberal model** based on economic growth, characteristic of countries like Great Britain, Australia, Canada, USA;

3) The **institutional model** existing in the Nordic countries: Denmark, Finland, Norway, Sweden.

The original concepts were completed and adjusted by Pinker (1979) and Gosta (1990). Both Titmuss (1997) and Gosta (1990) advocate institutional model, it has the ability to create equality and reduce poverty.

Atkinson (1992) analyzes two models of “pure economics”: the centralized economy and the market economy. The analysis is seen through the interdependent relationship between the economic organization and the role of social policy. On one hand, the centralized, socialist enterprises were state property and the right to work was guaranteed and binding. There was no official unemployment, the protection system was based primarily on the system of remuneration. In this type of economy, there were various forms of hidden unemployment (technical unemployment, unpaid mandatory holidays), but no unemployment benefits. Medical services were free, but they were of poor quality.

On the other hand, Atkinson (1992) has shown that there are big differences between different countries economies and the pure market economy model. The most important difference relates to the alarmed extension of unemployment. Another source of problems is the labor market segmentation in the primary sector, which is offering high wages caused by the existence of strong organized trade unions and the secondary market, where immigrants typically have low paid jobs without any form of social insurance and real protection. Limiting social insurance only to those who have jobs and the existence of secondary employment sector, creates social pressures, on ensuring social protection.

Atkinson (1992) suggests a new economic model, symbolically called "the third way", between capitalism and socialism, which is important for both West and East. This “new way” must consider both the economic organization and the social policy design. This suggests the introduction of a "minimum income or basic income", as form of social protection, that will not be tied to employment status and will address those excluded from the social insurance, graduates, and new entrants into the labor market. The major problem is the financing of such basic revenue "through a system of taxes". So, according to Atkinson (1992) the existence of this model of social protection is subject to the proper functioning of economic activity, which will be the sources of financing it.

Also, Professor Anghel Rugină in his book "Principia Oeconomica" formulates the idea of the necessity of “the third revolution” in economic theory and proposes the "social liberalism". The “social liberalism” proposes a society characterized by balance and stability, and for achieving this two objectives are necessary structural reforms. Professor Rugină proposes the creation of "guidance tables" for economic science, which involves seven basic models, which exists as a bridge between classical and modern theory.

Joseph Stiglitz, the winner of the Nobel Prize for economics in 2001, has analyzed the model of "market socialism," which in his vision does not mean any incoherent mixture between the centralized planning and the coordination of market economy, tried by some Eastern European countries in years 80s, nor "utopian third way". Stiglitz (1995) focuses on specific market economy model, where the efficiency of the free market may be reproduced without private property. According to Stiglitz (1995) the model of “market socialism” and competitive market capitalism suffer from the same "mainstreaming proposals ". The author says literally that "market socialism fatal flaw" is that it took too seriously the neoclassical model. Stiglitz (1995) analyzed the issues which make closer or separates the two "pure models" and the current malfunctions of the market economies (capitalist or in transition), drawing the line between reality and utopia.

Regarding the role of the state, Professor Stiglitz (1995) shows that it is more indicated a pragmatic approach, respectively, opting for a public-private alternative, taking into account existing institutional limits. Stiglitz (1995) points out that massive failure of coordination resulting from deficiencies of information on competition, privatization and capital markets lead to the rejection of the idea that private sector activity is higher than the public sector. Stiglitz (1995) believes that there is not a real possibility to separate the economic efficiency of the notion of fairness. Government intervention can improve welfare by simply correcting traditional market failures such as externalities, public goods and monopolies. Economic history offers numerous cases in which both the market and the state have failed. However, empirical evidence suggests that countries with weak governments can be complemented with private sector development (Stiglitz, 1995).

It should not be neglected the fact that the existence of the European Social Model must be base on the relationship of interdependence between the economic growth and the structure of the welfare state. A first interpretation of the relationship between the economy and the social welfare state can be largely negative, where the rate of growth of the national economy is affected by the existence of a too large public sector. However, a number of studies based on comparing the indicators of economic growth and efficiency indicators of social services in various Member States shows that there is not a positive or negative relationship between stable economic growth and social protection. The best example is the Nordic countries pursuing this criterion would be ineffective, but they recorded a high level of protection coupled with a stable economy.

Another type of relationship is based on the quality of services provided by the welfare state that affect the economic behavior of the population. Some of the World Bank’s studies have shown that an extensive system lowers labor discipline and work behavior. This relationship is extended between protective systems on the one side and increasing rates of early retirement and work absences, on the other side.

The relationship between participation in the labor market and social security system is seen differently. Thus, some experts say that a general system of protection of the family has determined the decreased participation of women on the labor market. Again it can be used as counter argument that the Nordic countries have a generous system and are effective in terms of women labor market participation.

A defining element of any system of social welfare is its minimal character of the protection. This coordinate is required by the necessity to combine social protection with economic growth. A high social protection circuit can pull the national economic productive resources that could be used in other areas. It also has a negative effect on the workforce that can not respond positively to the work signals (low elasticity). If social protection is too low, economic growth may suffers and may occur disruptions in the reproduction of labor force, including social pressures. The social protection system has multiple components: the guaranteed minimum wage, unemployment benefits, social assistance and minimum pension. All regulations are correlated with financial resources, including resources needed to stimulate economic growth.

Sapir (2005) shows that an important role for the models of welfare performance analysis has the relation between efficiency and equity. In the Nordic model, the degree of efficiency and equity are high, unlike the Mediterranean model, in which both were low. On the other hand, the liberal model has a high level of efficiency, but is socially inequitable, while continental model has a low efficiency, but has a high degree of fairness. In this respect, the models that are not effective can not cope with the constraints on public finances, due to globalization, technological change and aging populations. It results that the Nordic model and the liberal are more sustainable, while continental model and the Mediterranean should be reformed in the direction of efficiency, growth and employment.

3. The three-dimensional growth based on the Strategy "Europe 2020"

The impact of the recent financial and economic crisis has intensified budgetary consolidation pressure, increasing the likelihood of cuts in social services throughout the European Union. Regardless of the magnitude of the fiscal consolidation efforts and social policy areas concerned, there can be no doubt that all austerity programs are regressive in nature and that option of increasing the budgetary revenues has been exercised much less than budget cuts.

The relatively close link between the economic development and the level of social protection in European Union continues to diminish. Meanwhile, the European social policy remains the Achilles heel of European integration. In reality, there is no uniform European Social Model and nor was there any attempt to rectify a lack of legitimacy of the European integration, through the inclusion of social security systems in the EU's governance system.

It is a well known the fact that the welfare state has become dysfunctional and need to be reformed, modernized or rebuilt. The process of globalization, demographic change and European integration have eroded slowly but surely, the foundation of the welfare state in the Member States. Additionally, the European Social Model erosion was accelerated by economic and social transformation in Eastern Europe. While many citizens of the new Member States wanted an alternative model of western social welfare, received a minimal form of social protection. (Hermann, 2010). Some experts have sounded the alarm that there is even a danger that the welfare state can go bankrupt under the weight of the cost and burden of redistribution.

However, there is a clear distinction between the various models of the welfare state and the European Social Model and the result of efforts to modernize the European social policy will not be the end of the European social model, but involves a clear shift in ensuring the balance between the sources of funding and the eligibility and the legitimacy of social benefits. Michael Krátke (2005) underlines that the European Social Model still has future and he suggests that European left parties could use the European Social Model as a trademark for a new political project.

The increased budgetary austerity measures have left its mark on traditional social protection systems, and though the social policy remains the responsibility of Member States. Therefore, the various European institutions have promoted strongly the flexible labor markets and the policies oriented on demand of the labor market. But, in order to ensure fiscal consolidation was intended to reduce social spending, so that the level of social protection was lowered to the point that there are not even the minimal living expenses covered. Meanwhile, social assistance is granted only to tests based livelihoods (means-tested), and is conditional on fulfilling some obligations.

In general, the reform of social protection systems aims to move from welfare as a factor of social existence to welfare as a tool for people reintegration on the labor market, as quickly as possible. By gradual change from welfare state aid to "welfare through work" has been complemented by flexible labor markets, and

the promotion of atypical and often temporary employment. The reforms were supported by strong public campaign that discredited solidarity, arguing instead for "individual responsibility". As a result, some members of society who have no longer a job do not enjoy adequate economic and social security (Hermann, 2010).

The current financial and economic crisis has revealed the existence of social deficits that have appeared over time and eventually eroded some of the most distinctive features of the European Social Model. However, the crisis has created an opening for a political discourse with alternative ideas to create a European Social Model based on a sustainable economy. In literature, sustainable development is characterized as a level of development that welfare does not diminish over time. Thus, an economy in recession is not sustainable in the long term, and a society where a large mass of people experiencing poverty and social exclusion is not sustainable.

The European Social Model based on sustainable growth covers a wide range of objectives, namely: resource efficiency, ensuring macroeconomic stability and competitiveness, education and continuous training of the workforce, increasing employment and equal opportunities. The European Social Model based on sustainable growth is a pattern of resource use that aims to meet human needs while maintaining environmental protection, so that these needs can be met not only today but for generations to come.

In early March 2010, the European Commission launched the "new strategy for sustainable growth and jobs", the strategy "Europe 2020", which replaces the Lisbon Strategy, adopted in 2000. The strategy "Europe 2020 "outlines the new vision of the EU's development model of market economy in the next decade, based on three pillars: **a smart growth**, which is based on the knowledge economy and innovation, **a sustainable growth**, which involves a competitive economy which is allocating resources efficiently, and **inclusive growth**, which assumes full employment and social and territorial cohesion.

The basic criteria underlying the European Social Model are: efficiency, social inclusion and sustainability. These requirements are mandatory and included in the "European Social Agenda". Employment underpins European Social Model and increasing unemployment jeopardize its sustainability. The objectives of the "Europe 2020" can be considered ambitious, but are achievable because are based on the EU's powerful new economic governance, the single market, the EU budget, the foreign policy, the economic and monetary union. Although the disparities between the levels of development and living standards in the Member States, the European Commission considers that the objectives of this Strategy are relevant to all Member States. This Strategy supports Member States to cope with the impact of post-crisis, the intensification of recovery of public finances and the challenges of globalization of the world economy.

Figure 1: The role of the Strategy "Europe 2020"

Source: Author/based on: European Commission (2010). Commission Communication Europe 2020 - A European strategy for smart, sustainable and inclusive growth Brussels, 3.3.2010 COM (2010) 2020 final.

The sovereign debt crisis has highlighted also the interrelationships between the economic policy and the monetary policy, in the Euro area. The crisis has led to the exposure of the interdependence between the economic policy coordination (Strategy “Europe 2020” and the Stability and Growth Pact) and the monetary policy (which is influenced by the need for increased wage flexibility and sustainability of public finances). The impact of the common economic and financial crisis and the sovereign debt crisis has made clear that Member States have analyzed insufficiently the negative repercussions of the economic policies on the monetary policy. Some member states were not prepared to withstand shocks of the elimination of the basic tools: the autonomous monetary policy (issue its own currency) and the exchange rate.

The crisis also led to a recognition of the causes of the negative influences, which should be avoided by coordinating emergency measures taken to avoid insolvency or illiquidity of the Member States. The Strategy “Europe 2020” seems useful as offering tools to solve problems of competitiveness (rooted in factors such as: inflexible labour markets, uncompetitive wages, a too large public sector, unsustainable social welfare systems) and reduced potential growth in Southern Europe Member States. The conditions under which the EU and Member States must address the issues of competitiveness and reduced rates of GDP growth became much more difficult to solve, in the context of the sovereign debt crisis and given that it is necessary that the budgetary reforms, the structural reforms and the liberalization must be carried out at the same time. In this respect, the Strategy “Europe 2020” could help formulate a better structured and coordinated respond, bringing added value to a better economic governance.

4. Conclusions

It should not be neglected that in the past three decades, despite long periods of economic growth in many Member States, the socio-economic inequalities in the European Union have increased. This is why the new strategy “Europe 2020” has established that employment is the most effective tool to solve the growing inequalities and to ensure the protection against social exclusion and poverty. However, the project a "smart, sustainable and inclusive growth", as theorized in “Europe 2020”, seems to have a neoliberal approach to social protection (Scharpf, 2012).

On the other hand, the project of a European Social Model, namely "European Social Space" is acting as a counterweight to the idea of the European Single Market. As a leader, the EU should provide a set of common social policies in order to create a unique model of welfare. In this way, the EU should strengthen its social dimension, pushing the European integration forward. However, this step is still far from being achieved and harmonizing different national welfare models, nowadays it appears unlikely (Ebner, 2014).

In its Communication "Balance the strategy “Europe 2020”, for smart, sustainable and inclusive growth", the European Commission (2014) reviewed the progress towards the objectives of the strategy and noted that the reasons for requiring its objectives are in 2014, as stringent as in 2010. The European Commission (2014) underlines that the EU is on track to meet or approach the goals of education or environment protection and energy, but the situation is different with the objectives of employment, research and development or poverty reduction. Therefore, the European Commision has recommended to focus on the fundamental elements of long-term action that are essential to future economic growth and social welfare.

Translating these objectives at national level has contributed to highlighting some gaps, as certain differences between Member States with the best results and those with poor results and other increasingly greater gaps between different regions of Member State or between neighboring regions of different Member States. Finally, the European Commission (2014) highlights the existence of inequalities exacerbated in the distribution of wealth and income and the active involvement and participation of regions and cities, which are responsible for the implementation of several EU policies, are essential for “Europe 2020” objectives. The European Commission recommends that these challenges must be addressed in the future review and subsequent adjustment of the strategy.

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CALCULATION AND ANALYSIS IN THE EFFICIENCY OF APPLYING THE QUALITY MANAGEMENT SYSTEMS WITHIN INDUSTRIAL ORGANIZATIONS

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Abstract: - In this article we propose to illustrate the methodology of measuring and assessing the impact of quality systems on the performance of industrial businesses. If in terms of the total quality management system – TQM, the impact may be measured by comparing the business performance with a reference standard (for instance ISO 9001), which records the difference compared to the performance prior to implementing the TQM, or, on rarer occasions, by optimizing the costs of quality with the help of econometric models, for the integrated quality improvement system, comprising of the TQM system based on the ISO standards and the Kaizen management system, which we propose and assess within this article, the efficiency/performance will be measured through a methodology based on analyzing the evolution of financial indicators for business performance. This approach was implemented as a result of findings from the businesses where we have been provided with documentation, and where the calculation and assessment of quality system operation efficiency by optimizing costs using the classic or improved econometric models is not approved by the management.

Key words: - quality management, quality system, efficiency, improvement, method

JEL (Journal of Economic Literature) classification: O1, O2

1. Introduction

In addressing the topic of this article, we began from the finding according to which only the businesses which provide the market with products and services executed in a manner corresponding with the beneficiary requirements in terms of quality, materialized in a significant increment of competitiveness regarding the competitor supply, can survive in the current economy, under the influence of evolutions such as the globalization of markets, the customization of demand, the adaptation of Romanian economy to EU requirements, the increase in competitiveness between businesses and in the interest for protecting the natural environment.

The concerns regarding quality assurance have also increased in the Romanian economy along with our country's EU integration. This is due to the fact that the quality approach on a pan-European scale is based on the objective of creating a single market and the free movement of goods, which is only possible through the presence of two common features thereof, to ensure interconnectivity and to facilitate real competition. The quality management system adopted by all countries in the European economic space fills this role, with the quality promotion policy representing the underlying component of the European industry development policy.

In the same train of thought, one may observe that quality has currently become a strategic instrument for the EU economic policy, and the quality requirements have increased significantly; one believes that satisfying the client is no longer enough, his expectations must be exceeded by promoting the "Beyond Customer Satisfaction" concept, according to which the product provided must exceed client expectations, must thrill. As

a result, the Romanian businesses, as participants in the European and world transfer of assets, have also begun to implement major changes in the development strategy and policies, in order to provide highly competitive products and services, which would facilitate an advantageous market position compared to the competition). In this regard, one may observe that numerous companies on the Romanian market undergo an accelerated process of organizational and management transformations, in order to redefine their place and role on the market and to improve the supply. The implementation of quality management systems plays an essential role within this process. Therefore, at the end of 2013, 24,231 companies were certified according to the ISO 9001 standard for all activity sectors. However, there are still many companies which conduct predominantly stereotypical activities, without implementing an aggressive strategy that would allow them to obtain a high profit in order to reinvest in modernization, restructuring and quality improvement projects, so as to ensure a better position on the market. A comparative analysis conducted in this regard shows that the number of certifications in the quality management system in our country is low compared to most EU countries (Table 1).

The main cause for this situation is a lack of trust for many economic agents in the efficiency of applying the quality systems. The discussions held with the managers of some of the businesses documented led to the conclusions that such managers believe the implementation of quality systems as an expense not covered by the results, and the increase in quality as an action which determines the reduction of work productivity and an unjustified increase of expenses. This misconception may be explained by the practice of economic agents where reservations regarding the calculation of quality system efficiency occurs, justified by the fact that they are unable to keep correct tabs on quality costs and the effects thereof. The highlighting of quality costs in the documents (accounting documents), as observed in the practice of companies documented, indeed poses special problems generated by the fact that the accountancy of most business does not feature any accounts for the distinct registering of the two information categories (quality system costs and effects). Difficulties occurred when trying to precisely establish the quality costs are determined both by the methods used by companies for the calculation, planning and tracing of costs, as well as by a series of factors independent from accountancy systems, such as: certain quality costs cannot be quantified or their estimation is subjective: there is a discrepancy between the time of occurrence and the time of identifying deficiencies, as well as between the time of preventive measures and the time of obtaining the effects of such measures; the lack of management involvement; the high necessity of resources for implementing the system, etc. Furthermore, one of the issues posed by the highlighting (registering) of quality costs in the current economic practice, and one which we deem essential, is determined by the impossibility of precisely establishing the indirect expenses for quality assurance, expenses representing the largest percentage of quality costs. On example in this regard is represented by the investment projects for the technical modernization of the business. It is obvious, for example, that by purchasing certain installations, modern technologies the level of product execution precision, and implicitly, the quality of such products is increased. However, the amount of investment associated with this effect cannot be precisely determined. Another aspect we must consider in highlighting and determining quality costs is to take into account and quantify all the cost categories, including the so called “external costs”, respectively the expenses for environmental protection and those incurred by the company for obtaining and providing a certain level of quality. Therefore, a holistic approach is needed to define and select quality costs.

