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CONTENTS

<i>ARTICLES</i>	4
WINDOWS OF OPPORTUNITY IN CHINA - CEE ECONOMIC RELATIONS Sarmiza Pencea	4
A CASE STUDY OF CHINA´S WIND POWER RESOURCES Xue Yanping	14
THE FISCAL FEDERALISM AND THE GOOD ECONOMIC GOVERNANCE IN EUROPEAN UNION Alina Ligia Dumitrescu	25
COMMON AGRICULTURAL POLICY – THE MAIN DRIVER OF SUSTAINABLE RURAL DEVELOPMENT IN EUROPEAN UNION Andreea Drăgoi, Cristina Bâlgăr.....	34
TRADE PROMOTION APPROACHES TO STRENGTHEN THE INTERNATIONAL COMPETITIVENESS OF ENTERPRISES Octavian-Liviu Olaru.....	43
MICROECONOMIC ANALYSIS IN COMPETITION POLICY Paul Prisecaru	50
THE SITUATION OF IRAQI OIL INDUSTRY AND ITS PROSPECTS Al Dulaimi Haidar Ali	62
SWEDEN AND TURKEY: TWO MODELS OF WELFARE STATE IN EUROPE Simona Moagăr Poladian, Andreea-Emanuela Drăgoi.....	72
A MATHEMATICAL MODEL FOR ASSESSING THE FACTORING ACTIVITY Alexandru Olteanu, Mădălina Rădoi.....	80
INVESTMENT FUNDS INDUSTRY IN ROMANIA Adela Ionescu	90
PARAMETRIC INSURANCE COVER FOR NATURAL CATASTROPHE RISKS Serghei Mărgulescu, Elena Mărgulescu.....	97
PARAMETRIC DISTRIBUTION FAMILIES USEFUL FOR MODELLING NON-LIFE INSURANCE PAYMENTS DATA. TAIL BEHAVIOUR Sandra Teodorescu	104

ATTITUDES AND PERCEPTION IN CONSUMER’S INSURANCE DECISION Mihaela Andreea Stroe, Mihaela Iliescu.....	112
THE SOCIAL NETWORK SITES AND THE GOVERNANCE OF THE SUSTAINABLE DEVELOPMENT Cristian Moisoiu.....	121
<i>SPECIAL ISSUES</i>	130
CORPORATE FINANCIAL DISTRESS AND BANKRUPTCY: A COMPARATIVE ANALYSIS IN FRANCE, ITALY AND SPAIN Alessandra Amendola, Marialuisa Restaino, Luca Sensini.....	131
THE OEM-OBM DEBATE: FACTORS INFLUENCING CHINESE FIRMS' BRANDING DECISIONS IN THEIR INTERNATIONALISATION PROCESS Ian Wilson	143
BEYOND THE LIMITS OF CRISIS Eduard Ionescu, Carmen Costea	152
<i>BOOK REVIEW</i>	156
JOSEPH STIGLITZ’S PRICE OF INEQUALITY SEEMS TOO HIGH FOR FUTURE GENERATIONS Petre Prisecaru.....	156

ARTICLES

WINDOWS OF OPPORTUNITY IN CHINA - CEE ECONOMIC RELATIONS*

Sarmiza Pencea¹

Abstract

The Central and Eastern European countries (CEE) share an old, constant and strong friendship relation with China. Along the last decades, both China and CEE countries underwent tremendous changes following different paths to development. These changes, as well as the outburst of the global financial and economic crisis in 2007 followed by the European turmoil, shaped a completely new global economic environment for all the actors in the global scene. It also brought to surface the hidden flaws in each country's own development model, shedding light on the untapped potential in their economic relations and opening new windows of opportunity. This paper looks at the bilateral trade and investment relation of China and the CEE10 countries (the EU members group), with a special focus on Romania-China economic relationship, laying stress on the opportunities and the road ahead.

Keywords: *China, Central and Eastern European Countries, CEE, CEE10, China-CEE, China-Romania, FDI, ODI.*

J.E.L. Classification: *F140, F150, F210, O520, O530, P20.*

Introduction

The Central and Eastern European countries (CEE) share an old, constant and strong friendship relation with China. In spite of the huge geographic distance that separates them from China, in spite of the cultural differences, the languages barrier, or their distinct choices in terms of economic development models and policies, there have always existed many commonalities and complementarities between China and these countries, which helped strengthen their links and make their cooperation easier. After the CEE countries have integrated into the European Union, new opportunities appeared for their economic and trade relations with China, a major partner of the EU. Nevertheless, while the development potential of the relations between the two sides is impressive, it is still far from being harnessed properly.

1. Favourable traditional conditions for bilateral relations

Since 1978, China has started building a new future for itself by opening up to the world economy and pragmatically creating a development model tailored for its specific needs. The purpose of the comprehensive reforms brought about was that of attaining the country's rapid

* This paper was presented by the author in the international forum "China and Central and Eastern European Countries: Economic Cooperation and Outlook" Beijing, China, 23 May 2013, organized by the Institute for World Economics and Politics (IWEP), the Chinese Academy for Social Sciences (CASS).

¹ Ph.D., Senior Scientific Researcher, Institute for World Economy of the Romanian Academy.

economic development and its repositioning into the world economy. For about three decades, the performance of the Chinese economic model proved outstanding in terms of growth and development, technological modernization, poverty alleviation and improved living standards. China is now the second-largest economy in the world, the most important manufacturer, the number one exporter and the second- largest global importer of goods, as well as the dominant actor in many international markets. It also holds the largest foreign exchange reserve worldwide.

On the other hand, after 1989, the year when the communist system fell apart in Europe, tremendous changes took place in the CEE10² countries, too. As they chose to switch to the market economy, these countries embarked on complex and painful reforms founded on the neo-liberal approach favouring liberalization and privatization. Their overriding priority was to adjust to, and to integrate into the European Union, with a view to catching up and bridging the development gap that separated them from Western Europe. The thorough restructuring process that followed impacted significantly on their economic structure and the CEE10 countries became strongly integrated and, at the same time, strongly dependant on the EU Western economies (former EU15). For the new EU member states, these economies became the leading source of foreign investments, cross-border loans and imports, and their most important export markets. The EU integration brought efficiency advantages, technological and managerial know-how transfer, jobs, increased productivity and accelerated economic growth. The development gap between the CEE10 countries and the EU Western economies was reduced, but it remained still far from being closed.

During the last two decades, in spite of the huge changes undergone by their own economies, by the world economy as a whole, and by their respective places in the new global environment, the CEE10 countries and China managed a smooth transition of their bilateral relations. However, as they were more focussed on their own reshaping and redefining processes, bilateral trade and economic cooperation lingered, and even in the most recent years, when trade and investments received a significant boost, important potential still remained untapped.

Box 1. China- CEE10: A glimpse of the Untapped Potential
Facts and Figures on the Bilateral Trade

- ***CEE10 countries cumulate a total population of about 100 mil. people (1/5 of EU), a combined area of over 1 mil. sq. km. and a total GDP(PPP) of over USD 1 979 bn. in 2012 (about 13% of EU GDP). (CIA Factbook, 2013);***
- ***In all CEE10 countries, GDP(PPP)/capita exceeds \$10 000 and in 6 of the 10 countries it exceeds \$20 000;***
- ***Still, the total trade CEE10- China is only a little over USD 61 bn, (\$ 52.5 bn. in imports and \$ 8.5 bn. in exports). (UN Database, 2013);***
- ***The China-CEE10 trade volume is 3 times smaller than the China-Germany trade volume (\$187 bn.) and also lower than China's bilateral trade with France (\$ 75 bn.), or the UK (\$ 71 bn.). (CIA Factbook, 2013);***
- ***Since 2000, the trade between China and CEE10 has grown more intensively than bilateral trade with the other EU members (EU17)³. The***

² The paper will focus on CEE countries in the EU (EU10), namely Bulgaria (BG, according to ISO codes abbreviations), Czech Republic (CZ), Estonia (EE), Hungary (HU), Latvia (LV), Lithuania (LT) Poland (PL), Romania (RO), Slovakia (SK) and Slovenia (SI).