Table no. 1 – *The evolution of the number of certifications in the quality system for certain European countries*

Number of ISO 9001 certifications						
Country / Year	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*
Romania	10737	15865	16200	19405	21641	24231
Poland	10965	12707	12195	10984	-	-
Germany	48324	47156	50583	49540	-	-
France	23837	23065	29713	29215	-	-
Spain	68730	59576	59854	53057	-	-
United Kingdom	41150	41193	44849	43564	-	-
Total number	455303	500286	530039	492248	-	-

** Information source: The ISO Survey of Management System Standard Certifications 2013*

As a result, the calculation of quality system efficiency, which implies determining the ratio between costs and effects, cannot be performed. In order to solve this issue, a solution underlying the evolution of the process of quality system implementation within companies, we set out to showcase a methodology with which to measure the efficiency of implementation and operation of quality systems within industrial businesses, without the necessity of an extremely precise determination of quality costs, a methodology tested in a case study within this article.

2. Presentation of the Methodology for Calculating and Analyzing the Efficiency of Quality Systems Based on the Evolution of the Financial Indicators of the Business

2.1 Characterization of the Study Method

The research for finalizing the methodology was aimed at the impact of the integrated system (TQM) comprising of the ISO 9001:2008, ISO 14001:2005 and ISO 50000:2011 standards, combined with several methods from the Kaizen system, on the financial performance of S.C. ARCTIC S.A. The study also benefited from our documentation conducted for other business in the manufacturing industry (*ASSA ABLOY, Cris-Tim, Pirelli din Slatina, Eldon România, Star Transmission Cugir etc.*), a fact which led us to believe that its results may be generalized for the entire manufacturing industry.

The study is based on a comprehensive research which combines questionnaire-based research, in order to identify and select a sample of companies who have implemented the quality system, with an empirical analysis of financial data collected from such businesses and the direct examination of the financial data publically disclosed by the same. The basic concept used in this research adapts the study methodology to the ***insider*** model, so as to separate the impact of the quality system from those of other measures applied by the company. Furthermore, we also considered a feature common to all researched businesses – that according to which both the studied event, as well as the time of its occurrence may be precisely defined without impediment (for example, obtaining a quality certificate). I have made this statement because there are numerous cases when establishing the exact trigger of a researched event is extremely difficult when the reliability of the business is poor and you cannot trust the public statements made by its representatives. In this regard, the concrete economic situation shows that several organizations claim to have implemented the quality system, measure confirmed by ownership of the quality certificate, when, in fact, they have made no essential changes leading to results that can be attributed to the quality system. Obviously, the use of such unreal information made publicly available by the company that has implemented the quality system will lead, in the study, to results lacking any practical use. In order to avoid such a situation, the methodology used by us was completed by interviews with quality managers within the companies documented. We believe that the use of such interviews to gather information sought from the company has been the difference between our study and the typical questionnaire-based studies.

2.2 Choosing the Indicators for Measuring the Economic Efficiency of Quality Systems Implemented within Romanian Businesses

The main objective of implementing a quality management system is to increase the company's performance. In general, performance is associated with two key processes – management and measuring of performance. Performance measuring occurs as a sub-process of performance management, which mainly focuses on identifying, tracing and communicating performance results by using performance indicators. More precisely, after establishing the objectives desired by applying the decision intended to increase performance (in our case – implementing the chosen quality system), we require indicators which can measure progress separately. In this regard, the use of key performance indicators – KPI is recommended, indicators which can help quantify the achievements of the quality system, respectively the level of objective fulfillment. As a result,

such an indicator-based system may be used as a sole instrument for consolidating the managerial decisions to implement quality systems.

The quality of results in applying the system is associated with the selection of performance indicators. The most frequently used performance indicators are financial and they vary depending on the activity carried out and on the company function (production, human resources, commercial, financial, etc.). Moreover, it is necessary that the indicators selected be anchored in the dynamics and typology of the respective company, so that they may faithfully illustrate company objectives up to the last level.

Economic efficiency, determined with the help of financial performance indicators illustrates, in the context of features of the *insider* model, the very result of implementing the quality system, highlighted through the continuous improvement of products, processes, activities and the adequate involvement of employees motivated depending on the level of objective fulfillment, as well as satisfying a corresponding number of clients with the business' capacities and meeting environmental protection objectives.

For a useful analysis, suggestive in expressing the objectives followed in the case study, presented herein, we have provided a careful selection of key performance indicators, by choosing those which provide the competitive advantages generated by the quality system, are directly connected to performance, are measurable and ensure compatibility with various references. Thus, in order to distinctly highlight the contribution of implementing and operating the quality management system in improving the economic and financial results of the company assessed, the following indicators were used: Turnover (CA), Variable expenses, Margin over variable expenses (MCV), Fixed expenses, Operational profit, Break-even (PR), Return on investment (T), Economic rate of return on investment (RRE), Discounted net revenue (VNA), and Economic performance (R).

3. Applying the Proposed Method for Assessing the Efficiency of the Quality Management System within S.C. ARCTIC S.A.

The ARCTIC S.A. trade company manufactures electronic and household products with a high technical level, used for household needs (refrigerators, washing machine, vacuums, etc.). It has 2500 employees and a turnover, for 2014, of 384 mil. EUR. Arctic is present on the Romanian market through the Arctic and Beko brands, with a market share of approximately 35% and is a major exporter. Currently, 90% of the refrigerator appliances is exported to 59 countries throughout Europe, Africa and Asia. In July 2015, Arctic celebrated the production of the 25th million refrigerator since its establishment. In order to ensure a growing outlet demand, the company decided to make a 24 million EUR investment. Thanks to this project, the company will record a rapid increase of its turnover.

The company has implemented an integrated management system in two stages: in 2005 it has implemented an integrated system comprising of ISO 9001 and ISO 14001, while starting with January 2012, it has also implemented the ISO 50001:2011 standard, being a large electricity consumer.

By implementing the three standards in an integrated quality system, the company complied with the requirements imposed by the beneficiaries and by the companies with which it collaborates, the aim of the objective being to reduce the possibility of error occurrence to a minimum and to achieve the *zero faults* principle. Along with this integrated quality system, the company also implemented in 2013 methods corresponding to the continuous quality improvement management system – Kaizen. Therefore, the 6 Sigma, Total Productive Maintenance and Just in Time methods were integrated. As demonstrated below, the implementation of the quality management system had a considerable impact on the increase in company efficiency. Moreover, its consequences were obvious even during the crisis between 2009 and 2010 *when the company did not suffer*.

In order to demonstrate the efficiency of implementing and operating quality systems within industrial organizations, we must first assess the impact of implementing the total quality integrated system (TQM), comprising of the three aforementioned standards, during the 2005 – 2010 period, and of the impact generated by the combined action of the integrated system (TQM) and of the methods associated with the Kaizen management system during the 2010 – 2014 period.

For 2005, the simplified situation of the profit and loss account is showcased in Table no. 2.

Table no. 2 – *The Balance Sheet of S.C. ARCTIC S.A. upon 31.12.2005*

Indicator	Amount		Percentage from CA (%)
	Thousand EUR	*Thousand lei*	
Turnover	190000	836000	100
Variable expenses	114750	504900	60,0
Margin over variable expenses (MCV)	75250	331100	40,0
Fixed expenses	66500	300168	36,0
Operational profit	7030	567789	3,7

With the help of these values, the break-even may be determined according to the relation:

PR= $\frac{CF}{MCV}$ x 100

Where: PR – break-even; CF – fixed expenses; CV – variable expenses; MCV – margin over variable expenses.

Thus determined, the break-even illustrates the minimum percentage of activity in relation to production capacity, for which profit is nil. Results show that the break-even for the ARCTIC SA trade company amounts to 88.3 %, while in absolute values, it amounts to 166,250 thousand EUR, respectively 731,500 thousand lei.

PR $=\frac{66500}{75250}$ x100 = 88.3 % of production capacity.

If we were to use the margin over variable expenses, determined as a percentage of turnover, we would obtain the break-even of values, respectively the minimum value of turnover for which the profit is nil. The calculation formula is:

PR = $\frac{CF}{MCV\%}$

PR $= \frac{66500}{40\%}$ = 166,250 thousand EUR, respectively 731,500 thousand lei.

In the same, year the total costs of non-quality, represented by the cost of internal and external faults, rising to 28,000 thousand EUR, the equivalent of 15% of the turnover, were quantified. This means that the effective variable costs only actually amount to 75,250 × (100 – 15) = 63,963 thousand EUR, while the difference, amounting to 11,287 thousand EUR, represents non-quality costs.

The successful introduction of the quality management system represented a considerable improvement of indicators, fact noticeable by analyzing the simplified form of the profit and loss account for 2010 (Table 3).

As can be observed, the turnover reached the amount of 253 mil. The stabilization of the manufacturing process has determined a decrease in fault costs, which translated into a profit increase of 85% compared to 2005.

Table no. 3 – *The Balance Sheet of S.C. ARCTIC S.A. upon 31.12.2010*

Indicator	Amount		Percentage from CA (%)
	Thousand EUR	*Thousand lei*	
Turnover	253000	1113200	100%
Variable expenses	153000	673200	60,5
Margin over variable expenses (MCV)	100000	440000	39,5%
Fixed expenses	90330	397452	35,7%

Operational profit	12905	56782	5,1%

Results show that for the ARCTIC S.A. trade company, the break-even for 2010 amounts to 90.3 %, while in absolute values, it amounts to 225,825 thousand EUR, respectively 993,634 thousand lei.

PR =$\frac{90330}{100000}$ x 100 = 90,3 % of production capacity.

The fact that the PR is greater than in 2005 is explained by the rapid increase of turnover. Moreover, this situation also resulted from the decision to invest in order to increase the production capacity for which, as shown, investments of 24 million EUR were allocated.

The result of the absolute value is:

PR = $\frac{90330}{39,5\%}$ = 228,683.5 €, respectively 1,006,207.4 thousand lei.

In the same, year the total costs of non-quality, represented by the cost of internal and external faults, amounting to 23,276 thousand EUR, the equivalent of 9.2% of the turnover, were quantified. This means that the effective variable costs only actually amount to 100,000 × (100 – 9.2) = 90,800 thousand EUR, while the difference, amounting to 9,200 thousand EUR, represents non-quality costs.

With regards to the inclusion in the time frame associated with the analysis, of the 2009 and 2010, the years of the financial and economic crisis, we must state that such has not influenced the results of the study, as the company suffered no significant consequences, and the financial indicators were on the rise during such period. Therefore, CA increased by 133%, while profit increased by 183%.

The successful introduction of the TQM quality management system and of the continuous quality improvement system – Kaizen, practically meant a step closer to achieving the *zero faults* objective, *as can be seen* in Table 4, where the simplified situation of the profit and loss account for 2014 is showcased.

As shown in the table, the turnover reached the value of 384,000 thousand EUR, representing an increase of 152%. The stabilization of the manufacturing process determined a decrease of defect costs, translated into a profit increase 1.5 times greater than in 2010. This means that a decrease of 9.2% for fault costs has determined a profit increase by approximately 50%.

For 2014, the simplified situation of the profit and loss account is showcased in Table 4.

Table no. 4 – *The Balance Sheet of S.C. ARCTIC S.A. upon 31.12.2014*

Indicator	**Amount**		**Percentage from CA (%)**
	Thousand EUR	***Thousand lei***	
Turnover	384000	1689600	100%
Variable expenses	230400	1013760	60%
Margin over variable expenses (MCV)	153600	675840	40%
Fixed expenses	134400	591360	35%
Operational profit	19200	84480	5%

Results show that for the ARCTIC S.A. trade company, the break-even amounts to 87.5 %, while in absolute values, it amounts to 336,000 thousand EUR, respectively 1,478,400 thousand lei.

PR =$\frac{134400}{153600}$ x100 = 87,5 % of production capacity.

The result for the amounts in lei for the break-even is:

PR = $\frac{134400}{40\%}$ = 336,000 thousand €, respectively 1,478,400 thousand lei.

In the same, year the total costs of non-quality, represented by the cost of internal and external faults, amounting to 7,680 thousand EUR (i.e. 3 times lower than in 2010), the equivalent of 2.0% of the turnover. As a result, the variable effective costs only amount to 153,600 × (100 – 2.0) = 150,528 thousand EUR, while the difference, amounting to 3,072 thousand EUR, represents non-quality costs.

This result shows that the successful introduction of the TQM quality management system, combined with the methods of the continuous quality improvement system – Kaizen, meant a very close step to achieving the *zero faults* objective *(in this assessment of the result, one must consider that the Kaizen system methods were only present for three years from the total five-year period analyzed).*

As shown in the table, the turnover recorded an increase of 152%. The stabilization of the manufacturing process determined a decrease of defect costs, translated into a profit increase 1.5 times greater than in 2010. This means that a decrease of 9.2% for fault costs has determined a profit increase by approximately 50%.

In addition to these calculations, in order to obtain a clearer perspective of the impact of efficiently implementing and operating the TQM system, completed by methods from the Kaizen system, we deemed it useful to calculate the amount by which the turnover would increase, in absence of an implemented total quality management system (2005 - 2010), and of the system completed with Kaizen methods (2010 - 2014) for the profit to reach the level achieved by using this system..

The calculation formula is:

$CA_1 = \frac{CF+(1+x)P0}{MCV\ (\%)}$, where

CA_1 – turnover which, given the conditions at hand, allows the increase of profit by X percent;
P_0 – profit for the initial situation.

In the situation prior to implementing the quality management system, the 184 profit increase would have required an additional turnover of:

$CA_1 = \frac{66500+1,84\ x\ 7030}{40\%}$ = 79435,2 thousand €

$CA_{2} = \frac{90300+2,03\ x\ 12905}{39\%}$ = 116497 thousand €

This means that, in order to obtain the same profit by incurring non-quality costs, the sale volume should have increased during the 2005 – 2010 period by 41.81%, and by 30.34% during the 2010-2014 period, when Kaizen methods were also implemented. Therefore, we believe the introduction of quality systems may provide a significant economic impact for the company, and also for the entire national economy, through a more efficient resource management, thus insuring an increase in welfare.

4. Conclusions

The case study performed represents a factual, objective and factual assessment, from a statistical standpoint, of the impact of effectively implementing a quality management system on the financial performance and economic efficiency in general. Moreover, the feasibility of the methodology for calculating the efficiency of the quality system was demonstrated.

The results provided aim to confirm the special economic capacity of businesses that have implemented the system and to reassure the management of such organization that have implemented the system of the validity of the decision made in this regard. Obviously, there are certain companies which, after obtaining the quality certificate, failed to record continuous improvement progress and fail to provide full satisfaction to their

clients. If for such organizations, the advantages of certification were do not fully meet their expectations, the causes do not reside in the limitations of the quality system, but in the manner in which it was commissioned. After certification, one needs to follow the observance of referential requirements, especially of the "*Continuous Quality Improvement*" principle, through efforts of continuous development of all processes. Yet, by the very introduction of certain quality improvement methods (in our examples, methods belonging to the Kaizen system), the businesses documented recorded a substantial increase in efficiency compared to the situation prior to introducing the quality system.

As a result, we believe that in the near future, all industrial businesses will resort to a quality system similar to the one assessed herein – ***the TQM-Kaizen integrated quality improvement management system.***

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THE ESSENTIAL POLITICAL FRAMEWORK FOR ECONOMIC GROWTH

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Abstract: - The question referring to the reasons for which the differentiate growth rates across countries occurs is one of the most debated subjects within the economic literature. A common feature of the majority of these papers is the importance and the heaviness of the political institutions in the growth path of a country. In this study we will discuss three main characteristics of political institutions by endeavouring their contribution and effects on economic growth. The essential political conditions for growth will be determined using a model that integrates political factors into an endogenous growth model and derives the effects of political repression, political stability and policy certainty on economic growth. Next, we will asses in what extent the political context influences an individual's economic and rational choice. To highlight the impact of the three political dimensions: political freedom, political stability and policy certainty we will discuss the specificity of economic trajectories in CEE countries. This fact will enhance our ability of distinguishing the specific role that each of these variables is playing and also, the existing interdependence between them. Keywords: economic growth, institutions, political system, reproducible capital.

Key-Words: economic growth, institutions, political system, reproducible capital.

1. Introduction

Scholarly work on political, social, and economic development has grown rapidly in recent years; economists, political scientists, and sociologists have made this area of research one of the most dynamic and fruitful in the social sciences. Assessing the role of political institutions in economic performance is not an easy task. Long-standing, deep-rooted political and social challenges have shaped each national institution and economy today. Similar political institutions, set in two different countries, can affect their respective economy in different ways. And at the same time, institutions that differ politically, set in two different countries, can lead their countries to similar economic performance. What can account for these inconsistent and distinct results? What is the effect of political institutions on economic performance? This study focuses on the political determinants of economic performance. A primary topic throughout is whether or not democracy or political freedom contributes to quality of life by providing a useful and constructive political infrastructure.

2. The Basic Model

In this section we will present the model that integrates political factors into an endogenous growth model and derives the effects of political repression, political stability and policy certainty on economic growth (Chen and Feng, 1996; Feng, 2003). It constitutes the first step in identifying the essential political conditions for economic growth inside a country. Even when elaborated, the model was based on simple assumptions, the results it generates can be successfully interpreted in a general way of correlating the role of political institutions within the economic growth. Therefore, we will describe Feng's model (2003) developed with the aim of identifying political conditions for economic growth. The initial assumptions of the model are: an

economy without population growth, individuals live for two periods and their preferences are the same. Thus an individual born in period $t-1$ will maximize the following utility function:

$$V_t = u(c_t - 1) + \frac{1}{1+p} E_t u(d_t) \qquad [1]$$

In [1], c is the individual's consumption when young, d is the individual's consumption when old, t the time period, p the measure of time preference, and E the expectation operator. For simplicity of calculation, the intratemporal utility function was assumed to have constant elasticity:

$$u(c_{t-1}) = \frac{1}{1-\sigma} c_{t-1}^{1-\sigma} \quad \text{and} \quad u(d_t) = \frac{1}{1-\sigma} d_t^{1-\sigma} \qquad [2]$$

In this case $0 < \sigma < 1$ measures the elasticity of intertemporal substitution. This type of utility form satisfies the concave function characterized by the diminishing utility in consumption.It also simplifies the mathematical calculation when derivatives are taken.

The budget constraint when the individual is young is

$$c_{t-1} + k_t = y_{t-1}, \qquad [3]$$

Where y_{t-1} is the individual's income when young and k_t is the accumulation of reproducible capital, including human capital. Obviously, the amounts of consumption and investment are determined by the income levels. One important innovation of the theory of reproducible capital is how an individual allocates his time over various activities in the current periods affects his productivity in the future period (Arrow 1962, Romer 1986, Lucas 1988).