³ EU17 is the rest of the EU after excluding CEE10 (EU27-CEE10= EU17)

overall bilateral trade China-CEE10 multiplied **16-fold**, imports grew **15-fold** and exports almost **27-fold**, considerably more than China's trade with the rest of EU (6-fold, 5-fold and 7-fold, respectively)⁴;

- **Consequently, the share of the 10 CEE countries into the total EU27-China trade flows improved (from 5.5%, to 13.8% in imports and from 1.4%, to 5.1% in exports), but the dominance of the Western economies still remained unchallenged. In 2011, the EU17 economies still accomplished more than 86% of the total EU27 imports from China and almost 95% of the total EU27 exports to this country.**
- **All the CEE10 countries run negative balances of trade with China, with low export volumes, often only about one tenth of the import ones. (On the average the total exports of CEE10 account for only 16% of their total imports);**

Box 2. China- CEE10: A glimpse of the Untapped Potential
Facts and Figures on Bilateral Investments

- *For decades, China has been a major recipient of FDI from the Western countries and specifically from the EU highly developed economies. It ranked first among the developing countries and second only to the USA globally, as a FDI recipient; In 2012 it became the no.1 destination for FDI worldwide;*
- *Only very recently China has also become an outward investor, driven both by its internal development stage and needs, and by the opportunities available internationally during the global economic downturn;*
- ***From only barely \$ 3 bn. outward direct investments (ODI) in 2003, China has come to invest overseas, in 2011, over \$ 60 bn (Campeanu V., Pencea, S., 2012); That is an impressive 20-fold increase in less than a decade. However, the amount of Chinese ODI is still quite low, not exceeding 6.7% of the global ODI(in 2012);***
- ***The EU27 stock of Chinese investments totalled only about \$20 bn in 2011, nearly 26 times the amount of 2005 (China Customs, 2011), but still very little compared to total FDI stock; Nevertheless, the EU27 outward investment stock and flows to China still exceed by far the investments received by EU27 from this partner country;***
- ***CEE10 countries still don't attract important Chinese investments. Although the FDI stock from China kept growing, amounting to almost \$985 mil. in 2011 (nearly 15-fold the 2005 level) it still lagged behind the Chinese FDI stock in the other EU17 countries. Consequently, the share of the CEE10 in the overall Chinese ODI volume into EU27 decreased from 8.6% in 2005, to only 4,9% in 2011, (China Customs, 2011);***
- ***In 2011, all the CEE10 countries together cumulated much less Chinese FDI stocks than each of Luxembourg (\$ 7.1 bn.), France (\$ 3.7 bn.), Germany (\$ 2.4 bn.), or Sweden (\$ 1.5 bn.);***
- *CEE10 set up about 2000 companies in China (Wen Jiabao, 2011), but their outward investment flows to this destination are quite low.*

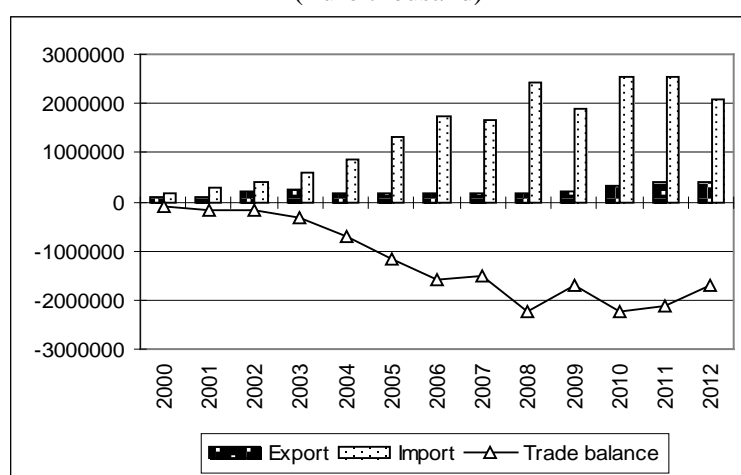
⁴ Calculations based on Comtrade UN Database statistics, SITC Rev.3, April 2013

Maybe one of the most intriguing cases of untapped potential in CEE10-China relationship is the one of ***China-Romania trade and economic cooperation***. In spite of the fact that the two countries have a track of exceptional bilateral relations, although bilateral trade reached record-high levels right during the global financial crisis, although Chinese investments in Romania are quite significant, the economic connection of the two countries is far from reaching its potential (see Box 3.).

Box 3. *China-Romania: A Country Case of Highly Untapped Potential*⁵

- Romania is the 7th largest country in the EU27 and the second largest among CEE10 countries, in terms of surface and population (about 22 mil.); In 2012, its total GDP (PPP) was about \$275bn, and only about \$12 800 per capita;
- In the overall CEE10- China trade, Romania ranks only the 5th by volume, after Poland, the Czech Republic, Hungary and Slovakia;
- Carrying up to **70-75% of its trade with EU member countries**, Romania is tightly integrated into the EU market. Last year, only about 1/3 of its exports went outside the EU and little over 1/4 of its imports came from outside EU;
- ***In 2012 Romania's trade with the first 3 largest economies in the world – USA (\$2.8 bn.), China (\$3.2 bn.) and Japan (\$ 0.6 bn.) - amounted to \$ 6 bn., of which more than half was its trade with China***; the total trade volume of \$3.2 bn. in 2012 was in steep decline from over \$ 4 bn. in 2011, which was an all time record-high year (UN Database, 2013);
- Among Romania's top trade partners ***outside the EU, China ranks the 3rd*** following Turkey and Russia;
- While its exports to China totalled only nearly half a billion dollars in 2012, Romania's imports were over 5 times larger (\$ 2.7 bn.) (Annex 1);

Chart 1: Trade flows between Romania and China. 2000-2012
(Euro thousand)

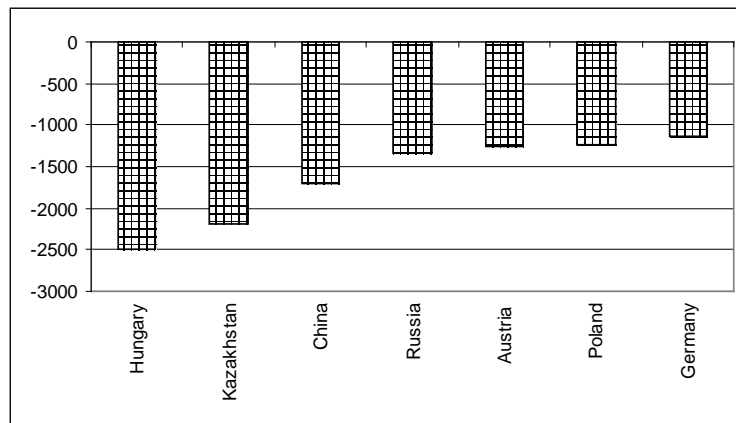


Source: Calculations based on the National Institute of Statistics data

⁵ This Country Case partially draws upon Pencea S., Oehler-Sincai M. "Main Trends of Trade in Goods between Romania and China in the last Decade", 2013

- ***With exports accounting only for about 18% of imports in 2012, Romania keeps running a substantial deficit of its balance of trade with China***
- ***But Romania's trade deficit with China is slowly descending.*** In 2012 it was Euro1.7 bn., from Euro 2.1 bn. in 2011 and over Euro 2.2 bn. in 2010. This resulted mainly from shrinking Romanian imports, during the global downturn;
- ***By the trade deficit induced, China ranks 2nd among Romania's non-EU trade partners and 3rd when all Romania's foreign partners are considered.***

Chart 2: Romania's largest trade deficits with its main trading partners in 2012 (Euro million)



Source: Calculations based on data of the National Institute of Statistics.

- ***The high trade deficit with Hungary is strongly increased by Hungarian re-exports of Chinese goods to Romania.*** The importance of this fact is double: first, it signals that the Chinese goods are more present in Romanian markets than it is revealed by statistics. Second, it highlights that direct commercial contacts between Romanian and Chinese companies are poorly developed and need to be fostered;
- Another important phenomenon is that while Romania's direct exports to China are low and its trade balance is negative, many Romanian goods reach the Chinese market by third party intermediaries. ***Due to the underdeveloped direct relations between Romanian and Chinese companies, just like in the case of the Chinese exports, partially channelled to Romania through Hungary, many Romanian export goods get into China indirectly, being re-exported by third parties.*** As such, Romanian wood was re-sold to China by Arab traders, Romanian ships were re-sold to China by Dutch companies, Romanian machine-tools reached China through German societies, while Romanian garments got into the Chinese market through Italian firms.
- ***Chinese FDI stock in Romania totalled about \$126 bn. (2011), exclusively from private investors. (Annex 2.) It ranked only the 3rd among CEE10 most important destination for Chinese ODI, after ranking the 1st in 2005. In 2011 Romania received the lowest FDI inflow from China (\$0.3 mil.), among CEE10. Its FDI outflows to China are also low.***

With the outbreak of the global economic crisis, in 2007, the resilience of both the Chinese and the CEE-10 economies was put to drastic testing. The economic depression hit them brutally, but it also helped bring to the surface hidden weaknesses, vulnerabilities and imbalances, highlighting the urgency of finding new sources of sustainable growth. At the same time, for the best placed players in the international markets, the global downturn created valuable opportunities. China was among the few who could capitalize on these opportunities and it might do the same again with the new win-win approach towards the CEE10 countries.

A window of opportunity is opening for the China-CEE10 countries in the aftermath of the global economic crisis and the sovereign debt euro zone turmoil. If properly used to reinforce and foster their bilateral economic exchanges and cooperation, it could give an unprecedented boost to their growth and development.