Also, since k is the composite of physical and human capital, it creates a knowledge spill-over on the basic skills of the new generation. Income when young is defined as:

$$y_{t-1} = w_{t-1} k_{t-1} = y_{t-1}, \qquad [4]$$

Where w is an exogenous endowment of "basic skills". It measures personal productivity in utilizing the total capital accumulated, as wage earning potential varies from person to person with the same level of reproducible capital. Since k can be considered the average accumulation in the economy, equation [4] implies that the reproducible capital accumulated by the previous generation is a positive externality on the income of the new generation. The higher the average capital accumulated, the higher the income for the new generation, with the endowment of basic skills kept constant.

So far, we have an economic model of consumption and investment. A person decides how much to consume currently and invest for consumption in the future, conditioned by his income, while how much he earns depends on his idiosyncratic capacity and the existing reproducible capital.

Next, political factors are embedded into the model according to economic factors and considerations. Any economy functions within some sort of political framework, and consequently it is impossible for an economic agent to be impervious to the political structure surrounding the economy. Of all the political factors, the model identifies three as fundamentally important. First, we start with a political regime that exists during the first period of the economic agent's life. If this regime remains in power in the second period, with a probability of π, the budget constraint of the individual when old is:

$$d_t = r_t(1-\tau), \qquad \tau < 1, \qquad [5]$$

Where r is the exogenous rate of return, and τ is the social cost imposed by the government (it enters the calculation only with respect with the future period since the individual is concerned about the future when making an investment decision). Therefore, $(1-\tau)$ measures how well an individual can appropriate the returns on his physical and human capital investment, given the political constraints. In a broad sense, in this model, τ captures the idea of how a government runs an economy (whether it is political repression or political freedom). The government may be repressive, expropriating the gains of the marketplace and stifling productivity. Or the government may be conducive to the market by establishing rules that protects growth-enhancing incentives. For instance, the government may pass laws and take actions to protect property rights. The government may also provide public goods such as national defence, communications networks, transportation infrastructure, research, and education all of which lead to increased private investment. When government policy has a positive effect on the incentive of the economic agent to invest,τ, takes a negative value, which will augment the investment returns to the individual, when the exogenous rate r is kept constant.

When government policy takes a toll on the economic activities, τ takes a positive value between zero and one. As a result, the total returns to the individual will decrease, compared to the benchmark of no government, which is $d_t = r_t k_t$. The variable τ reflects the fundamental characteristics of a political system.

Political stability is another political variable to be placed in the model. Since the probability that the current government will extend its rule for the second period is only π, the probability that the current regime will be replaced at period t must be $1 - \pi$. If the current government maintain its rule in the future, then we can expect policy continuation. Investors will not be surprised by any significant policy change. In this simplified model, Feng (2003) assumes that each political regime is identified with a particular set of policies, and that those policies do not change fundamentally. If the policies do undergo radical change, that is equivalent to a political regime change. The variable π captures the longevity of the current government (ie political stability).

Also, assume that once the new political regime is installed, there is a probability of 50% that the new regime will be more repressive than the current one by $\Delta\tau$ (and logically a probability of 50% that it will be less repressive by $\Delta\tau$). According to Alesina, $\ddot{O}$zler, Roubini, and Swagel (1996), it can be reasonably assumed that regime change produces uncertainty when a large sample of cases is examined. In a mathematical model, a 50% probability best captures the uncertainty brought about by regime change.

Thus the budget constraint of the old generation when a new political regime is installed is:

$$d_t = r_t(1 - \tau + \Delta\tau)k_t \,, \qquad \text{with } p = \frac{1}{2}, \qquad [6]$$

$$d_t = r_t(1 - \tau - \Delta\tau)k_t \,, \qquad \text{with } p = \frac{1}{2}, \qquad [7]$$

where $\Delta\tau$ measures the difference in political and social cost imposed by the new and old regimes. In this simplified model, the specification of the incremental change of repression can be viewed as a special case of a random walk-process, in which the innovations of repression take only two discrete values with equal probability.

The idea is to capture political uncertainty caused by regime change. The 50 % probability is based on the assumption that the new policy of the new political regime is untested and, once the new regime is installed, it is equally likely to be either more or less repressive than the current regime by $\Delta\tau$. Here $\Delta\tau$ gives us the third political variable, which is called policy uncertainty (with the reverse – policy certainty). If $\Delta\tau$ equals zero, there will be no policy differences between the current and future political regimes. Thus, policy certainty is the highest when $\Delta\tau$ equals zero. With the three political variables in place, the individual's problem is to maximize equation [1], subject to constraints [2] to [7]. This will result in:

$$Max_{c_{t-1}} u(c_{t-1}) + \frac{1}{1+p} E_t u(d_t) \qquad [8]$$

The lemmas following calculation (setting the marginal utility from consumption in $t-1$ equal to the marginal utility from consumption in t, defining $g = \frac{k_t}{k_{t-1}}$) and derivation yield the propositions:

$$\frac{\partial g}{\partial \pi} > 0$$

$$\frac{\partial g}{\partial (\Delta\tau)} < 0$$

$$\frac{\partial g}{\partial \tau} < 0$$

Therefore, we can draw the following theoretical conclusions: ceteris paribus, first, the lower the probability of the survival of the current regime or the higher the level of political instability, the lower the growth rate< second, the more polarized the policy positions between opposing parties or the higher the degree of policy uncertainty, the lower the growth rate; third, the more repressive the government or the lower the level of political freedom, the lower the growth rate.

3. A Theoretical approach

It has been already proved that economic institutions are a major source of economic growth across countries (Rodrik 2007). Economic institutions have a decisive role in economic growth and, besides, they are important for resource distribution: investments and production decisions. As a consequence, the ability of certain groups of economic agents is conditioned by the institutional economic context and by its influence on

resource allocation. Therefore, the economic institutions are endogenous (Acemoglu and Robinson 2006) and emphasize the existence of a permanent dispute of interests among different agents over their choices and decisions regarding the distribution of their available resources and the economic environment where their activity will be developed.

Thus, it is easy to notice that the construction and the development of economic institutions is, in major part, determined by the political background and political power of a country. The economic choices and the behavior of the main economic agents and individuals are influenced both by the constraints and incentives that political institutions shape within a society. Given the endogenous feature of political institutions and strategic allocation of powers they provide, appropriately chosen institutions can help the development of credible mechanisms capable of decreasing risks of opportunistic behavior of political and economic players (Pereira and Teles, 2011). Accordingly, for a country's sustainable development, political institutions must assure a contextual and conditional environment that will determine politicians to conduct in a reliable and impartial manner over time.

On the other hand, many researchers emphasized that political institutions are critical for a sustainable economic growth especially in low-income countries. Moreover, the CEE countries are the best examples in proving that as long as the same political party rules within a society for a large period of time, the political system will be affected in a negative way. Also, from the specificity of CEE countries the researchers could observe that when the governing coalition is formed by many parties, the electoral system tends to be more party-centered. This fact leads to a smaller and weaker economic growth for developing countries. In the same logic, the differences between the influences of political institutions are also given by the type of the political regime within a given state.

This article studies three major dimensions of a political system: political freedom, political stability, and policy certainty and relates them to economic development. These dimensions constitute the political foundation of economic management and affect not only economic growth, but also the economic determinants of growth, such as inflation, investment, human capital, income inequality, property rights, and population growth. Of the three variables, the role played by democracy or political freedom in growth is the most controversial: "democracy has been both lauded as a vehicle for happiness and prosperity, and blamed for hampering capital formation and the long term growth of nations" (Feng 2003).

The prevailing opinion among experts is that democracy is having a negative effect on GDP growth or has no effect (Gerring, Bond, Barndt, Moreno 2005). Although, in some studies, democracy is seen as the equivalent of the right to vote (Cheung 1998), Rivera-Batiz (2002) defined democracy as being present in countries that "control and maintain balance of the executive power, are characterized by: constitutional processes, freedom of the press and the absence of censorship, clear and effective legal and judicial structures, transparency, openness and involvement of citizens in decision-making."

With more than half a century ago, the dilemma was whether centralized economies or market economies are more efficient in terms of production of goods and services, capital investment and increased productivity in the long term and as therefore, in terms of the standard of living. The democratic government has been criticized by Walter Galenson and Karl De Schweinitz. In 1959, they argued that democracy is holding pressure on immediate consumption, which increases the investments cost, therefore slows down the growth. This argument was accepted and taken over by Samuel Huntington in 1968 and Huntington and Dominguez in 1975. From this perspective, democracy is viewed as a factor which generates an explosion of demand for current consumption, demand that threatens profit, resulting in reduced investment and sloed down growth. Within this context the government must posses the ability to act as an "iron hand" to take drastic measures to increase the size of the investment and hence the resources used in this process. It is understood that no political party could hope to win elections with a government programme that involves sacrifice in the present for a "bright future" (Huntington 1968). It was also shown that the countries with an authoritarian government comparative with democratic countries are at the same rate, or even at a higher one predisposed to rapid economic growth.

But there are important data showing that since the beginning of the Industrial Revolution, market economies have proved to be the ones contributing on long-term in raising the living standards. Therefore, we can ask to what extent democracy and economic growth are components of a causality mechanism (Friedman 2006). The debate on the impact of the government's regime on economic growth has been a focus area for researchers for a long time. Przeworski defines the concept of "political regime" based on the circumstances in which most political parties in several countries develop and implement similar policies without considering the

ideological orientation of the political party. (Przeworski 2001). A consensus has grown as a result of extensive studies according to which there is a direct relationship between the political system and economic growth.

Democracies and autocracies have been shown to perform on average, although democracies are less volatile. In addition, in democracies is more difficult to initiate drastic economic reforms. Thus, it was shown that when taken into consideration a country's history in terms of political regime, the analyzes revealed a positive relationship between democratic stock and economic growth and between democracy and the development of various economic policies vital to growth. About the ongoing crisis, we can say that goes beyond the mere economic crisis. Rather, we can look at it as a systemic crisis within which the key players are locked by stayi loyal to the old strategies that have been proven to be non-functional. While social and economic imbalances deepen, the existing order in the current institutional structure erodes. However, no one seems to actually have the ability to build a new set of institutional reforms.

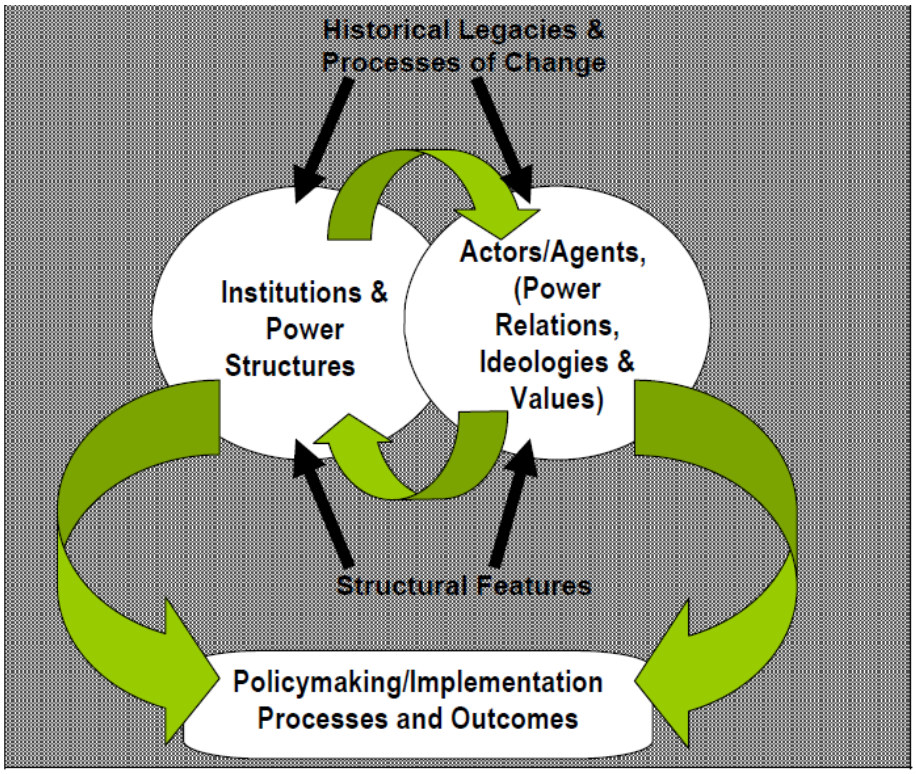
4. The Quality of Political Institutions

Hyland highlighted three characteristics of democracy against which this form of government should be evaluated. First of all, we should analyze democracy as an instrument that helps in making the best political decisions. Secondly, when designing democratic procedures, the representatives of the political institutions should have present the expectations of the people living within a free country and should operate accordingly to them, with the aim of increasing the prosperity and well being of the citizens from a given democracy. Thirdly, the participants and the decision makers operating within a democracy must prove their ability to undertake valuable and worthwhile actions, unconstrained and uncontrolled by endogenous factors.

Additionally, would be interesting to analyse whether or not political freedom or a high degree of democracy improves life through promoting economic growth, reducing income inequality, and improving education.

There are many research papers developed with the aim of understanding political systems and the way in which different characteristics might influence policy within a given state. Moore (2001) recommends three levels of analysis for mapping political systems: foundational issues, institutionalisation and government capacity and accountability. Figure 3.1 presents a framework for sector and policy analysis that starts with a broad/foundational country study. This framework concentrates on how historical legacies, processes of change and structural features influence the relations between institutions and actors and, in turn, the policymaking and implementation process.

Figure 3.1 Factors Influencing the Policy Process



Source: Moore (2001) Types of political systems

Thus, it is obvious that the quality of economic institutions is preponderant determined by the quality of political institutions. Political competition and the checks and balances imposed in a well-functioning democracy restrict the ability of governments to engage in rent seeking while the accountability of government to taxpayers leads to more business-friendly rules and regulations (Moncrieffe 2004a). Democratic regimes are also more likely to have independent regulatory institutions and independent judiciary system. The interconnection of the quality of economic and political institutions is strengthen even more in the terms of economic development, as it is supported by more performing economic institutions that also demand performing political institutions.

5. Conclusions

We may conclude our analysis by stating that taking into account the existing scientific literature regarding the essential political framework for economic growth reaches a consensus that a political freedom contributes to economic development, and hence to the evolution of performing political institutions. Most of the researchers demonstrated that there is an existing interactive relation between economic institutions and the political framework within a given society. Therefore, stronger democratic environment will contribute towards a more stable and offering economic background, fact that will always act as an incentive for all the economic and political agents from a certain country. Nevertheless, the ability of these economic agents to contribute to the policy making is constrained by the allowances that political institutions put in place in a given state. Consequently, the ability of a government to achieve economic growth and is also dependent on the quality and stability of the country's political stability.
In a future study it will be interesting to analyze the extent in which economic development generated an increasing demand for better political institutions and whether or not this demand was met in the CEE countries.

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CONSUMER'S ATTITUDE CONCERNING ORGANIC FOODS

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Abstract: - Despite the fact that Romanians have increasingly healthier habits and the consumption of organic foods is growing year after year by 20%-30%, this consumption represents less than 1% of the aggregate sales in Romanian retail, compared to the Western Europe, where the share exceeds 5%. Also, national consumption of certified organic products represents only 2% of the total foods consumed. In order to be able to change the existing situation it is necessary to determine, firstly, the consumer's attitudes on organic products. Since the attitudes are the result of learning, they can be changed. In the light of the organic consumers' possible attitudes, this aspect has two connotations. One can be favorable, in changing the view of a greater number of consumers in favor of more products, promotional messages, etc., environmentally oriented. The other may be unfavorable, if the companies are not careful and do not maintain constant and convincing efforts to protect health and the environment. In this context, we aim to add more insight on consumers' behavior regarding organic foods.

Key Words: marketing research, consumer behavior, attitudes, statistic survey, green goods

1. Introduction

"The fast century" has certainly put its mark on our life style and not necessarily in a positive way. The first issues and the most important one of this new lifestyle is represented by poor nutrition. In this context, in recent years a new trend emerged on the food markets in Romania, the ecologic food consumption, also known as bio or organic, which meet a real success.

Despite the fact that Romanians have increasingly more healthier habits and the consumption of green foods increase also year after year by 20%-30%, they represent less than 1% of the aggregate sales of Romania retail, compared to the western Europe, where the share exceeds 5% [1] (in Germany the consumption share is 5%, in England and Austria is 3% and in Hungary it has reached 2%). Also, the internal consumption of certified green foods represent only 2% of the total consumed foods, although almost 70% of the products from the Romanian rural areas can be classified as natural and green, according to Ciprian Cioceanu, president of the Organic Agriculture Operators of the "Bio Romania" Organic Agriculture [4].

However, experts in the field claim that the market for organic foods will not exceed 2% in the following three years [2].

To be able to change the current situation it is necessary to determine, firstly, consumers' attitude regarding organic foods. Because they are the result of learning, attitude can change. In the light of the organic consumers' possible attitude, this aspect has two connotations. One can be favorable, in changing the attitude of a greater number of consumers in favor of more products, promotional messages, etc., environmentally oriented. The other may be unfavorable, if the companies are not careful and do not maintain constant and

convincing efforts to protect health and the environment. In this context, we aim to add more insight on consumers' behavior regarding organic foods.

2. The concept of attitude towards the organic foods

Ecological foods, also known as "bio" or "organic" are goods produced by farmers who place emphasis on the use of renewable resources and environment conservation. For a good to be declared ecologic, it is necessary for at least 95% of its components to be organic and also to undergo the evaluation carried out by an Inspection and Certification Body, nationally or internationally accredited [6].

Ecological products represents a mix of ingredients from organic farming that respects the following principles and rules [8]:

- Eliminate any polluting technologies in an unpolluted area;
- Use of varieties and species within creased resistance to environmental conditions;
- Improving and maintaining soil's natural fertility;
- Use of fertilizer and soil improvers, pesticides, raw materials for feed preparation, ingredients for preparing food according to the guidelines provided by organic farming legislation;
- The absence of genetically modified organisms and plants irradiation;
- The absence of synthetic chemical additives: preservatives, colorings, flavorings, emulsifiers, acidifiers, taste enhancers, thickeners.

On the other hand, attitude is the term used when we consider total evaluation (including of oneself) made by a consumer, on persons, objects and issues, considering how favorable/unfavorable or how positive/negative is considered the item subject to judgment [5]. Generally, attitudes are the result of a learning process undertaken by the consumer, of its direct experience with the product, of the information obtained from others and from exposure to marketing. Attitudes vary in a large number of ways. We may question the attitudes form their foundation point of view and thus we can discriminate attitudes based on emotions, believes or previous behaviors and experiences, or we can approach the attitudes having internal consistency (being associated largely with feelings, attributes and positive behaviors) or ambivalent attitudes (composed of a combination of positive and negative attributes) [3].

Attitudes lead to the formation of a mindset based on acceptance or rejection of an object (in this case organic food), based on its proximity or remoteness, and also makes people have a relatively constant behavior regarding similar objects. These are designed to save energy and thought efforts, reason for which are hard to change [5].

3. Research methodology of the attitudes of organic food consumers

The marketing research process was conducted following the coordinates:

➥ *Research scope and objectives*

The research summarized in this article aims to assess Bucharest's consumers attitudes concerning organic foods.

The appropriate objectives of the above formulated purpose are:

- Identifying the extent to which Bucharest's consumers know the organic foods;
- Determining the main segments of organic food consumers by age, sex, income, education, occupation;
- Identifying the Bucharest's consumers attitudes regarding organic foods;
- Determining the extent to which the consumers recognize the main organic foods certifications;
- Identifying the frequency of consumption of the main categories of organic foods;
- Establishing the main reasons for purchasing/not purchasing the organic foods;
- Determining the importance of the main characteristics of the organic foods in the acquisition process;
- Identifying how the consumers asses organic foods main attributes;
- Determining the main factors that limit the consumption of organic foods;

- Determining the financial sacrifice level to which the consumers will be willing to undertake to purchase organic foods.

➥ *Community research and sample size*

Limited financial and time resources determined the limitation of the research area only to Bucharest. Thus, general collectivity under research is represented by Bucharest's population aged 15 and over of which a single sample was extracted.

The *observation uni*t is represented by the natural person (the individual) that is part of the researched collectivity and the *analysis unit* is the same with the observation unit.

Since the questions of the query translate into qualitative variables, it was considered appropriate to determine the volume of the sample using the qualitative variables relationship. The sample was determined considering the dispersions with a maximum possible value for qualitative variables (p = 0.5). The probability for guaranteeing the result is 95% with a maximum allowable error margin of ±5%. The dimension of the researched community, meaning individuals with ages over 15, last resident in Bucharest, amounts to a total of 1,674,146 persons according to the data provided by the National Statistics Institute. Thus, the sample size will be determined according to the established restrictions, as follows:

$$n = \frac{1,96^2 \cdot 0,5 \cdot 0,5}{0,05^2 + \frac{1,96^2 \cdot 0,5 \cdot 0,5}{1.674.146}} = 384,0718 \cong 385 \quad (1)$$

Within this research 385 persons were questioned, based on the questionnaires, out of which 37 questionnaires were removed because they contained incomplete data or non-answers. It follows, thus, a final sample of 348 persons. The response rate meeting a satisfactory level of 90.4%.

➥ *Research questionnaire*

The questionnaire used in this study represents a reflection of all objectives, hypothesis and variables established in the earlier stages of research.

The method used for collecting information used for each research was presented in the personal survey (face to face) carried out in public areas with heavy traffic with interception on the streets or business premises. This method for collecting data involves short interviews, thus determining a questionnaire of 15 questions and low complexity. Also, the method of collection imposed the use of a structured process of presentation where the questions where questions presented in the query and the use accessible scales (semantic differential, Likert's scale).

Therewith, when developing the questions wording the importance of correlating the content of the questions with the degree of respondent's awareness in terms of the issue at hand was considered, so that his answer should be given knowingly.

The language used when wording the questions must be simple and direct, so as not to cause confusion or to leave room for interpretation, being adapted to the investigated community's characteristics. Regarding the order of the questions, for the issue at hand the respondent's work approach was applied, principle that requires that questions requiring greater mental effort to respond to be placed in the center of the questionnaire.

➥ *Sample representativeness*

One of the preliminary steps of statistical analysis and interpretation of the results is establishing the representativeness of the selected sample population. This is done based on auxiliary variables: "sex" and "age" for which the distribution parameters' values are known for the population of interest. It is well know the fact that for the situation where the differences compared to the estimators values obtained based on the data from survey are significant then, the sample is not representative.

The share of women form the sample total turned out to be 54,4%. In order to see if there are significant differences compared to the known value form the total population according to the official data (53,4%) test z was used (the sample is of normal value) to compare the proportion from the sample and of the population. Thus, considering the fact that the value computed for the test is smaller $z_c = 0,374$ than the theoretical value $z_{1-\frac{\alpha}{2}} = 1,96$ established for a guarantee probability of the research results of 95% to which corresponds a level of significance, $\alpha = 0,05$ we can conclude that the sample is representative.

Regarding the variable "age" it is know the distribution form of this variable in the target population due to the data provided by NIS [7], so that in order to verify the representativeness of the sample it has been

used the test χ^2 to compare this distribution with the one from the selected sample. In our case, after applying the test we have obtained $\chi_c^2 = 8{,}871$. The theoretical value of the test considered for a level of significance $\alpha = 0{,}05$ and a number of degrees of freedom $df = k - 1 = 5 - 1 = 4$ is 9.49. Thus, $\chi_c^2 < \chi_{0,05;4}^2$ a conditions that leads to accepting the null hypothesis and formulates the conclusion according to which the two distributions are consistent therefore, the sample is representative.

4. The research results

After conducting the survey to determine *Bucharest's consumer's attitudes regarding the organic foods*, we were able to formulate the following conclusions, as a result to the established objectives and hypothesis during the preliminary phase of the research:

- The first objective of the research was to identify *the extent to which Bucharest's consumers know about organic food*. In this regard, the respondents were asked to express their opinion and name a term that they usually associate with organic food. The data collected shows that 44% of Bucharest's consumers associate organic food with no fertilizers and no food additives, while 31% believe organic food are natural products, 19% consider that they are fresh, and 6% that are produced traditionally (see Fig.1).

These results reflect the low level of awareness of Bucharest's consumer on organic food; given that the majority of respondents could not correctly define this type of products (56% of Bucharest's consumers have defined them incorrectly as being natural products, traditional or fresh).

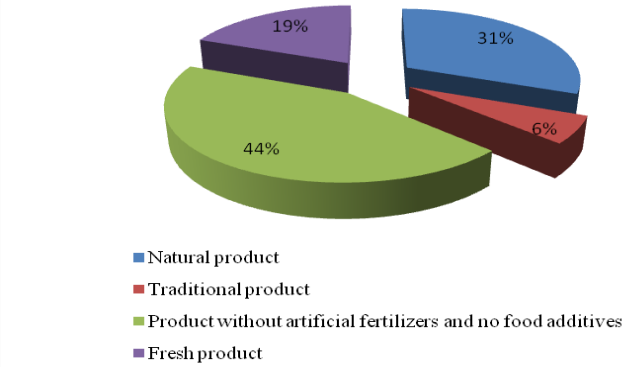


Fig.1. What is the term you associate with the name organic food?

Incorrect identification of the organic foods represents one of the main factors that negatively influence the sales volume on this market. In this context, the information and promotion campaigns of the organic foods may have an important role in enhancing opportunities for the producers of this type of products.

- The second objective of the research is to *determine the main organic food consumer segments*. Based on data provided by the research we can conclude that the frequency of consumption of organic foods is relatively low (see Fig.2.)

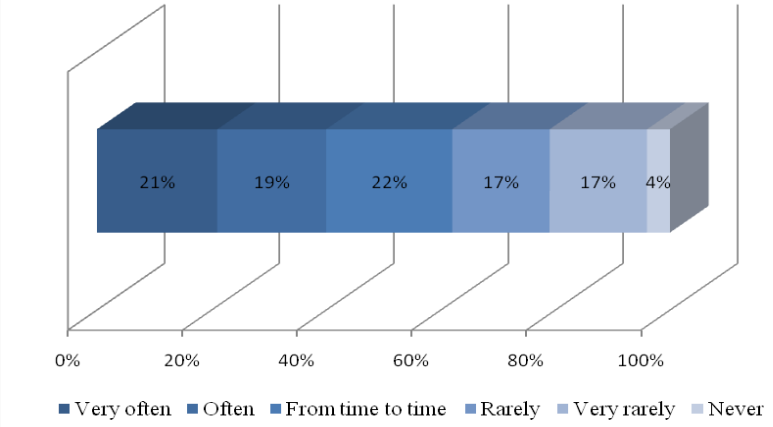


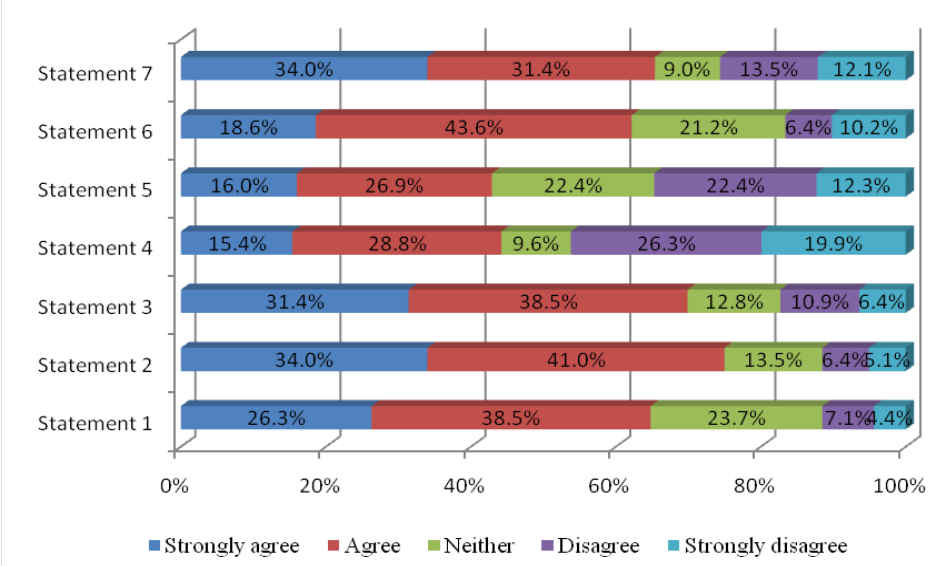
Fig. 2. The frequency of consumption of organic foods

According to the research, the frequency of organic food consumption is only apparently high, given that 40% of consumers buy organic products often and very often and 22% sometimes consume these products. On the other hand, the share of consumers who buy organic food seldom and almost never is of 34% and those who say they have ever used organic products is 4%. Correlating these results with those obtained from the previous objective we were able to conclude that those who consume often and very often organic food are not entirely represented by people who define these products correctly. So those who correctly define organic food and have declared that they consume often and very often these products represent only 22%. Most organic food consumers are actually consumer of products more or less natural and not certified organic products consumers.

Also, following the analysis carried out it was found that the average monthly net income is the variable that significantly influences the consumption of organic foods and there is a positive correlation between these two variables. Thus, as consumer income increases, there is an increase of the same measure of consumption of organic food. Also, it was found that age, education and gender are variables that do not significantly influence consumption of organic foods.

- *Identifying Bucharest's consumers' attitudes regarding organic foods* has been another objective of the research carried out.

Analyzing the data collected through Likert's scale (see Fig. 3.), we may conclude at first glance that Bucharest consumers agree that organic foods have a high quality level (75% of consumers) but that are unreasonably more expensive in comparison to the conventional ones (69.9% of consumers). Also, 65.4% of respondents agree that organic foods are the base for a healthy lifestyle, 64.8% of respondents have confidence in this type of products and 62.2% agree with the statement that consuming organic food is a sign of commitment to the environment.



Captions: Statement 1: I have confidence in organic foods
Statement 2: Organic foods have a high quality level
Statement 3: Organic products are unreasonably more expensive in comparison to the conventional ones
Statement 4:I am willing to pay a higher price for the purchase of organic products
Statement 5: Organic foods have different properties compared to conventional products
Statement 6: Eating organic food is a sign of commitment to the environment
Statement 7: Organic foods are the base for a healthy lifestyle

Fig. 3. Bucharest consumer attitudes regarding organic foods

The average scores, specific to Likert's scale reinforce those stated above (see Fig.4).

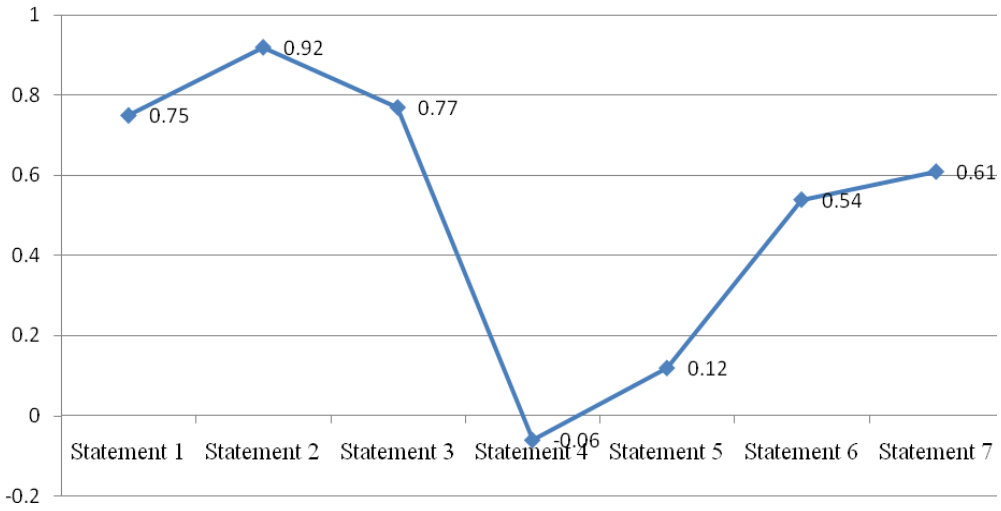


Fig. 4. The average scores, specific to Likert's scale used to measure consumers attitudes regarding organic foods

▪ The fourth objective of the research is to determine *the extent to which consumers recognize the main certifications of organic foods*. After processing and analyzing the data related to degree of awareness of Bucharest's consumers of the main certifications of organic food, we were able to conclude that a significant percentage of consumers do not have sufficient information on the main certifications of organic foods (see Fig. 5.). We reiterate on this occasion the need to educate consumers on the characteristics of Romanian organic food.

However, there are some certifications recognized by consumers. Thus, 57% of consumers know well and very well the national certification "ae", specific for organic foods in Romania and 49% know well and very well known the national certification "bio" of Germany.

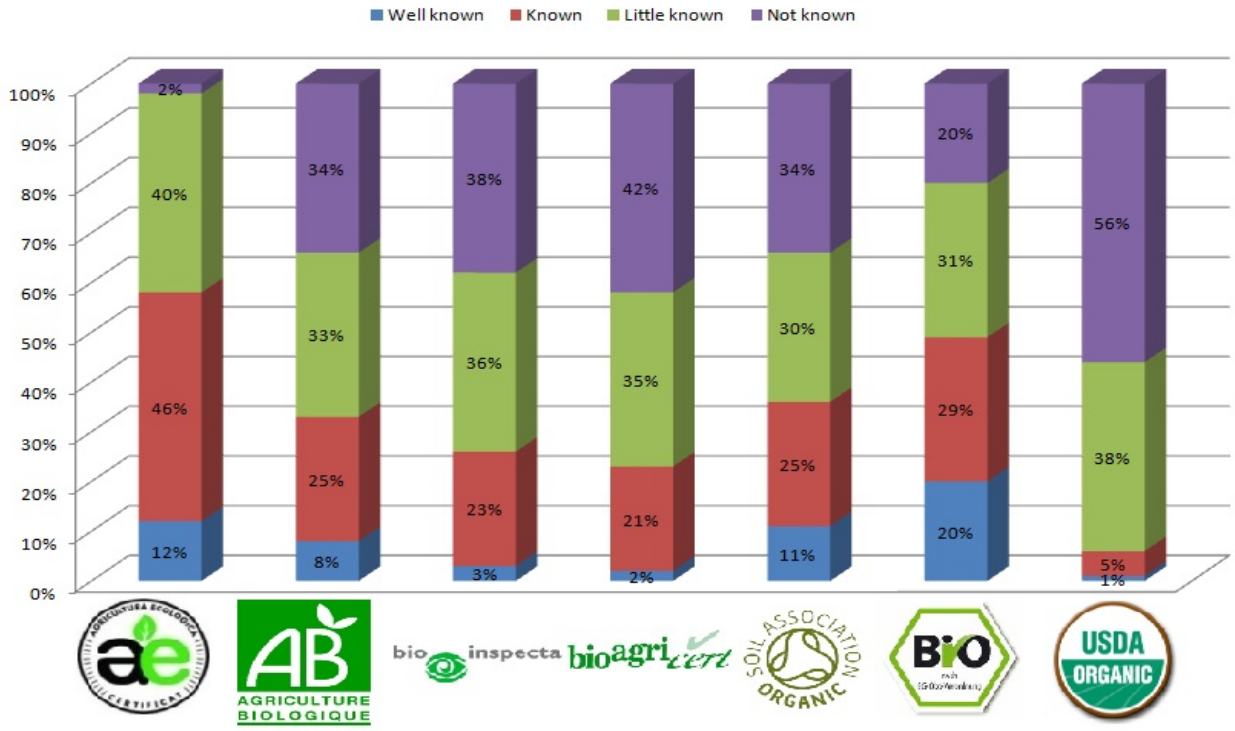


Fig. 5. Awareness of the main certifications of organic food

Also, 36% of consumers know well and very well the "Organic Soil Association", Britain's national certification and 32% of consumers know well and well the French national certification "AB". Instead, the certifications "bioagri-CERT" - Italy, "USDA Organic" - US and Swiss's national certification "bio-controllers" are very little known.

Concentrating marketing efforts towards informing the consumers on organic food certification or production process is a key element in developing this market. In this context, it is necessary for marketers to focus their attention on promoting these certifications, drawing inspiration from the rich branding theory and practices. The information flow should be maintained through regular and clear information session of the advantages and characteristics of organic foods.

▪ Through the next objective was targeted the *identification of consumption frequency of the main categories of organic foods*. Following the data collected from the analysis, we can observe that the fruits and/or vegetables are a category of organic foods with the highest frequency of consumption, 37% of consumers of organic products claim that they consume them daily, and 33% that they consume once a week (see Fig. 6.). The next category of organic foods consumption frequency is represented by bakery products consumed daily by 20% of consumers of organic food once a week and 37% of them. Milk and / or dairy products and meat and/or meat are consumed daily by 16% and 14% of respondents and once a week for 28% and 39% of respondents.