2. Windows of Opportunity

Europe is now tightly interconnected West to East and North to South in ways that would have seemed impossible in the '80s. If, in better times, such an interdependence showed mainly its advantages to the CEE10 countries (in terms of growing investments, trade, jobs, technological transfer, higher productivity and competitiveness), under the backdrop of the global and regional crises it also revealed the “dark side” of high integration: **dependency**. As the old EU-member countries, especially the euro zone members, got under the strain of their own economic problems, their import demand for East-European goods and their FDI out-flows to the CEE10 countries declined; also, the Western banks, dominant in the CEE10 countries, though were stopped from withdrawing capital, did little to help, refraining from financing these economies back to their economic growth; additionally, some of the Western European multinationals which had extended to the East, have devised crisis strategies which included closing or selling their Eastern businesses and moving out of the CEE10 countries. Such developments affected CEE10 area severely.

Under these circumstances, to be able to further pursue their catching up strategies, the 10 CEE countries need fresh capital for investments and larger markets for their exports. And this is where new windows of opportunity open for China-CEE10 economic relations:

Firstly, China has a huge domestic market and a policy aiming at economic rebalancing both at home, where domestic consumption is meant to become a major driver of its economic growth, and internationally, where balances of trade with most of China's partners, CEE10 countries included, are running deficits. While opening more to imports from CEE10 country is obviously beneficial for these economies, such a move addresses both these imbalances which China wants corrected.

Secondly, while the CEE10 countries need substantial investments for their growth and development, Chinese businesses are seeking for investment opportunities. Moreover, going into details, plenty of untapped complementarities are revealed: as such, many of the fields in which Chinese potential investors are interested - such as, for instance, infrastructure building, or energy generation – are also some of the areas of high interest in CEE10 countries, which are either partially short of such facilities, or interested in revamping, extending and modernizing operations. *These matching interests and needs create a solid foundation for expanding China-CEE10 cooperation.*

At present, potential investors from China find themselves in an extremely advantageous bargaining position: on the one hand, they have almost no competition in these markets, at least for a while, on the other hand, potential locations in CEE10 will be competing among themselves to attract investments and this might drive them to offer additional incentives to investors.

Investing in the CEE10 area is very attractive, because these economies display a host of advantages for businesses willing to develop local economic activities in Europe. Hereunder we are highlighting just some of the most important potential drivers of Chinese investments in CEE10:

1. It is worth noting that setting up operations, or investing in whichever CEE10 country *will costs just a fraction of the corresponding cost in Germany, UK or France, while the investment can ensure equivalent advantages in terms of access to educated employees, highly-skilled workers and technological know-how*. (Sometimes technology of interest to Chinese companies had already been transferred to these countries from their Western partners and it might be accessible);

2. It is also important to underline that investors in CEE10 countries will benefit from operating in very *open economies*, enjoying increased *economic freedom*. According to the *2013 Economic Freedom Index* released by the Heritage Foundation, Europe was the world's most improved region in 2013, from this standpoint. Among the CEE10 countries, the *Czech Republic, Poland, Romania and Bulgaria recorded their highest economic freedom scores ever*. As it can be noticed from Table 1, CEE10 are quite well positioned among the 177 countries appraised. The first three best ranked, Estonia, Lithuania and the Czech Republic falling in the category of “*Mostly free*” economies (Overall Index between 79.9-70), while the others fall in the category “*Moderately free*” (69.9-60.0). For comparison, the world average index was 59.6 and the regional one, 66.6. It is also worth noting that all of the CEE10 countries score very well as regards the “Open Markets” indexes.

Table 1. Economic Freedom in CEE10 countries, 2013

Ranking	CEE10 countries	Overall Index	Open markets		
			Trade freedom	Investment freedom	Financial freedom
13.	EE	75.3	86.8	90.0	80.0
22.	LT	72.1	86.8	80.0	80.0
29.	CZ	70.9	86.8	70.0	80.0
42.	SK	68.7	86.8	75.0	70.0
48.	HU	67.3	86.8	75.0	70.0
55.	LV	66.5	86.8	75.0	50.0
57.	PL	66.0	86.8	65.0	70.0
59.	RO	65.1	86.8	80.0	50.0
60.	BG	65.0	86.8	55.0	60.0
76.	SI	61.7	86.8	70.0	50.0

Source: 2013 Index of Economic Freedom, the Heritage Foundation (the index appraises 177 countries, worldwide)

3. By investing in the CEE10 economies, companies from far away countries, such as China, *can get nearer to their target export markets and customers*, can acquire direct and better knowledge on the specificities of the European markets and niches and can *reduce considerably their production and operating costs*. While avoiding transport hazards and no longer paying for long-distance transportation, they also benefit from local skilful and comparatively cheaper workforce, highly educated specialists, technological prowess and highly innovative talents (Table 2) for their local productive activities.

Table 2. Global Innovation Index rankings of CEE10 countries, 2012

COUNTRY	2012 RANKINGS
Estonia	19
Slovenia	26
Czech Republic	27

Latvia	30
Hungary	31
Lithuania	38
Slovakia	40
Bulgaria	43
Poland	44
Romania	52

Source: INSEAD; Note: The Global Innovation Index ranks 144 countries worldwide

Table 3. High value-added Sector Development in CEE

	PL	CZ	RO	HU	SK	BG	EE
MANUFACTURING							
Advanced Automotive	H	H	H	H	H	L	L
Aerospace	M	M	M			L	
Renewable Energy		M	M		L	M	M
Electrical Engineering	H	M	L	L	H	M	L
Mechanical engineering	H	H	M	L	M	H	M
SERVICES							
Software development	M	M	M	L	L	M	H
Software Services	M	M		M		M	H
Sophisticated Business Process Outsourcing	M	M		M	H	L	H
R&D							
Biotechnologies	M	L			L		
Life Sciences		M	L	L	M	L	
Nanotechnologies		L				L	
Lasers			M				
Pharmacy	M	M	L		M		

Note: **H** = High (well-developed industry); **M** = Medium (developing industry); **L** = Low (existing potential to develop the industry)

Source: Adapted after Global Trends, Second Quarter 2011, Eurasia Group, PwC

4. Additionally, while trying to climb the technological ladder, both China and the CEE10 countries might find it easier and wiser to join their efforts in developing together *higher value-added sectors. There are important capabilities and expertise in CEE10 countries to build upon, both in high value added manufacturing and services, as well as in R&D* (Table 3). From this standpoint, one can envision the opening of *another window of opportunity for China-CEE10 future cooperation in high-technology high-skills and knowledge intensive activities* (Table 3).

5. It is also important to outline that the business environment in CEE10 countries is generally friendly and many of its features are improving (Table 4). Chinese investors seem to adapt more easily in these markets, as their business models bear more similarities with the local ones, and sometimes current rules impose less demanding standards comparatively to the West.

Table 4. Business Environment in CEE10

Wage rates	Competitive (they dropped by 5% in the past 10 years, while elsewhere on the continent they remained stagnant)
Highly qualified, educated employees	Available
Tax regimes	Business friendly
Infrastructure	Developing
Supplier networks	Developing
Trade policies	Generally open
Political environment	Generally stable
Economic prospects	Generally positive
Prospects of Euro adoption	Delayed
Pace of economic reform	Slowing

Source: Adapted after Global Trends, Second Quarter 2011, Eurasia Group, PwC

6. Finally, it is worth stressing that investing into CEE10 economies is prone to giving a new boost to the Chinese exports to these countries, and further on, to the larger EU market. *Investing in the East opens the door to the West, locally produced goods becoming European and facing virtually no market barriers.* Consequently, *investing in CEE10 will give a new impetus to China's future economic growth.* Also, strengthening cooperation with CEE10 countries will enhance China's cooperation prospects with the European Union.

Conclusions

China's Twelve Measures for promoting cooperation with Central and Eastern European countries is undoubtedly charting the way forward, but the success of bilateral cooperation resides in the efforts made by each country. Each country should strive to identify its best ways to benefit from the windows of opportunity currently open, to turn to good account their geographical position, good industrial foundation, high quality labour force and all the other resources they have and to capitalize on the pragmatic set of measures assembled by China. But they also have to coordinate among themselves and possibly even work out a group strategy able to maximize results and avoid the risk of a race to the bottom, when competing for Chinese investments.

Romania needs to make up for the time and opportunities lost in relation to China, starting with the smaller steps (such as speeding up visa formalities, or help provide better and timely information to businesses), and continuing with comprehensive sets of measures to encourage, stimulate and nurture business connections, ideas, bilateral and multilateral regional projects able to promote trade and attract investments.

Romania should encourage Chinese companies to participate in the privatization processes of the Romanian state-owned companies, but also to develop green-field units for local production and distribution to European, Middle East and Northern African markets, capitalizing on its exceptional port capabilities at the Black Sea. It should invite Chinese companies to compete in infrastructure and energy projects bids in Romania and it should also encourage the development of major cross-border infrastructure projects in Central and Eastern European area, capitalizing on the Chinese technological and financial support. It should stimulate Romanian companies to jointly develop economic and technological zones with Chinese enterprises and participate in regional production networks. It should stimulate and assist Romanian exporters to "go East, to China" and Romanian multinationals to extend activities and invest in China. Joint R&D projects should also receive foreground attention and support.

Since the windows of opportunity have just opened, the challenges to be met on the road forward are still partially unknown. The promises of a win-win major project such as China-CEE10 economic partnership are enticing, but not without risks for all sides. That is

why, securing the right policies and striking the right balance between prudence and boldness are crucial.

References

- **Campeanu V., Pencea S.** et all , 2012, *China- An Elephant That Can No Longer Be Ignored*, Editura Universitara, Bucharest;
- **Hanemann, T.** , 2012a, *Chinese FDI in the US: A Record Year Amid A Gloomy FDI Environment*, Peterson Institute for International Economics
- **Hanemann, T.**, 2012b, - *How Europe should respond to growing Chinese investment*;
- **Hanemann, T, Rosen D.**, 2012, *China Invests in Europe*, Rhodium Group;
- **Honggen, Zhu** , 2012, *Plenty of Untapped Potential*, China Forum;
- **Mackintosh, P.**, 2013, *Change Is Afoot*, Global Finance, Report: Central& Eastern Europe;
- **Pencea S., Oehler-Sincai M.**, 2013, *Main Trends of Trade in Goods between Romania and China in the last Decade*;
- **Wen Jiabao**, 2011, *Strengthen Traditional Friendship and Promote Common Development*, Adress at the China-CEE Economic Forum, Budapest;
- **Wen Jiabao**, 2012, *Work Together for a Promising Future*– Adress at the China-CEE Economic Forum, Warsaw;
- **Xin, Chen**, 2012, *Trade and Economic Cooperation between China and CEE Countries*, Institute of European Studies, WP Vol.6. No.2/2012;
- **Zoukui, Liu** , 2013, *An Opening*, Beijing Review, January 7/2013;
- **EIU**, 2012, *Chinese Investment in Central and Eastern Europe*, Business Intelligence, November 18, 2012, www.intelligencequarterly.com
- **EIU**, 2013, *China Going Global Investment Index*, A Report from EIU, www.eiu.com;
- **Financial Times Business**, 2012, *Global Greenfield Investments Trends*, The FDI Report 2012
- **PriceWaterhouseCoopers**, 2013, *China Deals, A Fresh Perspective*, www.pwc.com
- **PriceWaterhouseCoopers**, 2012b, *Central Eastern Europe: Moving up the value chain*;
- **PriceWaterhouseCoopers** , 2011c, *Evolving Outlook for Business in Central and Eastern Europe*, Eurasia Group Global Trends Quarterly, Second Quarter, 2011, www.pwc.com
- **PriceWaterhouseCoopers**, 2010d, *Foreign Direct Investment in Central and Eastern Europe, A Case of Boom and Bust?* Economic Views, March 2010, www.pwc.com
- **China Customs**, 2011, *Statistical Bulletin of China's Outward Foreign Direct Investment*, China's Outward FDI Stock into EU countries, 2005-2011, p.88-89
- **CIA**, 2013 ,*World Factbook*, May
- **Heritage Foundation** , 2013, *Index of Economic Freedom*
- **INSEAD**, 2013, *The Global Innovation Index*
- **OECD**, 2013, *FDI in Figures*, January;
- **United Nations**, 2013 - *Comtrade UN Database*, April

A CASE STUDY OF CHINA'S WIND POWER RESOURCES*

Xue Yanping¹

Abstract

At present, China is the largest energy producer and the second largest energy consumer in the world. With the increasing pressure to cut GHG emissions and to improve energy efficiency, China is now changing its traditional energy mix, mainly through consuming more renewable energy instead of fossil energy. This change has resulted in a policy adjustment which in turn boosts the utilization of the wind power resources. However, the development of the wind power resources in China is confronted with some significant challenges, such as greater installed electricity capacity than the electricity generation, greater electricity generation than the electricity transmission capacity and greater inland wind power generation than the offshore wind power generation. Therefore, the further development of China's wind power electricity in the coming years depends largely on the ways these challenges will be addressed.

Keywords: *China, Wind Power, Policy.*

J.E.L. Classification: *Q 6.4.*

Introduction

In 2012, China was the largest producer and the second largest consumer of primary energy in the world. However, China is under the increasing pressure to change its traditional energy structure. In order to reduce GHG emissions and to use energy in a more effective way, China has focused on the development of renewable energy resources. Over the last ten years, Chinese policy has led to a quick growth of the wind power electricity generation. However, China faces several challenges for the further development of the wind power electricity generation, such as the unbalanced growth of the wind power installed electricity capacity and the electricity production as well as the unbalanced development of the wind power electricity generation and the grid-connected electricity. In the coming years, the development of the wind power electricity will be decided by the way how these issues be addressed. The author attempts to make a short discussion of these issues and then gives some tentative policy options.

1. China needs a renewable energy policy

In 2012, China's GDP reached 8.26 trillion US dollars and its economy grew at 7.8 percent over 2011. However, China consumed about 3.53 billion tons of primary energy (coal equivalent), ranking the second in the world after the United States. China's energy consumption per GDP is twice higher than the world average². Chinese economy is expected to continue to grow at a rather high rate in the coming years and this means that China will face greater pressure of primary energy shortage. We should look at the current situation of China's energy production and consumption in order to have a full understanding of China's

* This paper is based on the PPT presentation made at Romanian Academy, Institute of World Economy, on June 13, 2013.

¹ Senior research fellow, Institute of European Studies, CASS.

² See China Energy Statistical Yearbook 2012, China Statistics Press, Beijing, March 2013.

challenges and opportunities.

China is similar to EU in the terms of fossil energy reserves with rich coal resources but poor resources of crude oil and natural gas. Over the last twenty years, China's primary energy production and consumption both increased rapidly and is one of the most important drivers for Chinese economic growth. The present economic growth model, however, is not sustainable in the terms of fossil energy reserves. Because the sustainable development refers to not only meet the needs of current generation but also the future generations should be able to cope with the development challenges.

Looking into the energy mix in China, we can see that the country heavily depends on the coal and other coal-based energy. In 2012, Chinese output of coal was 3660 million tons, crude oil 204 million tons and natural gas 107.7 billion cubic meters. With the rapid development of Chinese economy, the coal-based production system has undergone profound changes over the last ten years. This change is promoted by the needs to improve energy efficiency and to reduce GHG emissions. When Chinese industrial sectors shift to clean and efficient energies, China's energy dependency rose rapidly. In 2012, China produced 3660 million tons of coal and imported 280 million tons of coal, with a relative low dependency rate of 7 %. But in the same year, China imported 272 million tons of crude oil and 42.5 billion cubic meters of natural gas. Thus, China's dependency on imported oil and gas was at 57 % and respectively at 28 %, ³ which is much higher compared with its dependency on coal. For the last five years, China's consumption of coal represented around 67 % of total primary energy consumptions while oil and gas consumptions accounted for about 18.9 % and 5.5 % respectively. It should be noted, with the increasing pressure of GHG emissions reduction, domestic electric power, industry and transportation will prefer to use cleaner energies, such as natural gas.

This transformation will further increase the dependency on crude oil and natural gas, thus challenging China's security of energy supply. The following tables show the primary energy production and consumption in China.

Table.1. China's Total Production of Energy and its Composition (from 2006 to 2011)

Year	Total Energy Production (10Ktce)	As Percentage of Total Energy Production (%)			
		Coal	Crude Oil	Natural Gas	Hydro/Nuclear/ Wind Power
2006	232167	77.8	11.3	3.4	7.5
2007	247279	77.7	10.8	3.7	7.8
2008	260552	76.8	10.5	4.1	8.6
2009	274619	77.3	9.9	4.1	8.7
2010	296916	76.6	9.8	4.2	9.4
2011	317987	77.8	9.1	4.3	8.7

Source: National Bureau of Statistics of China, 2012.

Table.2. China's Total Consumption of Energy and its Composition (from 2006 to 2011)

³ China's dependency for crude oil will rise to 60% in 2013 according to some statistics. See Research Report, CNPC Economics and Technology Research Institute, Beijing, April 2013.

Year	Total Energy Consumption (10Ktce)	As Percentage of Total Energy Consumption (%)			
		Coal	Crude Oil	Natural Gas	Hydro/Nuclear/ Wind Power
2006	258676	71.1	19.3	2.9	6.7
2007	280508	71.1	18.8	3.3	6.8
2008	291448	70.3	18.3	3.7	7.7
2009	306647	70.4	17.9	3.9	7.8
2010	324939	68.0	19.0	4.4	8.6
2011	348002	68.4	18.6	5.0	8.0

Source: National Bureau of Statistics of China, 2012.

2. China's advantages for developing renewal energies

Generally, Chinese economy is still heavily coal-based, which is environmental unfriendly and low energy efficiently. Chinese government regards this as a serious challenge for the country's future development and the cooperation with other countries. Moreover, Chinese government has targeted the national energy self-sufficiency at 85 percent for 2015. Because China is under growing pressure to change its traditional energy structure, those clean energies, especially renewable energy, will be seen as a potential option. Then it should be asked, does China have adequate resources of renewable energy to meet the economic development needs in the coming years? The answer is "yes".