On the other hand, organic eggs are consumed equally once a week (32% of consumers of organic products) and 2-3 times per month (31% of respondents). Honey, soft drinks, coffee and teas are the categories of organic foods with the lowest frequency of consumption. Thus, soft drinks, coffee and tea are consumed by 61% of consumers with a frequency ranging from 2-3 times per week to occasional, and honey is consumed once a month or occasionally.

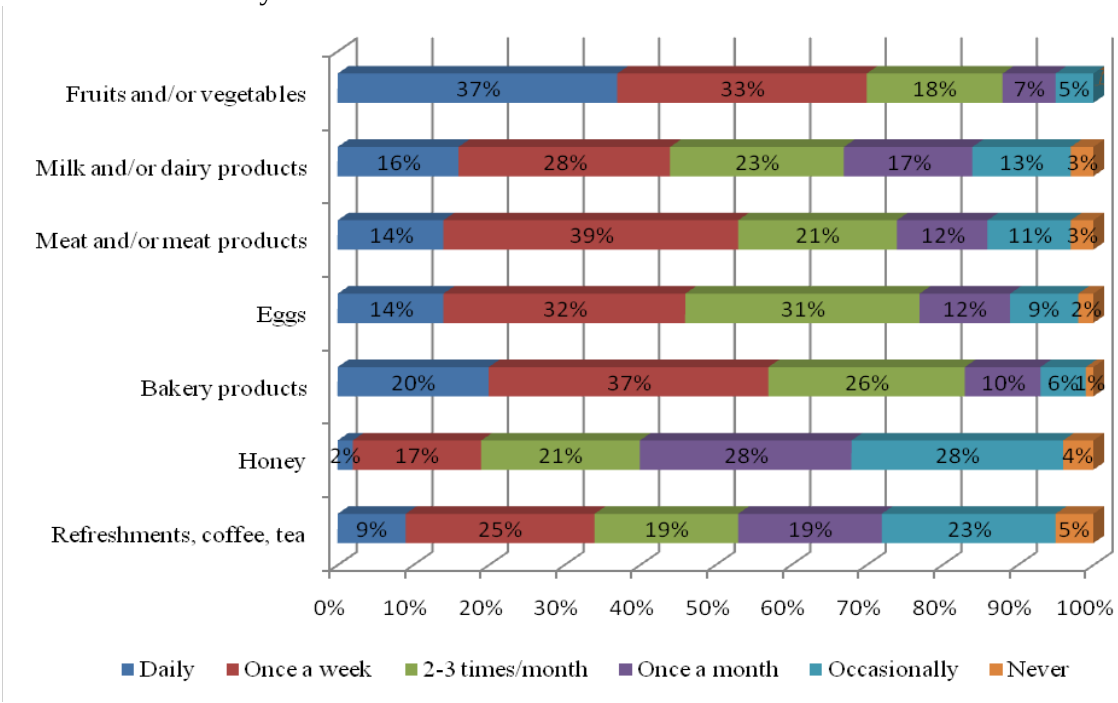


Fig.6. consumption frequency of the main categories of organic foods

▪ In terms of establishing the *main reasons for purchasing/not purchasing organic foods*, research shows that the main reasons for buying are that organic food taste much better (46% of consumers of organic food) and they are healthier (34 %) (see Fig. 7.).

On the other hand, the 4% of non consumers of organic foods do not purchase such products, primarily due to the high price (50% of respondents who do not consume organic foods) and the lack of confidence in the truthfulness of the producer s' statements (35.71%) (see Fig. 8.).

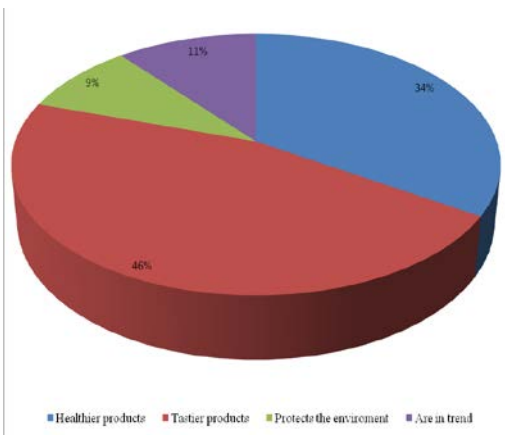


Fig.7. Reasons for buying organic foods

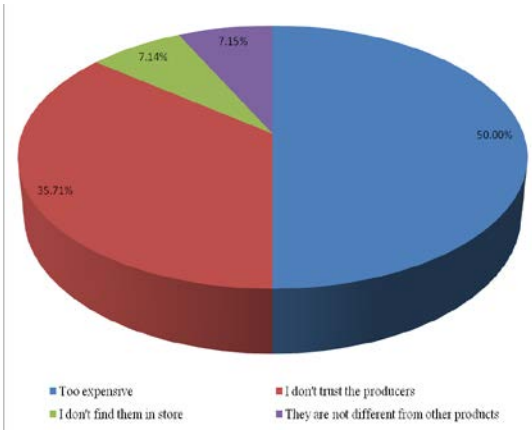


Fig.8.Reasons for not buying the organic foods

- With regard to *determining the importance of the main features of organic foods in the process of acquisition*, research shows that taste is the most important feature in the process of buying organic foods, followed by health benefits and price (see Fig. 9.). To a lesser extent, consumers believe that when choosing organic foodsthe reduced impact on the environment, ingredients and brand are also of importance.

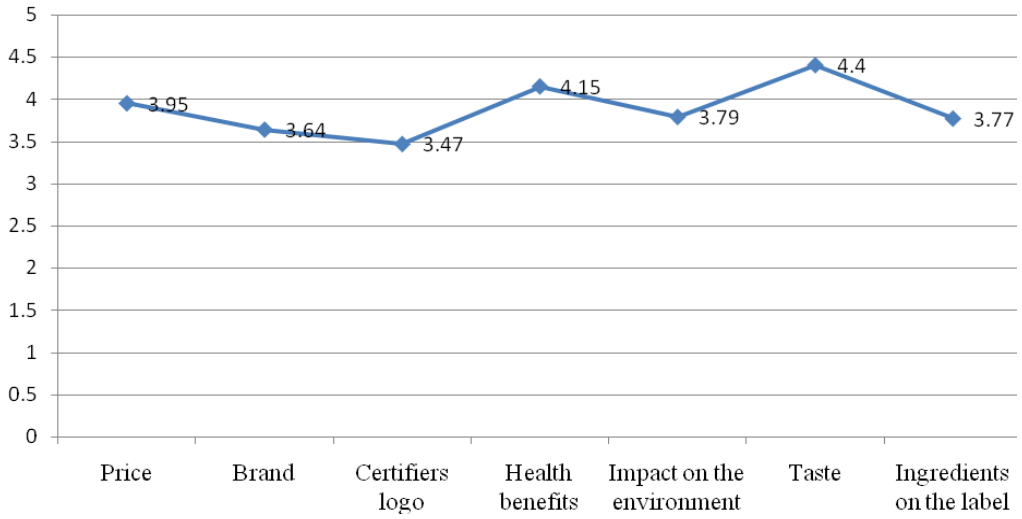


Fig.9. Distribution of average scores on the importance of organic food attributes in the acquisition process

The presence of the logo certifier has the least importance in the process organic foods acquisition compared with the aforementioned characteristics.

- To identify the *consumers' assessment method of the main organic foods atributes*, was used a semantic differential scale where consumers were asked to express their views on the characteristics of organic food versus conventional food. Thus, 86% of Bucharest's consumers and respectively 82.67%, believe that organic foods are "much better" and "best" in terms of content and other chemical additives and, respectively, in terms of taste, compared to conventional food products (see Fig. 10.).

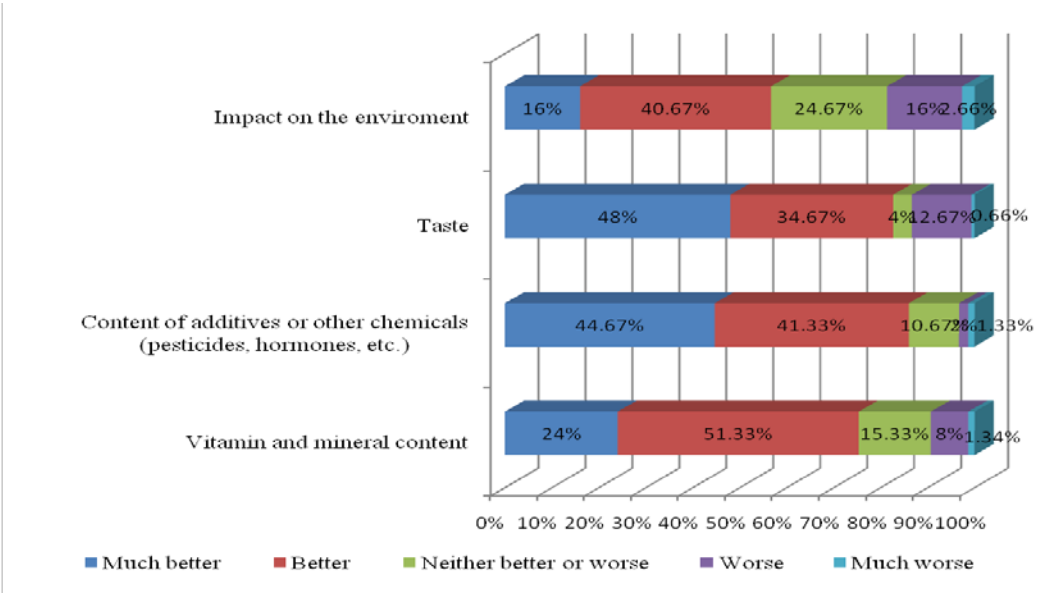


Fig.10. Method of assessment of the main attributes of organic food compared with those of conventional food products

Also, 75.33% of Bucharest's consumers consider that organic foods are superior to conventional food products in terms of content of vitamins and minerals, and 56.67% believe that organic foods have better impact on the environment compared to conventional products.

Correlating these results with those on the importance of the organic foods main characteristics in the acquisition process, we can conclude that organic foods are considered superior to conventional products in terms of some very important features for consumers.

- Following the research, we can draw up a conclusion also regarding the *main factors that limit the consumption of organic food.* Thus, according to 49% of Bucharest's consumers the main factor limiting the purchase is the high price of organic foods. Also, 24% of consumers distrust limits the consumption of organic food. To a lesser extent, lack of information and limited availability are two other factors that limit the consumption of organic foods (see Fig.11.).

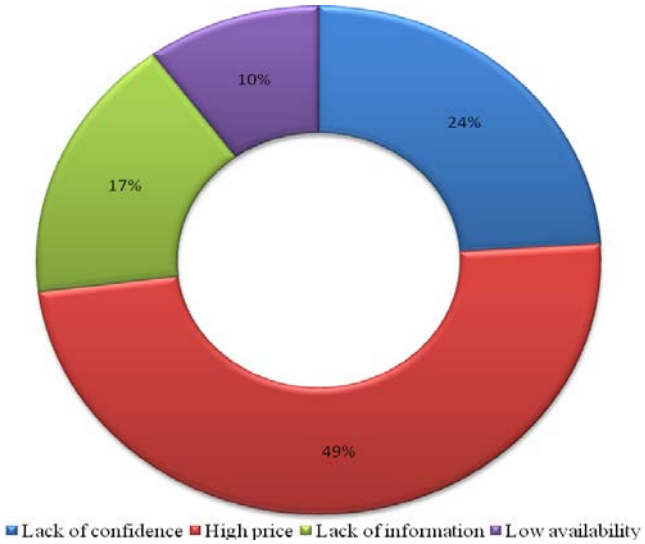


Fig.11. Factors limiting the consumption of organic food

- The last objective of the study was to *determine the level of financial sacrifice that the consumer would be willing to perform when purchasing organic foods*. Thus, 40% of Bucharest's consumers are willing to pay extra 10-20% for the purchase of organic foods, and 34% of them only 10% more (see Fig.12.).

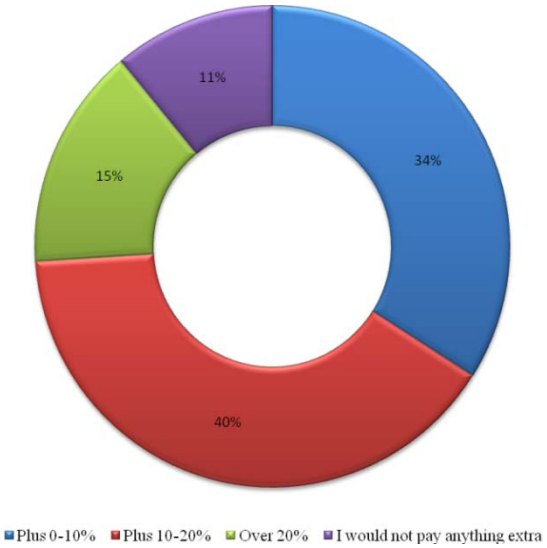


Fig.12.The level of financial sacrifice the consumer will be willing to make in order to buy organic foods

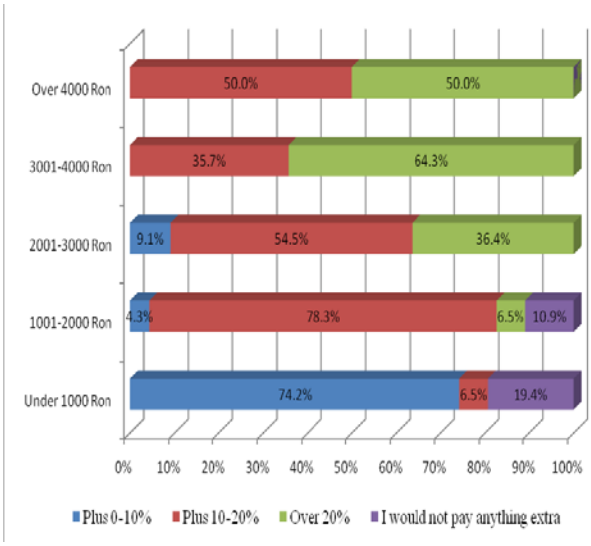


Fig. 13. Level of sacrifice correlated to "income" variable

Correlating these results with those specific to the "income" variable, we may note that 74.2% of people with an income below 1000 lei are willing to pay up to 10% more to buy organic foods, 78.3% of people with an income between 1001-2000 lei and 54.5% of those with an income between 2001-3000 lei are willing to pay extra 10-20% for the purchase of organic foods. People with an income above 3000 lei are willing to pay extra or either 10-20% or even more than 20% for organic foods. This results should be noted considering the fact that currently, the price of organic food is 30% higher, and sometimes even double compared to conventional products [2].

5. Conclusions

Summarizing the above considerations, we may conclude that consumers' attitudes concerning organic foods is favorable. Unfortunately, this is not always reflected in the purchase of these products, the first obstacle is the difficulty of identifying organic food. Although Bucharest residents declare themselves consumers of organic food, many do not know their main features, nor their certification system. Consumers confuse organic foods with products that offer similar benefits or with products that seem ecological leading thus to the reduction market development of organic food, taking into account the factors which limit the purchase of organic products are perceived to be lower in these "substitutes" (such as price).

This can be changed only by informing consumers and develop a correct attitude on organic food. Thus, through clear and issued repeatedly can increase the level of education of the population on this product, which will ultimately justify the presence of the most important barriers, the price premium.

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ECONOMIC AND ENVIRONMENTAL ASPECTS ASSOCIATED WITH THE TECHNOLOGIES FOR ELECTRICITY PRODUCTION FROM CONVENTIONAL SOURCES AND MEASURES TO MITIGATE THE PRODUCED IMPACTS

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Abstract: - The electricity sector represents the sector with the greatest impact in terms of producing climate change, mainly due to the greenhouse gas emissions generated through the burning of fossil fuels. It is not however the only negative aspect associated to the classic technologies of electricity production. This paper aims to assess the economic and environmental aspects associated to the technologies for the electricity production from conventional sources and as a conclusion of the research it will also propose certain specific measures designed to mitigate their impacts. Therefore, the analysis will focus on economic issues, such as limited resources of fuels and the significant fluctuation in fuel prices, low energy efficiency, environmental protection expenditures and health issues as a result of the pollution generated by the electricity production and environmental aspects related primarily to the burning of fossil fuels, but also to extraction, transport and storage, aspects concerning the management of waste generated by the energy sector or to the risks associated with the process of producing electricity. In the final part of the paper a few measures will be proposed to mitigate the impact on the environment and economic development of such technologies, as well as increasing energy efficiency, promoting renewable sources of energy, carbon dioxide capture and storage, limiting deforestation, afforestation or the prevention of accidents in the energy sector.

Key-Words: conventional sources, fossil fuels, greenhouse gases emissions, energy efficiency

JEL classification: Q32, Q35, Q40, Q42, Q54

1. Introduction

The energy sector represents the sector with the most important contribution to the generation of greenhouse gas emissions, mainly through the burning of fossil fuels. Given the association of greenhouse gases emissions with climate change, the technologies that produce electricity from conventional sources are the most responsible for producing climate change. Under these conditions, the energy from alternative sources is gaining momentum at global-scale.

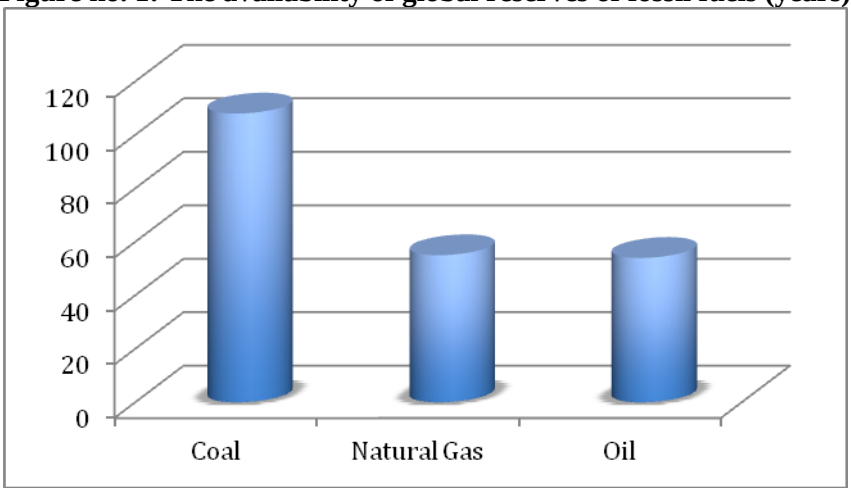
At the same time, having in mind that, besides the negative impact on the environment of the classic technologies for the electricity production, by producing climate change, there are economic problems associated to the energy-climate change relationship. In the following we will be analyse both the economic and the environmental aspects associated to the technologies to produce electricity from conventional sources.