China is rich in resources of renewable energies, especially the hydropower, solar-power and wind power. The country has a long history and rich experiences in using water resources to generate power for industry and agriculture. In 2011, China's hydropower installed electricity capacity achieved 230 gigawatts(GW), representing about 21 percent of total domestic installed electricity capacity. China is currently the largest user of hydropower in the world by the standard of electricity generation. By comparison, the use of solar-power and wind power started late but has developed very quickly over the last ten years. In 2011, the total domestic photovoltaic power installed electricity capacity reached 3000 megawatts(MW) and the grid-connected wind power installed capacity was 47 gigawatts(GW) in 2012, ranking No.1 in the world.⁴

3. China's wind power electricity generation

3.1. China has rich resources of wind power

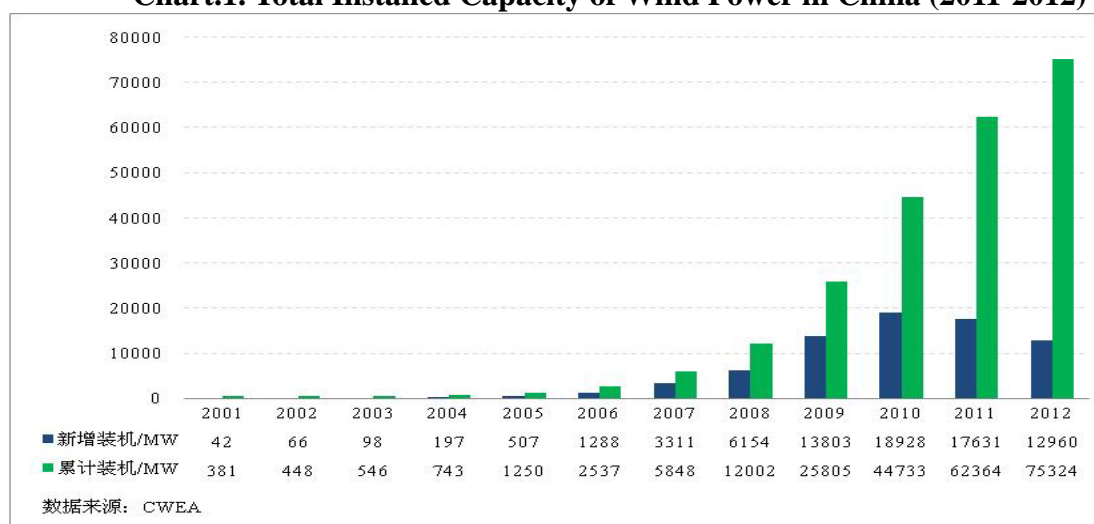
In China, the resources of wind power are over 3000 GW, of which only a small amount is developed and used. Since the introduction of "Law on Renewable Energies" in 2005, China has undergone a rapid development of wind power generation. The installed wind power electricity capacity rose from 1250 MW to 75.95 GW over the period 2005 - 2012. "China Energy Policy 2012", adopted by Chinese government in 2012, claims that the wind power installed electricity capacity has to reach 100 GW by 2015 (even so, only about 3 % of China's resource of wind power is used).

As the following tables show, in 2012 the total wind power electricity installed capacity was 75.95 GW (ex. Taiwan), with a rise of 20.8 % over the previous year. At the same time, the new installed capacity of wind power for 2012 was 12.96 GW, decreasing

⁴ China began to use nuclear power in the 80s and in 2011 national nuclear power installed electricity capacity was 12.54 giawatts (in operation) and 29.24 gigawatts (under construction). See China Energy Statistics Yearbook, China Statistics Press, Beijing , March 2012.

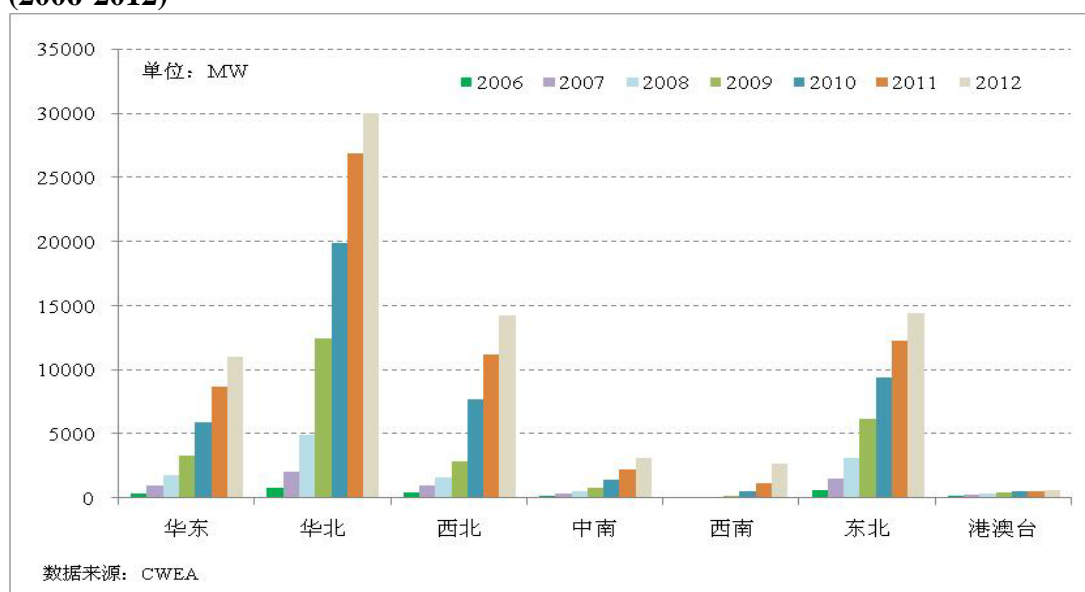
about 26.5 % over 2011 mainly due to the intense competition in the domestic and overseas markets.

Chart.1. Total Installed Capacity of Wind Power in China (2011-2012)



Note: Blue columns represent the new installed capacity and the green ones represent the total installed capacity.
Source: China Wind Energy Association/CWEA, 2013.

Chart.2. Regional Distribution of Total Installed Capacity of Wind Power (2006-2012)



Note: From left to right: eastern provinces, northern provinces, north-west provinces, central provinces, west-south provinces, north-east provinces and Hong Kong, Taiwan and Macao.
Source: China Wind Energy Association/CWEA, 2013.

There has been an interesting feature in the regional distribution of wind power resources in China. The onshore wind power resources are mostly concentrated in the inland areas such as Inner Mongolia, northwest, north and northeast provinces. At the same time, China's offshore wind power resources mainly concentrate in the coastal areas, which extend from Bohai Bay to South China Sea. This kind of distribution of wind power resources has an obvious impact on China's wind power development strategies.

Table.3. China's Top Ten Areas of Wind Power Installed Electricity Capacity

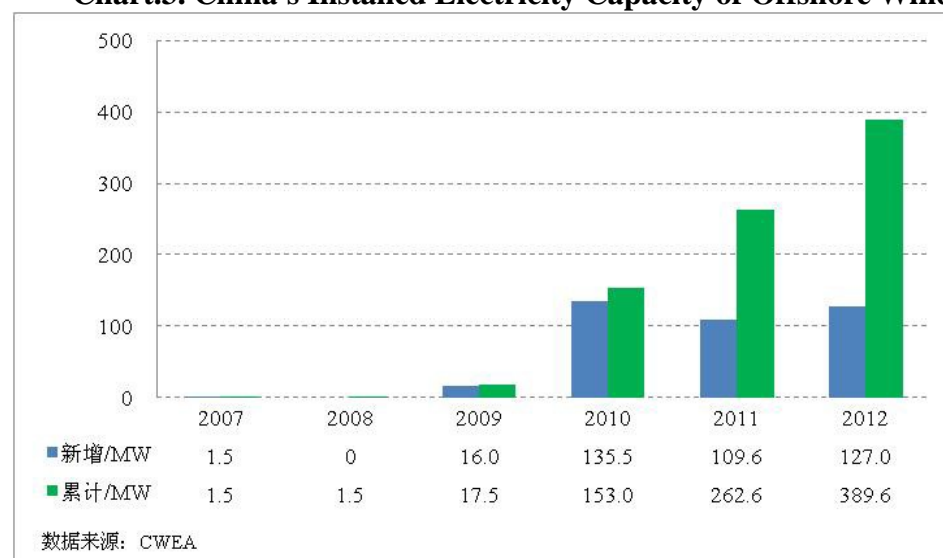
in 2012 (according to new and total installed capacity)

Area	Rank	2011 Total/MW	2012 New Added/MW	2012 Total/MW
Inner Mongolia	1	17504.4	1119.4	18623.4
Hebei	2	7070.0	908.8	7978.8
Gansu	3	5409.2	5409.2	6479.0
Liaoning	4	5249.3	869.8	6118.3
Shandong	5	4562.3	1128.7	5691.0
Heilongjiang	6	3445.8	818.6	4264.2
Jilin	7	3564.4	433.0	3997.4
Ningxia	8	2875.7	690.0	3565.7
Xinjiang	9	2316.1	990.1	3306.1
Shanxi	10	1881.1	1026.0	2907.1
Total*		62928.2	13017.0	75945.2

* Include Hong Kong, Taiwan, Macao

Source: China Wind Energy Association/CWEA, 2013.

Chart.3. China's Installed Electricity Capacity of Offshore Wind Power in 2012



Notes: The blue columns represent new installed capacity and the green columns represents total installed capacity

Source: China Wind Energy Association/CWEA, 2013.

3.2. China's wind power equipment manufacturing capacity

In 2005, Chinese government introduced a national strategy to develop wind power generation. Since then, there has been a rapid market expansion as more electric producers, driven by the huge potential profits, shift to the manufacturing of wind power equipments, especially the small-medium size wind turbines.

In 2012, China's top 20 wind turbines almost take up 98 % of domestic market share in the terms of new installed capacity, with Gold Wind representing 19.5 %, followed by United Power and SINOVEL. The largest five makers represent nearly 60 % of the domestic market share. The market situation is showed by the following two tables.

Table.4. China's top 20 makers of wind turbine in 2012 (new installed capacity)

Rank.	Maker	Installed No.	Installed Cap/MW	Installed Cap/%
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1	Gold Wind	1600	2521.5	19.5
2	United Power	1302	2029.0	15.7
3	SINOVEL	699	1203.0	9.3
4	MINGYANG	739	1133.5	8.7
5	XEXC WP	445	893.0	6.9
6	Shanghai Electric	430	822.0	6.3
7	Envision Energy	328	544.0	4.2
8	Gamesa	265	493.2	3.8
9	DEC WP	311	466.5	3.6
10	Vestas	244	414.4	3.2
11	CSIC HAIZHUANG	214	399.5	3.1
12	CSR WP	252	385.8	3.0
13	WINDEY	263	364.5	2.8
14	SANY Electrical	166	275.0	2.1
15	ChinaCreative	174	263.1	2.0
16	XJ WP	86	172.0	1.3
17	HEWIND	76	114.0	0.9
18	TEWIN	52	78.0	0.6
19	GE WP	40	60.0	0.5
20	INHE WP	23	57.5	0.4
Other		163	270.5	2.1
Total		7872	12960	100

Source : China Wind Energy Association/CWEA, 2013.

Table.5. China's top 20 Makers of Wind Turbine in 2012(total installed capacity)

Rank	Maker	Installed No.	Installed Cap/MW	Installed Cap %
11	Gold Wind	12227	15200.4	20.2
2	SINOVEL	9178	14180.0	18.8
3	DEC WP	4901	7364.5	9.8
4	United Power	4801	7311.0	9.7
5	MINGYANG	2802	4256.5	5.7
6	VESTAS	3175	3979.9	5.3
7	GAMESA	3220	3279.1	4.4
8	XEMC WP	1345	2694.5	3.6
9	Shanghai Electric	1582	2603.5	3.5
10	GE	1082	1635.5	2.2
11	China Creative	1045	1571.1	2.1
12	WINDEY	1429	1462.5	1.9
13	CSR WP	823	1302.3	1.7
14	Envision Energy	827	1292.5	1.7
15	CSIC Haizhuang WP	689	1274.8	1.7
16	Suzlon	649	901.3	1.2

17	SANY Electrical	379	598.0	0.8
18	Nordex	471	574.2	0.8
19	HEAG	450	560.1	0.7
20	YINXING Energy	496	505.0	0.7
Other		2193	2777.5	3.5
Total 计		53764	75324.2	100

Source : China Wind Energy Association/CWEA, 2013.

Globally, the competition has become increasing intense as more wind turbine makers of developing countries enter the markets. China is one of the important exporters of small-medium wind turbines. In 2012, China had seven biggest exporters of wind turbines, with a total exported installed capacity of 700 MW (ex. foreign invested firms). The United States is the largest overseas market for Chinese-made wind turbines. Gold Wind, the largest exporter, has established at least three R&D centers in the United States, EU and Australia.

Chart.4. Export of China's Wind Turbines (By the end of 2012)



Note: Blue columns represent new installed capacity and green columns represent total installed capacity for export.

Source: China Wind Energy Association/CWEA, 2013.

Table.6. Export Destination of China's Wind Turbines (by the end of 2012)

No.	Country	Quantity	Capacity/MW	No.	Country	Quantity	Capacity/MW
1	USA	182	327.75	11	Thailand	7	13.00
2	Turkey	36	54.00	12	Sweden	2	6.00
3	Italy	22	52.50	13	Iran	3	5.50
4	Bulgaria	34	51.50	14	Chile	5	5.34
5	Ethiopia	34	51.00	15	Cuba	6	4.50
6	Spain	12	36.00	16	Britain	3	3.75
7	Brazil	23	34.50	17	Kazakhstan	2	1.56
8	Australia	13	19.50	18	Belorussia	1	1.50

9	Ecuador	11	16.50	19	Uzbekistan	1	0.75
10	India	10	15.00	Total		407	700.15

Source : China Wind Energy Association/CWEA, 2013.

4. China's Policy on the Wind Power Electricity Generation

4.1. China has adopted a national energy policy

In China, the policy for developing wind power could not be divorced from a broader energy policy.⁵ In 2012, Chinese government publishes “China’s Energy Policy 2012”, a white paper outlining the pathways of energy development in the coming years. It claims that China’s energy development still faces some significant challenges. For example, “fossil energy resources have been exploited on a large scale, causing a certain amount of damage to the eco-environment” (see “China’s Energy Policy”, 2012). China should improve energy efficiency, energy security and reduce GHS emission mainly through scientific technological and system innovation as well as the further development of new and renewable energy resources and promotion of the clean efficient development of utilization of fossil energy resources. The white paper set a target for the renewable energy which should achieve 11.4 % of total primary energy consumption by 2015 and 15 % for 2020.

As one of the most significant renewable energy resources, the wind power played a key role in meeting the national target. Under the “Twelfth Five-Year Plan”(2011-2015),⁶ China should coordinate the development of onshore and offshore wind power resources. By 2015, the installed wind power electricity capacity will be 100 GW, of which 5 GW will be generated from offshore wind power resources.

4.2. Specific policy measures have been taken to achieve the target

4.2.1. The preferential price

Chinese government urged the national power grid corporations to buy all electricity generated by wind power under such price composition as: generating costs, investment and interest repay and reasonable profits. The power grid is asked to provide the nearest network connection for all electricity generated from wind power. When the price of wind power electricity is above the average electricity price, the power grid must share the excess costs across the whole grid system.

4.2.2. The price subsidy

From 2002, Chinese government begins to offer a special price support to the wind power generation. In the single year of 2002, almost one hundred thirty eight million yuan(16 million US dollars) is provided for the wind power generators and the total amount of price subsidy has risen to five thousand eight hundred and fifty million yuan(688 million US dollars), of which about two thousand and fifty million yuan(315 million US dollars) go to the wind power generators in the area of Inner Mongolia.

4.2.3. The tax privilege

At the moment, China’s wind power electricity generators are required to pay only 50 % of value-added tax (VAD). Furthermore, all wind power electricity generators enjoy an exemption of corporate income tax during the first three years of their operation. In the latter three years of operation, the corporate income tax rate for all wind power electricity generators is only 6.25 %, almost half of other firms who must pay 12.5 % of their revenue as income tax. Chinese makers of wind turbines, moreover, may enjoy more tariff preferences depending upon the size of wind turbines produced by them. For example, if a Chinese maker

⁵ China Energy Policy 2012, The Information Office of the State Council, the People’s Republic of China, October 2012, Beijing.

⁶ The Twelfth Five-Year Plan for National Economic and Social Development of China, The State Council of PRC, March 2011, Beijing.

produces wind turbines of over 1.2MW and it needs to import key materials or components for the production process, then it may enjoy refunding for these imported materials or components. However, if a Chinese maker produces bigger wind turbine, saying over 1.5MW, then the import duty on the key materials or components will be fully exempted.

4.2.4. The investment support

Since 1987, Chinese government has introduced loan interest initiative to boost the investment in the renewable energy projects in the rural areas. The central government and local government will share the obligations, with the former responsible for providing subsidy to the R&D projects, pilot demonstration projects, while the latter is responsible for supporting the promotion of use of solar and wind power.

4.2.5. The financial support on R&D

From 2008 to 2011, the Chinese government introduced several types of important financial subsidies and funds to stimulate the development of some key technologies for large wind turbines. For example, the government encourages the domestic wind power equipment makers to establish their own research and development centers focused on the development of independent core technologies. China begins to pay more attention to the capacity-building, especially the capacity of developing MW wind turbines.

5. The Challenges of China's Wind Power Generation

At the moment, the further development of wind power resources in China is facing many kinds of obstacles, of which some are rather serious. The lack of correct understanding and solving of these problems will impose a negative impact on the development of this sector, therefore causing the failure in meeting the national energy target.