2. Economic issues associated with the technologies for electricity production from conventional sources

2.1 Limited fuel resources and the significant price fluctuation

A first important aspect related to the conventional technologies is represented by the limited resources of fossil fuels and their significant price fluctuation. "Statistical Review of World Energy, a report published by British Petroleum (BP) in mid-2014 reveals that the world has reserves of 892 billion tons of coal, 186 trillion cubic meters of natural gas and 1688 billion barrels of crude oil. According to the mentioned study, albeit these figures seem impressive at a first glance, taking into account the current level of extraction, the proven reserves of coal will be depleted in 113 years, the last cubic meter of natural gas will be extracted by 2069, and until 2067 there will be no reserves of crude oil/the reserves of crude oil is about to run out by 2067.

Figure no. 1: The availability of global reserves of fossil fuels (years)



Source: BP Statistical Review of World Energy - 2015 Main Indicators

Fossil fuel reserves are concentrated in a relatively small number of countries. According to experts, 80% of coal reserves are located in only six countries, the European Union having only 4 percent of the stock. The EU share in total world gas reserves fell from 4.6% in 1980 to 1.3% in 2009. It is expected that these reserves will be depleted before the year 2030. Over half of global stock is found in only three countries: Iran, Qatar and Russia (24% in 2009), the latter representing a leading provider of gas for the EU. Ten countries (eight of which are members of the Organization of the Petroleum Exporting Countries - OPEC) own 80% of the world reserves of crude oil. Some of these countries can exercise their power to restrict the supply and to influence the price.

EU dependence on fossil fuels registered an upward trend, currently reaching approximately 55% of total consumption. Some Member States (e.g. Estonia, Italy, France and Sweden) have considerable stocks of shale gas. A reduced external supply can encourage them in to exploit these resources. It is estimated that in the Arctic region exist substantial quantities of crude oil, approximately 90 billion barrels, while the European Union reserves are around 12 billion barrels).

Besides the global consumption of fossil fuels, another important aspect is related to the fluctuation of prices. The quantities extracted from fossil fuels will fluctuate depending on economic conditions and, at the same time, their price will fluctuate. In other words, the quantities extracted will decrease when the price will be too low for these fossil fuels to be recovered economically advantageous, and they will increase when prices will cover the economically loss of fuel reserves. In addition, the price trend of fossil fuels affects the consumption. On the other hand, the price fluctuations affects other variables such as inflation, global GDP growth, etc. Consequently, the size of the reserves of fossil fuels depends on their price.[38]

2.2 Energy efficiency

The efficient use of energy, entitled "energy efficiency" represents the objective to reduce the amount of energy required to deliver products and services. Low energy efficiency represents a higher cost to produce

[38] Bharat, R., Onkar, S., (2012), *Global Trends of Fossil Fuel Reserves and Climate Change în the 21st Century*

the same quantity of energy. The problem of energy efficiency constitutes an important economic aspect on electricity production.

There are many motivations for implementing measures to improve energy efficiency. Reducing the use of energy reduces costs and that may lead to a reduction in the costs to the consumer, where energy savings offsets any additional cost of implementing a cost-effective technology.

By the efficient use of energy, the energy bills of the European citizens can be reduced, they can reduce their dependence on external providers of oil and gas, and it can also help protect the environment. An important aspect is that the energy efficiency can be increased throughout the energy production. At the same time, the benefits of increasing energy efficiency must be higher than the costs. Therefore, the EU measures should focus on the sectors with a higher the potential for savings.[39]

2.3 Environmental protection expenditures

The expenditures on environmental protection represents another relevant aspect within the economic relationship energy - climate change. Accordingly, the costs associated with activities aimed to the direct prevention, reduction and elimination of pollution or environmental degradation must be taken in consideration. The statistics on environmental expenditures allows the identification and measurement/quantification of the society's response to environmental issues and the ways to finance this activity.

Environmental protection expenditures can be analysed according to the type of activity that requires such expenses. There are three main sectors: the public sector, industry (mining and quarrying, manufacturing, electricity production, the supply of water and natural gas) and specialised producers of environmental services, such as collection, treatment, recovery and disposal of waste, these services being provided by the authorities or private companies.

Most of the amounts representing expenditures for environmental protection in the EU – about EUR 145 billion – was directed towards specialised producers of such services, over half of the amount (51.1%) of the total expenditure, the other half being divided between public sector spending (EUR 87.2 billion) and expenditures in the industry sector (EUR 51.6 billion). During 2003 and 2013, the expenditures targeted to specialised producers in the EU have increased by more than two-fifths (41.8%) calculated at current prices. At the same time, environmental protection expenditure of the public sector have increased by 40%. By 2013, the costs in the industrial sector had overcome with more than 21.3% the values recorded in 2003. This means that the environmental protection in the industrial sector had recorded low values early in 2000 and 2009. In both cases, these reductions have been linked to a reduced industrial activity, i.e. the decrease in 2009 can be associated with the global financial crisis.[40]

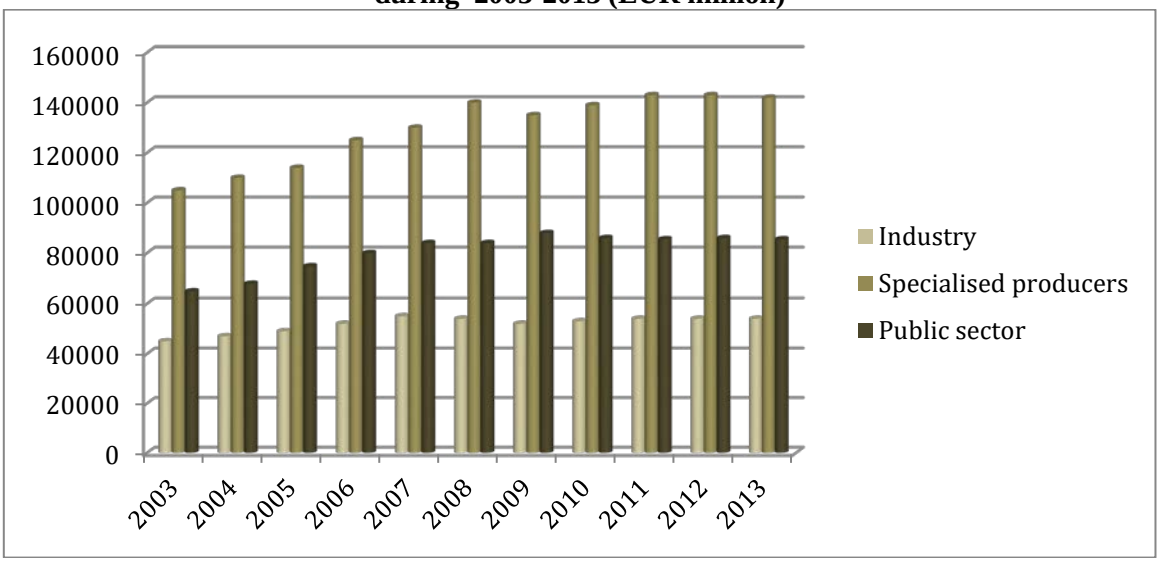
This fact is also confirmed by reversing the growth trend of spending on environmental protection in the European Union during 2008-2009. It was registered a reduction of 7.8% of the expenditures in the industry sector, while expenditure on specialised producers have decreased by 5.7%. In contrast, public-sector spending increased by 5.1%. During 2010-2012, industry and specialised producers have seen their spending increased, while public sector spending declined in 2010-2011, before an increase in 2012. In 2013, the expenditure of the public sector have fallen once again, as well as those recorded by specialised producers, while the industry has seen only a small increase.

The ratio of expenditure on environmental protection and the gross domestic product (GDP) is an indicator representing the importance of environmental protection in relation to the economic activity. In the European Union, for the specialised producers the ratio was of 1.11% of GDP in 2013, compared to 0.67% for the public sector and 0.40% for industry. Expenditure on environmental protection specialised producers (as a percentage of GDP) surged 0.10% between 2003 and 2013, while the same ratio for the public sector grew by 0.06%. In contradiction, the expenses incurred by the industrial sector fell slightly in relation to GDP between 2003 and 2013 (-0.02%).

[39] European Parliament, (2012), *Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC*

[40] Eurostat, (2015), *Enivironmental protection expenditure*

Figure no. 2: Trends in spending on environmental protection in the European Union during 2003-2013 (EUR million)



Source: Eurostat

Table no. 1: Total environmental expenditure o of the EU Member States during 2003-2013 (EUR million)

Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EU - 28	65651	74248	81154	83932	84123	88446	86427	86251	87340	87183
EU - 15	63029	69014	75346	79344	77883	83722	80568	79498	80915	81273
Euro area (19 countries)	51598	53164	55009	57139	59007	64849	60669	60921	61235	61190
Belgium	1717	1599	1812	1831	1954	2066	2152	2589	2355	-
Bulgaria	68	86	104	161	209	223	183	231	293	425
Czech Republic	-	-	599	477	541	609	774	795	857	724
Denmark	-	-	-	1262	1302	1405	1421	1300	1360	1597
Germany	8420	8140	8220	8020	8070	8110	8270	-	-	-
Estonia	19	25	21	25	25	41	23	50	-	-
Ireland	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-
Spain	2618	3041	2777	3121	3186	3507	2638	2750	2298	-
France	8891	9650	9827	10355	11023	11398	11570	11646	12065	-
Croatia	-	23	31	154	10	11	33	142	113	139
Italy	12073	12324	11902	12378	13190	13562	13624	13860	-	-
Cyprus	41	-	-	-	-	-	103	103	76	84
Latvia	6	96	116	198	201	163	104	137	163	-
Lithuania	58	10	181	255	274	319	375	290	298	195
Luxembourg	187	218	215	195	191	241	216	223	240	259
Hungary	573	692	620	317	270	284	446	389	407	-
Malta	62	70	80	92	92	93	124	80	95	-
Netherlands	-	7620	-	9022	-	8504	-	8626	-	-
Austria	1787	1742	2077	2047	1652	1643	1419	1253	1358	-

Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Poland	610	860	1281	1328	1469	1490	1751	1966	2015	1878
Portugal	696	736	749	831	935	1000	889	828	841	723
Romania	134	186	527	716	804	699	1012	1254	787	647
Slovenia	257	236	219	246	285	321	259	290	246	-
Slovakia	94	99	117	131	155	168	187	214	228	204
Finland	887	821	957	981	1045	1013	1146	1116	1231	-
Sweden	979	1172	1232	1192	1146	1057	1175	1275	1388	1397
United Kingdom	8747	-	17800	19931	16680	16647	17647	16453	17465	-

Source: Eurostat

2.4 The impact of pollution generated by the energy sector on public health - costs

In the process of producing electricity through the burning of fossil fuels, significant quantities of greenhouse gases are emitted, as well as a number of other specific pollutants (SOx, NOx, metals, etc.), which may cause adverse effects to the population health, both in the short (acute) and long-term (chronic diseases).

Accumulation of toxic contaminants in the body can trigger severe allergies, asthma and other diseases of the respiratory tract. According to statistics, the number of people affected by such disorders has increased, and any sick person represents a cost, both for the state and for all the factors involved. Greenhouse gases do not have a direct effect on human health, so do not generate conditions through the direct impact of pollutants. Long-term effects can be associated only with the consequences of global warming.

Considering these issues, it is necessary to increase the expenditure for the treatment of patients with chronic or acute respiratory disorders, sustained efforts being needed, because not treating can lead to the death of patients. According to a 2011 statistic published by the World Health Organization, it is estimated that urban air pollution generated by the burning of fossil fuels produces 3 million deaths annually, of which approximately 350,000 casualties within the European Union.[41]

3. Environmental aspects associated with the technologies for electricity production from conventional sources

3.1 Extraction, transport and storage of fossil fuels

The activities of extraction, transport and storage of fossil fuels may be harmful to the environment as a result of a series of negative effects they may produce.

In the extraction of fossil fuels, greenhouse gases emissions can be generated. For example, drilling, extraction and transport of natural gas through the pipes can lead to loss of methane, a greenhouse gas that has an associated global warming potential higher than that of carbon dioxide. Preliminary studies and field measurements show that methane leakages varies from 1% to 9% of the total emissions during the life cycle of the extraction unit.[42]

According to the experts, the future fossil fuel exploitation threatens the world's richest areas in terms of biodiversity around the globe, namely, Northern South America and the Western Pacific Ocean. In a study conducted by a group of researchers in environmental protection from Australia, it is indicate that the extraction of fossil fuels can have a double impact on animals and plants. In a recent study conducted by Professor Hugh Possingham from the Centre of excellence for environmental Decisions at Queensland University, the author points out the probability of occurrence of both an evident direct impact and a subtle indirect impact that is considered to be highly detrimental.[43]

[41] World Health Organisation, (2011), *Outdoor air quality and health*
[42] Tollefson, J., (2013), *Methane leaks erode green credentials of natural gas*
[43] Possingham, H., (2013), *Biodiversity Risks from Fossil Fuel Extraction*

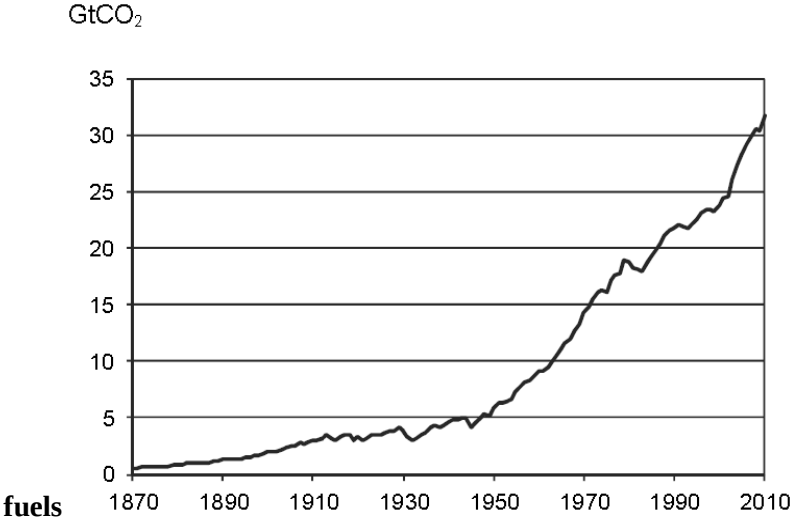
Also, both during transport and during temporary storage of fossil fuels, fugitive emissions may occur, including greenhouse gases, particularly in the case of natural gas and crude oil. Pollutant emissions may occur accidentally and have destructive effects for the environment, but also under controlled conditions when well established procedures for such activities are applied. Modern techniques aim at continuously reducing emissions relating to these activities, in order to protect human health and the environment.

3.2 Combustion of fossil fuels

Furthermore, there are a numerous serious environmental problems associated with the use of fossil fuels. . Burning fossil fuels produces about 21.3 billion tonnes of carbon dioxide per year, while it is estimated that natural processes can absorb only half of this amount, resulting thus in a net increase of about 10.65 billion tons of carbon dioxide per year.[44] Besides the carbon dioxide emissions generated by burning fossil fuels other pollutants are also emitted into the atmosphere, their quantity and type depending on the type of fossil fuel (coal, oil, and natural gas), the type, efficiency and operation of the combustion plant as well as the existence of the sequestration facilities of the emitted pollutants.

Figure no. 3 illustrates the evolution of carbon dioxide emissions resulting from the combustion of fossil fuels in the last century and a half.

Figure no. 3: The evolution of the level of CO_2 emissions worldwide resulting from the burning of fossil fuels



Source: Carbon Dioxide Information Analysis Center, Oak Ridge Național Laboratory, US Department of Energy

Coal represents the fossil fuel that emits the most significant amount of pollutants by burning. Coal combustion generates besides carbon dioxide, also other toxic pollutants such as sulphur dioxide, nitrogen oxides and carbon monoxide. At the same time, during combustion are emitted significant quantities of particulate matter. Large quantities of wastes (slag) are generated also.

In the case of natural gas, during combustion to produce electricity significant quantities of carbon dioxide, nitrogen oxides, carbon monoxide and volatile organic compounds are emitted into the atmosphere as well as significantly lower amounts of sulphur dioxide and particulate matter.

3.3 Aspects concerning the management of wastes generated by the energy sector

Waste generated by the electricity production activity through combustion of fossil fuels are ash, slag, retained particles from flue gases, petroleum residues. In the United States of America, these wastes are

[44] US Department of Energy, (2007), *What Are Greenhouse Gases?*

considered to be "special waste" by the Environmental Protection Agency (EPA) Protection. The management of such wastes being regulated by specific legal acts, other than federal regulations on hazardous waste.[45]

With regard to electrical transformers, equipment that is part of the systems for the electricity transportation, they are loaded with synthetic or mineral oils that may contain polychlorinated biphenyls (PCBs), substances from the category of persistent organic pollutants (POPs). Transformers which have become waste are a major danger for the environment as a result of the occurrence of oil spills, in this case both the environment and on the long term, the human health can be affected. In Romania, the management of PCBs is covered by HG 235/2007 on the management of waste oils.

Another important aspect is that of the petroleum residue pollution, considering that dumping these residues in water may represent an extremely dangerous element, both to groundwater and surface waters. The consequences can be extremely serious and long-lasting, given the fact that there is a chemical contamination, with negative effects on the conditions of the groundwater and surface water quality, respectively the aquatic flora and fauna.

3.4 Risks associated with the process of producing electricity

The life cycle of a power plant operating with fossil fuel, implies for the operating phase, several main stages associated with the main raw material, the fuel.

For a coal-fired power plant, these stages are: coal extraction (open-air excavation or mine), pre-processing and temporary storage, transport, processing, storage and usage to the electrical plant. The risks are associated mainly to the extraction activities (especially mining) and in-situ storage, as well as the storage in the plant. The main risks are explosion/fire and are generated by the accumulation of methane and other gases desorbed from coal. In mining perimeters there is also the risk of accidental pollution with mine water.