5.1. The market distortion

The policy to boost wind power generation has brought some consequences. Since 2005, a large number of wind turbine makers have appeared in China. As a result, almost all makers find that they have to cope with the intense competition and in some cases the market environment is increasingly worsening. A report of China Venture shows that over 60 % of China's largest and stock market-listed wind turbine makers is facing great financial loss, meanwhile, the foreign invested firms such as Vestas, Suzon and Repower is losing their shares in Chinese domestic market(China Venture, 2012).

5.2. The grid connection and outlet

In 2012, the coal-based electricity took up almost 81 % of China's total electricity generation, followed by the hydropower generation by 16 % and nuclear power generation by 2 %. Other renewable energy represents about 1 percent. At the moment, the electricity pricing mechanism results in a reluctance of the power grid to buy more wind power generated electricity because: (a) when the wind power electricity price is the same as the price of coal-based power electricity, it will be rather hard for the power grid to make extra profits. (b) buying more wind power electricity means buying less electricity from other sources, especially coal-based power electricity. What makes things worse is that the power grid's loss is not compensated by the government. (c)the trans-regional outlet is a more serious problem than any issues noted above. The transmission of wind power electricity generated in Inner Mongolia, for instance, must use the power grid's networks of Liao Ning province. In this case, who will pay for the power grid's loss in Liao Ning province? Is it the central government or the local governments?

5.3. Can the subsidy policy be sustainable?

The present price subsidy for the wind power generation is mainly ensured by the state finance. In 2012, the size of such subsidy is 5,800 million yuan (900 US dollars).As mentioned above, the wind power generation business has developed very quickly since 2005 and by 2015 the total installed wind power electricity capacity will achieve 100 GW. Will the

central government be able to continue to undertake such big size of funds? By comparison, the US and EU use the revenue from tax on fossil energy to promote the development of renewable energy. So it is still uncertain whether the subsidy policy in China can be sustainable. In addition, the state financial support aiming at promoting wind power generation and the power grid got little financial support. As a result, the power grid lacks motivation to buy more wind power electricity.

5.4. Regulatory policy

Before 2011, the local government was authorized to examine and approve the wind power projects whose installed electricity capacity was below 50 MW. To avoid the strict examination from central government, many wind power projects under this ceiling sprang up all over the country. These small wind power generators compete for the limited resources of wind power farms and the competition for profitable wind power farms is particularly fierce. In 2011, National Bureau of Energy of China introduced a new policy, under which only the wind power generation projects that are covered by the state plan may be given financial subsidies (National Bureau of Energy of China, August 2011).

5.5. The unbalanced development of wind turbine makers

The policy to promote the quick development of wind power turbine producers in China, led to a serious market excess capacity. In 2011, the production of wind turbines was 30 GW while the installed capacity was only 16 GW, which means that there was about 50% of market excess capacity. Considering this, Ministry of Industry and Information Technology of China raised the threshold of market access for all wind power turbine makers. A recent study made by Deutsche Bank claims that if China continues to rapidly develop wind power in such a way, that by 2020 the unused electricity installed capacity of wind power will likely rise to 29 GW.⁷

5.6. The uneven regional distribution

In China, the wind power resources are mainly distributed in the inland and border areas but the electricity end-users are usually located in the coastal areas, especially the metropolis in the eastern part of the country. The network load of power grid in the inland areas is usually lower than that of coastal areas. So, it is important to accelerate the development of offshore wind power generation.

5.7. Uneven Capacities

China's production capacity of wind power electricity exceeds the installed capacity of wind power turbine. Furthermore, the pace of development of wind power generators is faster than the pace of grid-connection of wind power electricity. In 2012, the installed capacity reached 75.94 GW and the grid-connected wind power electricity was only 60.83 GW with an existing gap of 11.15 GW.

Conclusions

In short, China should do something to balance the development of wind power generation and the improvement of the power distribution system, which will be very important for the further development of domestic wind power resources. The way out of the dilemma is to take the following actions as soon as possible:

- a. China should review the regulatory policy and give a more strict examination procedure on the wind power projects;
- b. China should invest more in offshore wind power generation projects and change the overdependence of inland wind power resources;
- c. China should create a fair market environment so that the wind power electricity

⁷ Deutsche Bank, Prospect of China Wind and Photovoltaic Report 2012, Chinese Edition, Beijing, February 2012.

- operators can improve their profit-making capacity;
- d. China should raise the level of financial support for research and development in new wind power technologies;
 - e. China should increase investment in the grid so that the wind power electricity generators and the electricity distributors both can benefit from such investment.

References

- **CNPC Economics and Technology Research Institute**, 2013, *Research Report*, Beijing, April;
- **China Statistics Press**, 2013, *China Energy Statistical Yearbook 2012*, Beijing, March;
- **China Statistics Press**, 2012, *China Energy Statistics Yearbook 2011*, Beijing, March;
- **The Information Office of the State Council, the People's Republic of China**, 2012, *China Energy Policy 2012*, Beijing, October;
- **The State Council of PRC**, 2011, *The Twelfth Five-Year Plan for National Economic and Social Development of China*, Beijing, March;
- **Deutsche Bank**, 2012 *Prospect of China Wind and Photovoltaic Report 2012*, Chinese Edition, Beijing, February.

THE FISCAL FEDERALISM AND THE GOOD ECONOMIC GOVERNANCE IN EUROPEAN UNION*

Alina Ligia Dumitrescu¹

Abstract

The research objectives aim to analyze the advantages and the disadvantages of the fiscal federalism, in order to identify the model of economic governance that will increase the quality and efficiency in public intervention. The fiscal federalism could have an important impact on the economic and political level in EU, but mostly in member states, in order to obtain a better administration and more responsible governance for the resources allocation, income distribution and fiscal consolidation. Fiscal federalism can bring to Romania advantages towards accessing more European funds and achieving budgetary discipline, and the last but not the least for stimulating economic growth.

Keywords: *public economics, governance, federalism*

J.E.L. Classification: *H2, H11, H72, H6.*

Introduction

The integration of the new member states from Central and Eastern Europe have changed the whole architecture of the European Union, creating pressure for a deeper economic integration. In the context of the recent financial crisis, the EU member states have faced the difficult decisions of reducing budget deficits, mainly by cutting budget expenses to achieve fiscal consolidation. The National Bank of Romania's governor, Mugur Isărescu has recently emphasized: "the recent international crisis amplified the need for deep reforms of economic governance, both at European and global level". The opinion of the governor of the National Bank of Romania is that "a good economic governance in the EU can be achieved through five main pillars: fiscal discipline, economic surveillance, close coordination, solid legal framework for crisis management, strong institutions and regulations in decisions making process".²

The "EU Sustainable Development Strategy" analyzes and underlines that the goal of "good governance" is to promote the convergence of local, regional, national and global levels, in order to enhance their contribution to sustainable development. Five principles underlying the good governance are set out in the White Paper of the European Governance (COM 2001/428), namely: openness, participation, accountability, effectiveness and cohesion. Each principle is important and is the basis of democracy and the rule of law in member states, and they apply to all government levels: European, national, regional and local levels. Community governance principles are particularly important in order to respond to current challenges of the extended European Union.

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¹ Ph.D., Senior Researcher, Institute for World Economy, Romanian Academy, e-mail: alinaligia@yahoo.com

² Mugur Isărescu, Workshop on economic governance in UE, organized by NBR, Mediafax news agency, 2013

The governance encompasses a much broader scope and reflects the customs and rules by which a country authority is exercised. This includes the process of selection, monitoring and replacement of the governments, the government's ability to formulate responsibly and to implement effectively sustainable public policies and the level of development of the public institutions that govern economic and social life and their interaction (World Bank, 2012).³

The economic and financial crisis has revealed a number of weaknesses in the economic governance of the EU Economic and Monetary Union. The cornerstone is the new set of rules on strengthening EU economic governance. According to the European Commission, the four main components of the „the economic governance“, are the following:

1. Stronger preventive action by strengthening the Stability and Growth Pact and deeper fiscal coordination;
2. Corrective measures strengthened by reinforced Stability and Growth Pact;
3. Minimum requirements for the national budgets to be consistent with the minimum standards of quality and covers all levels of government;
4. The prevention and the correction of the macroeconomic imbalances and the stimulation of the competitiveness are essential factors. New "macroeconomic imbalance procedure" broadens the EU economic governance and the surveillance trends include macroeconomic developments.

The Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (known as the "fiscal compact"), which entered into force on 1 January 2013, was an important step towards ensuring good economic governance of the EU. The Treaty specifically states the main objective of strengthening the economic pillar of the Economic and Monetary Union by adopting a set of rules, which aim to foster budgetary discipline through a fiscal compact, strengthen economic policy coordination and improving governance in the Euro zone, thus supporting European Union's objectives for sustainable growth, employment, competitiveness and social cohesion.⁴

1. Defining the concept of fiscal federalism: advantages versus disadvantages

In his "Essay on Fiscal Federalism", Wallace E. Oates considers the fiscal federalism as a form of fiscal decentralization and as a means of improving public sector performance. Federalism focuses on the relationship between the central government and national governments. The classical theory of fiscal federalism is concerned to establish a framework for the various forms of government functions and to create the instruments to perform these functions (Oates, 1999).