There are a few stages in the life cycle of a liquid fuel power plant, namely: the extraction, transportation, storage and processing of crude oil and transportation and storage of the oil products. Accordingly, the main risks are posed by eruptions/explosions/fires at the extraction wells, explosion/fires at refineries (risks related to the processing and/or storage of crude oil/finished products) and in the premises of the power plants (fuel storage risks). Transport and storage of crude oil/oil products were also associated with the risk of accidental pollution (soil, groundwater and surface water) with crude oil/oil products, as a result of losses/leaks in case of breakage of pipes or tanks.

For a natural gas power plant, the stages in the life cycle consist of extracting, transporting and, if necessary, the storage of natural gas. The main risks are posed by eruptions/explosions/fires at the extraction wells, explosions/fire at the transport and storage systems.

A risk related to all the power plants operating with fossil fuels is represented by the explosions at the steam boilers.

The industrial and transport accidents may have very serious effects on the environment, population and operators.

4. Types of measures to mitigate the impact of the technologies for electricity production from conventional sources on the environment and on the economic development

4.1 Measures to mitigate the impact on the economic development

Improving energy efficiency

According to the experts' opinion, energy efficiency measures are the most advantageous alternative in terms of cost-effectiveness, to mitigate the impact of the energy sector on the economic development. Therefore, a high energy efficiency lowers the costs. By consequence, within the decision-making process should be considered measures to improve energy efficiency throughout the entire chain of energy production.

[45] EPA, (2014), *Fossil Fuel Combustion Waste*

The 2012 European Union Directive concerning the energy efficiency sets out a set of measures designed to support the European Union's ability to achieve the 20% target regarding energy efficiency. According to the directive, all Member States are required to use energy in an efficient manner throughout the chain, from production to final consumption. At the same time, Member States were required to transpose the directive into the national legislation by the date of June 5, 2014.

The scale of the investments needed to meet the EU's goal regarding the energy efficiency is estimated at around 100 billion euros per year. The European Union has increased the funds available for energy efficiency, but it is necessary to stimulate private investment in energy efficiency through a proper use of public funds, and also through investments and solid support activities for project developers.

Carbon capture and storage (CCS)

Carbon capture and storage (CCS) represents the process by which carbon dioxide from the source of generation, such as the production of energy through combustion of fossil fuels, is transported to a storage site and it is stored, normally in underground geological formations, in such a form that it does not re-enter the atmosphere. The objective is to prevent the release into the atmosphere of large quantities of carbon dioxide (from the use of fossil fuels in energy production and other industries), but also to reduce the impact on the economic development by reducing the amount used for the costs of remediation.

CCS technology represents an important mean of mitigation of emissions from the combustion of fossil fuels to produce climate change. Although carbon dioxide was injected into geological formations for several decades for various purposes, including for the recovery of crude oil, long-term storage of carbon dioxide represents a relatively new concept. The first commercial example has been Weyburn in 2000. Other examples include SaskPower's Boundary Dam Power and Mississippi's Kemper Project. CCS can be described as a technique for purifying the air from carbon dioxide emissions.

Such a facility integrated in power plant began to operate in September 2008 at the power plant Schwarze Pumpe from Germany, operated by Vattenfall, in the hope to answer the questions related to the technical possibilities and economic efficiency. CCS technology applied to a modern conventional plants can reduce the carbon dioxide emissions into the atmosphere by approximately 80-90% compared to a plant without CCS. The International Panel for Climate Change (IPCC) estimates that the economic potential of CCS could set between 10% and 55% of the total effort to mitigate the impact of carbon dioxide by the year 2100.

Capturing and compressing carbon dioxide can increase the fuel requirements of a coal-fired power plant using CCS by 25-40%. These and other system costs are estimated to increase the cost of the produced energy with 21-91%. Implementation of this technology to existing plants would be more expensive, particularly if they are located farther from a storage location. Recent reports suggest that, if the research in this area will continue, by the year 2025 energy production in a power plant that uses coal and CCS technology will be less expensive than at a similar plant, which does not have the CCS technology.

Storing carbon dioxide can be achieved both through injection in deep geological formations, as well as in the form of mineral carbonates. Storage in the ocean is no longer considered feasible because it creates the problem of acidification of the oceans. Geological formations are currently considered as the most promising storage location. National Laboratory of the United States concerning energy technology (The National Energy Technology Laboratory-NETL) reported that North America has a sufficient storage capacity for more than 900 years, considering the current emissions. A general problem is that long-term predictions related to the security concerning the underground storage are very uncertain, because the carbon dioxide can be emitted into the atmosphere.

4.2 Measures to mitigate the impact on the environment

Promotion of renewable energy sources

Promotion of renewable energy sources is the most important measure to mitigate the impact of electricity production on the environment, the gradual replacement of conventional technologies of energy production with alternative technologies reducing the greenhouse gases emissions generated by burning the traditional fuels.

Besides the undeniable benefits in terms of protecting the environment and reducing the emissions, the technologies that use renewable sources have certain economic benefits, including diversifying the energy supply, reducing energy dependence in relation to imports of fossil fuels, supporting economic growth and job creation.

The EU renewable energy Directive lays down a general policy for the production and promotion of renewable energy in the European Union. It is necessary for the Union to cover by 2020 at least 20% of its energy needs using RES, and this goal should be accomplished by achieving the national targets. At the same time, EU Member States must ensure that at least 10% of the fuels used in transport are derived from renewable sources.[46]

Each Member State has its own resources and own energy markets, which reveals that Member States will have to follow separate paths at the time that they will fulfil their obligations under the Directive regarding the renewable energy sources, including the targets for 2020. In the national plans, the Member States demonstrate how they will meet these targets.

Carbon capture and storage

The implementation within the energy production plants of the technologies for carbon capture and storage can be regarded as a measure with double impact, both on the economy by reducing in the long run of the depolluting costs, and, mainly, on the environment by reducing the greenhouse gases emissions generated by the electricity production through the burning of fossil fuels.

In the experts' opinion, CCS will have a particularly important role in reducing global emissions of carbon dioxide and some specialists consider that this technology will have a more important contribution than the implementation of the technologies that use renewable energy sources.

The amounts invested in technologies of carbon capture and storage should be perceived as a "learning cost", which is covered in time, because the costs reductions generated by CCS technology will be higher compared to its required installation investments.

Limitation of deforestation and afforestation

The forest's role is to act as an absorption sink for the greenhouse gases emissions, including those arising from the electricity production. In this context, it should be immediately acted to limit deforestation, and for a massive reforestation worldwide.

Worldwide, the biggest initiative in this regard is the "REDD" Programme (Reducing Rmissions from Deforestation and Forest Degradation), representing a mechanism which has been under negotiation since 2005 by the United Nations Framework Convention on Climate Change (UNFCCC) and having the objective of limiting climate change by reducing greenhouse gases emissions through consolidating the management of forests in developing countries.

In the past two decades, various studies estimate that changing land use, including deforestation and degradation of forests contributes with approximatively 17-29% of the emissions of greenhouse gases at a global level. For this reason, the inclusion of emissions from land use change is an essential element in order to meet the objectives of the UNFCCC.

The principle of the "REDD" Programme is basically creating a financial value associated with the carbon stored in forests, providing incentives to developing countries in order to reduce emissions through forested land. An important element is that the "REDD+" Programme was developed a framework that not only refers to deforestation or to forest degradation, but at the same time it includes the role of the conservation and sustainable management of forests.

Measures related to waste management in the energy sector

[46] European Parliament, (2009), *Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC*

Waste management measures within the energy sector represents an important mean to mitigate the environmental impact of the energy sector. Therefore, for the implementation of these measures all decision makers must be involved, and to stimulate electricity producers, regulations must be adopted in order to lead them to intervene by taking the necessary measures. Therefore, as has been mentioned above, the main aspects of waste management in the energy sector refers to petroleum residues and used transformers that became waste.

Regarding the petroleum residues, the main negative aspects are related to the possibility of accidental spills or leaks of residues from tanks. To solve this problem related to residues from the combustion of heavy fuel oil, it is necessary the water washout and treating with a 5% solution of calcium hydroxide during collection of deposits.

Transformers which have become waste, particularly old ones (that have PCBs oils) should be collected in specialized centers. At the same time, it is necessary for policy makers to take drastic measures for persons or enterprises that do not comply with the legislation in force regarding this type of waste.

Prevention of accidents in the energy sector

For the prevention of accidents taking place within the process of energy production a proactive attitude should be taken into consideration, which is the only approach which can be successful in this case.

Therefore, measures for the prevention of accidents refer to periodic technical inspection of plants, installation of smoke detection systems, investments in the repairing or replacement of technical installations which are technically or morally used, organizing courses to improve management of the operators, periodic testing of personnel, both physically and mentally, in order to ensure that the personnel can deal with stress to which it is subjected (in particular of staff within nuclear power stations) and severe sanctioning of any deviations in non-compliance with the obligations to submit aspects relating to waste management or environmental protection.

5. Conclusion

Within this paper were presented and evaluated the economic and environmental aspects associated to the technologies for the production of electricity from conventional sources and were proposed measures to mitigate the impacts produced. Therefore, in the case of the conventional technologies for the electricity production we have analysed several economic aspects as the limited resources of fuels and significant price fluctuation, the low energy efficiency, costs related to the environmental protection and health as result of pollution generated by electricity production, as well as environmental issues such as extraction, transportation, storage, and in particular the burning of fossil fuels, management of waste generated by the energy sector or the accidents that take place during the process of obtaining electricity. Regarding the types of measures proposed to mitigate the impact of classical technologies of energy production on the economic development, these are related to improving energy efficiency or implementation of carbon capture and storage technology (CCS), while the mitigation measures of the environmental impacts are related to the promotion of renewable energy sources, the limitation of deforestation and afforestation, to waste management or the prevention of accidents in the energy sector.

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BOOK REVIEW

FOR JOSEPH STIGLITZ THE GREAT SOCIAL DIVISION IN USA IS A VITAL ISSUE TO BE URGENTLY RESOLVED

(Joseph Stiglitz: The Great Divide: Unequal Societies and What We Can Do About Them, Publica, Bucharest, 2015)

Part I, II, III

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1. Stiglitz's ruthless criticism against American capitalism

After two years Joseph Stiglitz returns on the matter of US social inequality, which seems to be a complex process with many causes, with a new book, in fact a collection of articles or essays published by *Vanity Fair*, *Project Syndicate* and *New York Times.* Stiglitz has identified four crucial and interconnected issues facing the developed capitalist society: the enormous social inequality, poor economic management, globalization, the role of the state and the market. Social inequality was caused by wrong macroeconomic policies, recent financial crisis, economic stagnation and globalization. The explanation for these challenges lies in the role played by the interest groups, the so-called 1% that influenced politics and that generated a poor management of economy and globalization effects. Only through the politics one may find good solutions as the markets cannot do this. Stiglitz is convinced that only a reform of democratic system for making political rulers more accountable may remove social division and ensure general prosperity.

In US although there was an economic boom in the 90's and between 2002 and 2007 the middle class has strongly declined and social inequality has continuously deepened, among other things due to a tax decrease applied by George W. Bush Administration to rich people. Stiglitz believes that inequality weakens aggregate demand, and economy and fiscal policies are the most effective instruments for strengthening the demand and improving the social equality. But improper fiscal policies may put additional pressure on monetary policies which, by cutting interest rate and relaxing regulations, try to stimulate the economy. Monetary policy managers have been market fundamentalists who underestimated the risks of their policy with the result of a speculative bubble and an unprecedented growth of inequality. In the first part of the years 2000 there was a consumerist orgy in USA, 80% of Americans spending on average 110% of their income.

Stiglitz rightly asks who is responsible for the recent financial and economic crisis (the Great Recession) and finds more actors and failures (such as risk management) outside macrostabilisation policy. Stiglitz blames the free market proponents who strangely seek help from the state during a crisis, the Republicans headed by Bush Jr. during two wars, tax cuts and huge deficits, the politicians who instead of doing public investments have accepted the deregulation and liberalization of the financial/banking sector, the deregulation activity that was started by Reagan Administration and continued by Clinton Administration that led to excessive securitization and derivatives, high risks and moral hazard, non-visionary and even fraudulent behavior of banks and rating agencies. Deregulation and liberalisation of financial markets associated with the free movement of capital have negatively affected not only USA but also emerging economies that instead of getting prosperity were hit by currency crises. Income redistribution towards financial/banking sector was made

through market manipulation and through abusive practices of credit cards and loans (exaggerated commissions and interest rates). Financial sector made an effective lobby for public policies that have increased social inequality and hardly supported the free market ideology involving privatization and liberalisation, limited progressive taxation, targeting monetary policy on inflation and not the employment rate. For Stiglitz in transparent and competitive markets profits fall to almost zero, but this cannot happen if the government has become the prisoner of corporations, especially of financial ones. Some economists are guilty of what happened in the financial sector, as they supported the idea that markets are self-regulating. Dodd Frank Act was meant to reform the financial sector but encouraged the merging of banks and the concentration of capital instead of solving the problem of too big to fail and to attenuate the risk of derivatives. Stiglitz mentions the documentary film „Inside Job" that rises the question whether economists' opinions are not influenced by the rewards of financial sector: consulting contracts, fellowships and others stimulants.

Stiglitz is very critical at the reactions to financial crisis of Bush and Obama Administrations. After an extremely costly rescue of Bear Stearns investment bank, the collapse of Lehman Brothers in September 2008 was accepted for giving a harsh lesson to other banks, but it was followed by the salvation from insolvency of AIG, an insurance company, with a lot of public money, that passed quickly to Goldman Sachs and other banks. Stiglitz proposed a plan of measures for crisis exit and economic recovery, but what was done in the economy reflected more the interests and points of view of banks and of the 1% group. Maybe it is true that Obama Administration prevented another great economic depression but it was not able to develop a robust recovery. The loss of potential GDP is estimated at 15% and the losses of income amount to trillions of dollars. The five points plan advanced by Joseph Stiglitz included the recapitalization of banks (not further enriching the bankers), helping homeowners by stopping foreclosures (only 10 billion $ were allocated and millions of people lost their homes), offering strong (fiscal) incentives to economy (not cutting the taxes for rich people), reform of national regulations to restore confidence and creation of a multilateral agency for coordinating global regulations. In 2015 one can see that the Great Recession has been overcome, maybe due to the policies implemented by US Administration and Fed, banking system is almost completely healed but the economy is not on the path to prosperity and its profound deficiencies are going to last for a long time.

What was happening during George W. Bush Administration may be considered a true economic nightmare: huge fiscal and current account deficits, enormous increase of public debt, unprecedented expansion of bad mortgage loans, record crude oil prices, a very low rate of the dollar. Moreover US had not invested enough in fundamental and technological research, high education, infrastructure and green energies. After a prosperity period during Clinton Administration when budget deficit was under control, capital market expanded to a great extent, middle class incomes widened noticeably, despite some mistakes and shortcomings in economic policy, it followed a dark period of Bush Administration, that cut the taxes for rich people, gave a lot of open or hidden subsidies to farmers, oil&gas companies, pharmaceutical companies, increased the military expenses, stimulated the consumer and mortgage credit race and irresponsibility of banks in lending and derivatives. After Dot-com bubble a new bubble appeared with the contribution of Fed's mistakes and also with that of the unlimited greed of bankers. Iraq war has cost the US a lot of money, by official estimates nearly $1,000 bn., but in reality almost $ 2.000 bn., money that could have been better spent on social security, investments in education and technology, improving infrastructure. Big winners of the war were oil companies, arms suppliers and Al Qaeda. What happened in Iraq after the war was the direct result of some great mistakes made by US Administration, such as dissolving local administration and Iraqi army. In Stiglitz's opinion the war in Iraq has led to strong rise in crude oil prices by restricting supply, although most experts consider that the very strong increase in consumption in China and India is the main cause.

USA had a contradictory position in trade policy, supporting multilateral liberalization and concluding bilateral agreements, but it applied some trade protectionism and continued to subsidize agriculture and some

industries. Globalization has not only emphasized the interdependence between economies but also enhanced the risk of spreading financial and economic crises on a global scale. Nowadays US is highly dependent on financing its public debt from the contribution of great partners, such as China and Japan. Stiglitz had some hopes that some of the damage made by Bush Administration might have been repaired by Obama Administration, mainly by better fiscal policies targeting employment and saving.

Stiglitz thinks that some fool capitalists are responsible for the financial crisis. Reagan Administration replaced Paul Volcker with Alan Greenspan as Fed Chief Governor which was a great mistake because the last one was a supporter of free markets and deregulation. Alan Greenspan was president of Fed during two financial bubbles, didn't use proper monetary instruments to prevent and counteract them, and together with Robert Rubin, Treasury Secretary, stood for deregulation and derivatives proliferation. In November 1999 US Congress abolished Glass-Steagall Act after a lobby of $ 300 mil., in April 2004 US Securities and Exchange Commission increased the leverage (debt/equity ratio) from 12:1 to 30:1, both this Commission and Greenspan neglected the great challenges of derivatives and claimed the hoax of self-regulation for financial sector. Bush Administration cut the taxes for rich people, which did not stimulate the economy but financial speculations, let alone the aberration to tax less the speculators than those who work hard. The rise of oil price had negatively affected the consumer demand but Fed had significantly reduced the interest rates and flooded the market with liquidity that has fueled the housing bubble.

After the collapse of WorldCom and Enron the Congress adopted Sarbanes-Oxley Act. Besides the large accounting-related irregularities it came to light the inadequate stimulation of employees through stock options, excessive rewards for managers and perverse scoring system of rating agencies (depending on the level of their remuneration).The big banks, AIG and two car companies were saved with taxpayers money but support given to the real economy and especially to the driving sectors was quite weak, all resembling with an unnecessary blood transfusion to a person with internal bleeding. Most of the individual mistakes may be reduced to one: wrong vision that markets adjust themselves and the state's role should be one minimal.

Wondering who killed the American economy, Stiglitz finds more guilty persons, individuals and legal entities, such as Alan Greenspan, Robert Rubin, Bush Administration, US Treasury, US Securities and Exchange Commission, banks, investors. Other culpable factors are: poor risk management, feeble institutional management, questionable accounting practices, investors'greed, irresponsibile behavior of rating agencies, credit brokers' rapacity, those responsible with market regulation and antitrust law implementation, economists that proposed unrealistic business models, supported targeting inflation instead of financial stability, promoted deregulation and liberalization which encouraged onerous practices in the financial sector. Low interest rates practiced by Fed in the last decade (and associated with tax cuts of Bush Administration) were motivated by Greenspan through high saving rates from China and the need to stimulate insufficient aggregate demand, but these rates contributed to housing bubble, have fueled a consumption boom, have reduced almost to zero the household savings, have tried to offset the negative effect of strong oil price increase. Quite strange regarding US indebtedness, caused by deficits and oil prices, it followed the way of Latin America in the 70's. Stiglitz does not agree with excessive state blaming (some intentions of state authorities were good) but he believes that politicians financed by banks and responsive to financial sector lobby should bear the blame, at least partly.

On exiting the financial crisis Stiglitz emphasized on state important role in market regulation and supervision but recognized that capitalist system does not distinguish itself by stability, on the contrary, in the last 30 years market economies have experienced over 100 crises. The combination between deregulation and low interest rates led to a new banking model based on securitization. Due to globalization, toxic credits were exported all over the world, so US recession instantly propagated to Europe and other areas. Stiglitz returns on 5-point plan that he believed Obama Administration should implement it and appreciates that there is no respect and trust in Wall Street and US President and Administration should not be influenced by *The Great Finance*.

Repeatedly Stiglitz insists in his book on the best way to exit the crisis and recession, which should be done through policies from the bottom up and not from top down.

Stiglitz seems to be concerned with inequality in political rights whether any ordinary citizen may vote and is not manipulated through mass media and other means in a country where not all citizens can easily vote and where the decision of Supreme Court of Justice in Citizens United case allows corporations to make unlimited campaign financing expenses. There is a vicious circle: economic inequality leads to political inequality which reinforces itself and in its turn amplifies economic inequality. Extreme inequality existing in USA is not even in the interest of 1% group. Very few people receive an enormous part of national income, between 20 and 25%. Chance Equality and American Dream to advance from the base to the top of pyramid is a myth and it has nothing to do with today reality.

High social inequality from USA is harmful for economic performance and there is the need for a fair income distribution and for public and fiscal policies targeting this by charging more wealthy people and increasing productive investments and employment. Inequality badly affects education and health care which negatively impact on economic growth and that is why political decisions for raising budgetary resources and a more judicious allocation of them is needed. But the rising of social inequality is a global matter, it has increased in the last decades not only in USA but also in many other countries. Inequality played as major role in so-called *Arab Spring*, actually a rebellion of youth against social inequities amid political autocracy, endemic corruption and unequal distribution of income. In 2013 at World Economic Forum in Davos social inequality have been the main subject of debate, being obvious the extension of inequality in the world, yet there are countries with relatively low levels of inequality. Countries like China and India that got high rates of economic growth have recorded a rapid increase of inequality, today there are more billionaires in China than in USA.

Stiglitz mentioned several times in his articles Thomas Piketty's book *Capital in the Twenty-First Century* published in 2013, focusing on wealth and income inequality in Europe and the US since the 18th century. The main idea of the book is that inequality is not an accident but rather a feature of capitalism that may be reversed only through state intervention and unless capitalism is reformed the democratic system will be put in danger. After the Second World War it was a period of strong economic growth when income growth was faster for those at the bottom and when a middle class was created. In the last 3 decades the richer capitalist societies have become increasingly unequal, and not close to the ideal of equality thought by Simon Kuznets. Thomas Piketty deems that by reinvesting much of the wealth of the capitalists this grows faster than the economy, especially if the interest rate is higher than GDP's growth rate. Fifty years ago Stiglitz was convinced that on the long term it would be attained equilibrium in terms of wealth and income inequality, centrifugal and centripetal forces related to inequality would eventually balance. By his analysis Thomas Piketty invalidates the law of descending rate of return to capital.

Stiglitz's explanation is connected with the role of capital gains in increasing the wealth of rich people. Economic rent is a price paid for a factor of production (such as land, labor or capital) or for temporary use of an asset or property. The benefits of monopoly power and other forms of market exploitation are also a kind of rent, and increasing inequality of income and wealth is often associated with higher rents and capital gains. When too much money is injected in an economy, as in case of quantitative easing, it may lead to an increase of stock and asset prices. But when asset prices are rising it is only a false impression that national wealth has increased, in reality the amount of assets remains the same, only there is a redistribution of income.

Asset price bubbles may raise ROE (return on equity) but their burst brings crises and recessions, avoiding them means diminishing capital gains and slowing down the continued growth of inequality. There can be policies that may lead to a lower level of inequality balance. Stiglitz calls into question the concept of economic rent hunting, especially characteristic to monopolies and other capitalist entities. The concentration of capital

specific to some markets favored market dominance and monopoly rent-seeking. Capital gains have been symbolic taxed and allowed a more rapid enrichment of the wealthy people, their money being often placed in the luxury goods and tax havens. As the markets do not function properly, there is surrogate capitalism or fake capitalism and social inequality is not just an issue related to capitalist system but rather to democratic system. Unfortunately in this system we have *socialization of losses and privatization of gains* and the slogan *the dollar and the vote*.

In the last 25 years the gap between 1% group and middle class enlarged, because the share of first and small group in national income increased from 12% to almost 25%, while its share in national wealth raised from 33% to 40%. A long time famous economists tried to justify high social inequality through theory of marginal productivity, higher incomes being associated with a higher productivity and a greater contribution to welfare. A sinister mockery is that corporate managers responsible for producing financial crisis and economic recession have received performance bonuses called retention bonuses. Instead those who contributed with extraordinary innovations to the progress of society received paltry rewards. Stiglitz avoids saying that we are dealing with a true oligarchy that has nothing in common with meritocracy and equal opportunities and has only undeserved privileges. But Stiglitz makes three important observations: expanding inequality is diminishing the chances of success, the distortions that lead to inequality, like monopoly power and preferential tax regime, undermine economic efficiency, a modern economy requires collective action, i.e. public investments in areas with spill-over effects. One may see that rich people distance themselves from ordinary people and are afraid of a strong state. It is obvious that capitalism involves inequality, though why is so much inequality in USA? Because so the 1% group wants and succeeds by getting cut taxes on capital gains, by establishing monopolies, by onerous banking practices, by having support from the politicians and justice. Stiglitz deems that inequality distorts society in many ways and in many fields and he again mentions Tocqueville and his saying: *self-interest rightly understood*, which would mean that self-interest is not contrary to the collective welfare.

Social inequality is growing and this is considered a good thing by *the right* who sees the wealth of society only in terms of the interests of the rich people, while *the left* makes calls to justice and fairness. But the rich people must care of inequality as societies characterized by great inequality do not function in an effective way, their economies are neither stable nor sustainable. Inequality diminishes the whole consumption because the high income people spend less in relation to their total income. As the money increasingly gathers at the top of society aggregate demand is declining, unemployment is rising, potential demand is decreasing. Economic rent hunting is facilitated by political system, the state offers transfers and subsidies, adopts laws easing market competition, imposes regulations meant to enrich corporation managers, and loosens the environment protection to allow swelling of corporate profits. Financial industry is the most important rent hunter not only because of speculations but also due to predatory lending practices. But rent hunting distorts resource allocations and weakens the strength of the economy, the example of the rich natural resource countries that have failed outstanding performances is quite convincing.

At the top of the social pyramid one can find economic rent hunters and not those with outstanding merits in the progress of society. It is also relevant the motivation of employees by wage size as this influences the productivity level and contributes to their welfare. What happened during and after the crisis is profoundly unjust and shows the ruthlessness and greed of corporations, they have reduced the workforce, wages, full time program to get higher profits and resorted to all sorts of subterfuges to make tax evasion. If equal opportunities slogan is not implemented in practice then it is wasted the most precious resource, the human resource. Unfortunately inequality has often limited the access to decent health services and to good schools and top universities. High education has become more and more important for the future of any individual and for the

whole economy but the reduction of budgetary funds has attracted a strong increase of tuition fees and the development of an skinning system of student loans.

The lack of trust is not only a problem related to political elections but also a problem for potential investors, for bank clients, for proper working of the economy, for a good functioning of public authorities. Stiglitz gives some examples of great personalities from the past –Ford, Roosevelt, Nixon-, that have understood the necessity of social welfare and combating social inequality. That is why for 1% group Stiglitz gives the proper advice: harden your hearts and be selfish!

For Stiglitz there are many contradictions facing USA, and country is heavily fighting with them, one being that the country is rich but has tens of millions of poor. High inequality undermines the economy and a large part of 1% group wealth is the result of exploitation (or rent hunting) under different forms of the rest 99% .USA has been a country of the middle class which eroded as the inequality has increased and affected education, health care and other social fields. While Scandinavian countries have a free education system in USA higher education became an extremely expensive luxury. In USA there are Medicaid program and Affordable Care Act meant to support the heath care of the poor but the results are quite disappointing despite huge funds spent and which translate into staggering profits for pharmaceutical companies. USA should be a positive example for other countries and not vice versa, US real strength comes from its ideational influence and not from its military power. Whether it would be spent more on education it would not dissipate so much funds and resources on prisons.

Stiglitz wants a higher tax income level for the rich people (1% group) and a real taxation of corporative profits, because too many corporations evade through various methods of paying profit tax. For Stiglitz it is better to tax bad things than good ones and factors with inelastic supply, imposing a carbon tax and a financial transactions tax. Additional taxation of natural resources or the rents paid to state may contribute to the increasing of funding for public investments. Stiglitz would like a tax incentive system, corporate taxes applied for production and sales in the US, halting of anti-competition practices, higher charging of monopoly profits and economic rents, progressive taxation of all income, with no amenities for capital gains, fair deductions for the middle class.

Social inequality is a global issue and it has been debated extensively at Davos in 2013 where Joseph Stiglitz attended the meeting. He remarked the focus put in the speech of Christine Lagarde on the link between social inequality and economic instability, also the consequences of technological progress on unemployment, the inability of the private sector to generate jobs in the context of modern manufacturing processes. IMF published forecasts showed significantly higher growth rates for emerging countries than for developed ones, perhaps because the first ones have managed globalization with sufficient skill to their own benefit. There is a crisis of political leaders and global leadership, in a multipolar world with many actors and some structured bodies, as G20, trying to address and resolve, without much success, global issues, one is terrorism, another one is global warming, but as recently Paul Krugman stated terrorism will not destroy humanity despite the damages created but global warming could do it.

Industrial Revolution has resulted in sustained economic development of Europe and North America for two centuries and increased the social and economic gaps between these regions and the rest of the world. After the end of Cold War economic globalization has accelerated and welfare gap between the nations began to shrink. The rapid development of many countries, especially in Asia, has not solved the problem of income gap at the national level, everywhere there are armies of poor and one may see a significant social inequality, even in fast growing countries like China. According to a study published by Branko Milanovic 8% of world population earn 50% of global income, and 1% group has 15% and its income increased by 60% between 1988 and 2008. An OECD study published in 2011 shows that income inequality started to grow in developed countries at the end of 70’s and the beginning of 80’s. Very few countries were able to significantly reduce the

income inequality, this is a product not just of macroeconomic forces but also of political forces. USA is not a good example because as gross GDP has increased 4 times in the last 40 years 1% group increased its share in total income to almost ¼. The representative American earns now less than 45 years ago and that with only secondary education with 40% less. American inequality has accentuated in the last 30 years along with the reduction of taxes and loosening of financial regulations. Europe seems to follow US bad example, austerity policy has led to more social inequality, economic stagnation, high unemployment (over 27 million unemployed). Excessive financialization explains the exponential growth of inequality, in the biggest American corporations the ratio between the salaries of managers and those of ordinary employees is 500:1. Asymmetrical globalization and capital mobility have weakened wages and working conditions in many emerging economies. A great shame is the inequality and poverty among children, a quarter of American children live in poverty, the percentage being lower in Europe but much higher in Africa, Asia and Latin America.

Stiglitz is a fan of Thomas Piketty, whose book raises fundamental questions not only concerning economic theory but also concerning the future of capitalism. Piketty also shows a massive growth of wealth/production ratio, but excess wealth originated in a high rise of the value of real estate assets. Wealth has increased especially in the financial sector for very few people but at the expense of consumers, economic efficiency and overall welfare. When wealth is growing in certain fields and salaries/incomes of middle class stagnate and inequality is growing we have a surrogate of capitalism and a tainted political system. High levels of economic inequality lead to political inequality and the chances of economic progress are becoming uneven. The continued growth in levels of inequality expected by Piketty may be overcome through simple changes and reforms to ensure fair rules of the game and an economic growth beneficial to all citizens. USA has a mixed economy, state playing a certain and benefic role in economy, fiscal system depends on public authorities choice. Thomas Piketty has proposed the elimination of inequality by taxation- a global tax on wealth- a political project with zero chances of success. Stiglitz makes some reasonable proposals to improve the American tax system, the aforementioned ones.

Stiglitz asks himself if there is discrimination as a permanent element of market economies and the logic answer would be *yes,* this starting from the influence of Martin Luther King ideas on his economic thinking. Stiglitz has written an essay entitled *The Myth of America's Golden Age,* in which he remembers the nightmare times of childhood and teen-age period. This essay was written after the publication of the book *Stress Test* of Timothy Geithner, former Treasury Secretary, who tried to defend his and his Administration policies during the crisis in an awkward way, putting the problem of moral hazard only for homeowners and not for bankers. Dr. King's speech *I have a dream* was so important for Stiglitz because he belonged to a contesting generation that wanted to correct inequities and injustices of the past. In order to solve the problems related to social discrimination and to build a better society Stiglitz gave up physics in favor of economics. Some leaders of Chicago School of Economics (neoliberal doctrine) minimized the problem of income distribution and denied the existence and importance of discrimination on a competitive labor market. Dr. King was fighting not only against segregation but also for economic equality and justice for all Americans. After 50 years racial discrimination is not finished, covers new forms, some more insidious and especially regarding job accession and income levels. A percentage of 65% of Afro-American children live in low income families and 40% of people put in jails are Afro-Americans. There is still an obvious segregation in education, a lack of equal opportunities and not enough jobs for Afro-Americans although many black people have important jobs, like President Barack Obama, or are famous musicians, artists, sportsmen and scientists.

After half a century the problem of social inequality reached crisis proportions and *American Dream is only a Myth.* After a short period between 1950 and 1980 when the welfare of the rich and that of the middle class increased together, a period of increased inequality followed, an explanation lies in the theory of propagation of

economic benefit from top to bottom, specific to Republican Party. But a Democrat Administration put into practice this theory by offering billions of dollars to the banks without any condition. However the banks cut the amount of loans and offered mega-bonuses to the managers who practically led them towards bankruptcy. Commercial and investment banks have committed a lot of villains and received huge rewards for that. Timothy Geithner was afraid of moral hazard of helping debtors and not of moral hazard of giving aid to the banks responsible of excessive indebtedness and high risk mortgages. Political system is strongly influenced and flawed by the intense lobby made by banks and other corporations. Too bad the politicians do not understand the more inequality exists the lower economic growth will be. Public policies and institutions may stimulate or counteract the raising of seeming inequality. It is true that Obama Administration and Fed have saved the banks with taxpayers money but with loans having a tiny interest rate while the banks have lent the government with 2-3% interest rates.

Difficult and restricted access to education due to very high costs accentuates the inequity and inequality, reducing the chances of poor young generation to successful professional careers. Student loans would have achieved after some sources, around $1500 billion, after other sources almost $ 3000 billion, much of them cannot be paid and neither is allowed personal bankruptcy, eventually they will be passed to future generations (to descendants). But in some countries, like Scandinavian ones, all education is free of charge, in other, like Australia, students may receive low interest rate credit which is afterwards paid according to the income of graduated person. *Justice for all* is another empty slogan in USA, because not having precise debtor evidence some banks have brought unfounded accusations to many borrowers who have to defend themselves in the courts using very expensive lawyers, but for blatant miscarriages of justice as a result of forgery of some credit files no banker has gone to jail. Obama Administration has saved the banks but not the debtors, most of them have lost their homes, not receiving a financial support from the public authorities or payment facilities from the banks, although there have been legislative proposals and even a strategy in this respect. Ebola epidemic brought out in sight not only of the health disaster from Africa but also the inefficiency of private system in the administration of health services focused on taking profits and not on addressing serious ailments and providing good services for all citizens.

If you were born in a poor family in USA you have small chances to get atop the social pyramid, chances are secure only if you're a genius. Many statistics and studies show that poor children have low chances to climb up the social ladder, their chances of success depend much on the education received and their parents' income. If you are a rich child you may benefit from a better nutrition, better health services, a better school, more recreational activities, better housing conditions, a more select/civilized district for living and so on. In the last decades US Administration and States Authorities reduced the financial support for public schools and universities which led to the huge fees ($ 60 thousand per year at Harvard University), a huge burden of student loans, a decline in the quality of education. The privatization of education and health services started by Reagan Administration and continued thereafter under the influence of the ideas of neoliberal school (led by Milton Friedman for a long time), increased enormously the cost level in these two social domains, but it has reduced the degree of accessibility and has not driven to an increase in the their quality and performance.

A perverse consequence of this phenomenon of liberalization at any price of social fields is the exponential growth of debts from student loans, figures provided by Stiglitz being it seems smaller than the real ones, and the situation is desperate for tens of thousands of university graduates, notably for those who cannot find a job. Student loans debt that exploded in the last two decades, being higher than that at the credit cards, is more difficult to control because academic degree provides better paid jobs today than the jobs for those who do not have diploma. At the same time this high debt negatively affects the consumption level and implicitly the economic growth. Public investments in human capital are the key for a sustained long term economic growth and for ensuring a very competitive economy. Some universities have become a sort of commercial companies

in search of profits, sometimes on the backs of students. For example Harvard University is the best (private) university in the world and provides a high level education, but it had an annual budget of $ 36.4 billion in 2014, cost of attending Harvard College without financial aid is $45,278 for tuition and $60,659 for tuition, room, board and fees combined, it has a paid staff of 13,000 for 21,000 students and a president paid with $ 1 million per year. One may see very high tuition fee for a student, but these fees cover only 1/3 of the whole budget.

In the wake of the financial crisis, about 4 million people were going to lose their houses, and the law was supposed to protect them, but *corruption in the American style* means influencing the laws in their own interest by big corporations through an insidious lobby addressed to politicians. The legislation was not able to prevent the housing bubble, to protect vulnerable consumers (naïve and uninformed) from exploitation lending practices. Then the bankruptcy legislation was amended to introduce the system of partial contractual servitude whereby a debtor became indebted for the rest of his life, paying a part of his salary and also a huge interest applied to all loan. Because ¼ of mortgages were not covered by mortgage value the only solution was to cut the principal value; if the bankruptcy procedure for corporations keeps their functioning and preserves their jobs by means of equity capital is also very important as the families and local communities to be kept intact. That is why Stiglitz raised the issue of mass refinancing of mortgage loans, possibly through a fiduciary society financed by the government (Jeff Merkley's plan).