Later, Wallace E. Oates (2002) questions the clarity of terminology "fiscal federalism". Thus, Oates (2002) shows that for those who are not economists, the term suggests a rather narrow area of fiscal relations (or purely financial) between different levels of government. Nevertheless, Oates's view on fiscal federalism is that the area of application is much broader than the fiscal one, and focuses on the roles of the different levels of government, and includes both the fiscal and regulatory functions and the purely political governance tools. Therefore, Oates (2002) defines the fiscal federalism as "multi-level governance economy".

It is noteworthy that the multi-level governance has been developed in many theoretical studies of the EU policies and then expanded in the decision making process at EU level. The multi-level governance is the typical model of European governance and the

³ World Bank, <http://info.worldbank.org/governance/wgi/index.asp>

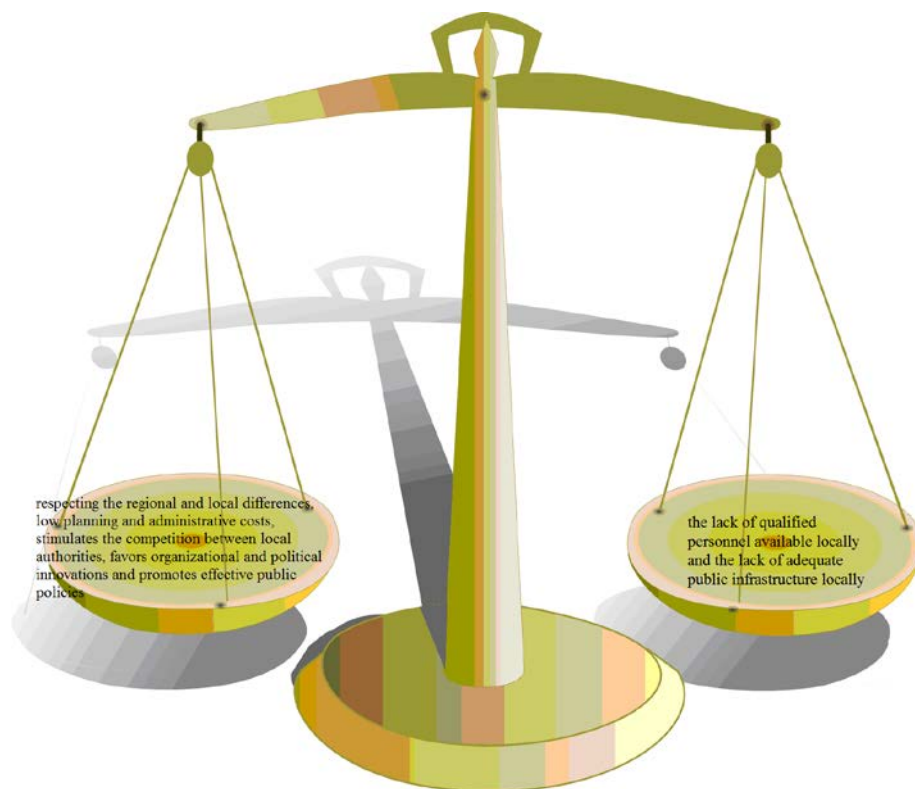
⁴ <http://www.european-council.europa.eu/home-page/highlights/fiscal-compact-enters-into-force-on-1-january-2013>

most appropriate to European realities of contemporary society, considered by many experts. The multi-level governance framework bases on a clear understanding of the role of decision-making process and the complex interactions of all actors in the political governance and focuses on power relations between different levels of government in the EU.

Chanchal Kumar Sharma (2004) distinguishes and clarifies that while the fiscal federalism constitutes a set of guiding principles, a guiding concept that helps in designing financial relations between both national and local levels of the state, on the other hand fiscal decentralization means the application of these principles. Subsequently, Sharma (2011) points out the fiscal federalism complexity and includes in his analysis both the vertical fiscal and the horizontal relations. In his opinion, the areas closely related to horizontal fiscal relations are the regional imbalances and the competition. Similarly, the issues related to vertical fiscal relations show the fiscal imbalance "between the two levels of government, central and local authorities, respectively".

According to the macroeconomics theory, fiscal federalism can be effective in solving the problems that governments face today, such as: income distribution, resource allocation, and economic stability. Due to its flexibility the central government can foster the economic stability and the income distribution, but the allocation of resources should be the responsibility of the local or regional governments. However, as regions and cities are not equal in their income, it is necessary the intervention of central government. The benefits of the fiscal decentralization are the following: respecting the regional and local differences, low planning and administrative costs, stimulation of the competition between local authorities, encouragement of organizational and political innovations and promotion of effective public policies, because the citizens have more influence locally. However, the disadvantages of fiscal federalism are the lack of qualified personnel available locally and the lack of adequate public infrastructure locally (Encyclopedia Britannica).

Figure 1: The advantages versus disadvantages of fiscal federalism



Professor David A. Super (2005) states that relations between the central and local taxes and the public spending programs are becoming increasingly controversial, and the fiscal federalism, a concept designed to divide the regulatory authority between the levels of government, is facing issues of fiscal cooperation. Some financing programs even offer incentives for states to follow the central political leadership, and in other states the central government assumes financial responsibility because of its superior fiscal capacity.

Super (2005) points out that a number of fiscal federalism vulnerabilities are related to either the consistently decrease of the impact of macroeconomic policies of the government to stimulate the economy expansion in periods of recession, or inadequate local funding for the social programs. Consequently, Super (2005) in his article „Rethinking fiscal federalism", criticizes the recent initiatives of decentralization of the fiscal responsibility for some types of functions such as the finance of the social protection programs. The author asks the countries to update their fiscal rules to eliminate inappropriate solutions to business cycle phases and to equip themselves with appropriate fiscal instruments for carrying out the duties of collecting taxes, for establishing priorities and for allocating resources efficiently.

2. Fiscal Federalism in the European Union

Oates (2002) points out that fiscal federalism explores the assignment of functions to different levels of government, and the design of the tax system and intergovernmental grants. Oates (2002) shows that in the EU, the assignment of the functions takes into account the Member States as modern nation states. However, at EU level it is required a strong central government with expanded monetary, fiscal and regulatory powers. Under these circumstances, Oates notes critically that these developments do not seem to fit very well with some elements of an „emerging confederation", which represent the European Union.

Oates (2002) relates to Picciotto and Weisner (1998), which showed that in addition to an appropriate division of functions between the different levels of government, providing a high level of performance of the public sector, it is needed the design and the establishment of a set of fiscal institutions and regulators. This can provide the right incentives to implement various types of public decisions. In addition, Oates (2002) accepts McKinnon's idea (1997), that it is necessary to have "precise budgetary constraints" at all levels of government, especially at decentralized level. Furthermore, Oates (2002) criticizes a number of worldwide attempts of fiscal decentralization, which have often been affected by central fiscal institutions, that have provided effective fiscal bailouts for their politicians from the regional and local level.

In short, according to Oates (2002), the fiscal decentralization cannot be achieved simply by allocating funds to the existing or newly formed, regional and local authorities but through appropriate procedures and institutions that should provide fiscal discipline in a way, that encourages effective budgetary decisions.

Sbragia (2004) states that for the review of "the federal characteristics of Union" the researchers focus on the institutions and areas of policy which relate to the former first pillar of the EU, which included: the Common Agricultural Policy, the customs union and the internal market, the competition policy and the state subsidies, the structural policy, the commercial policy, the Economic and Monetary Union, the European citizenship, the education and culture, the research and environment, the trans-European networks, the health, the consumer protection, the social policy, the Common Immigration Policy, the asylum policy, the border protection.

On the other hand, the former second Pillar, which concerned the common foreign and security policy, and the former third Pillar, which covered police and judicial cooperation

in criminal matters, showed the characteristics of a confederation based on intergovernmental principles. Therefore, Sbragia (2004) sees the EU as a "semi federal" political entity. In his view, the existence of a common trade on policy and a monetary policy underpin the argument that the development of the European Union may be compared with the type of existing federations and *post Maastricht EU has developed into a species of a federal state*.

According to the views of Boerzel & Hosli (2002), the economic theory of federalism, and more specifically of the fiscal federalism, has been promoted the useful theoretical concepts in order to evaluate the allocation of policy competences at different levels of government, and the final purpose of this approach is to determine a normative-analytical "optimum ". The optimal structure of the public sector concerns the allocation of competences and fiscal powers at different levels of government, effectively. Under these approaches, there seems to be a consensus that the EU macroeconomic stabilization and distribution functions perform better at the central level, but the provision of the public goods is generally more effective at other levels of government.

The approach of the political aspects of federalism is based on the economic reasoning of the efficient allocation of political powers between different levels of government. From the politico-economic analysis, it appears that not only the efficiency considerations, but also by political factors such as electoral dynamics determine the degree of centralization and fiscal decentralization. Moreover, in recent literature, are clear references to compromise between the economic efficiency and the political participation and the last, but not the least, the political representation issues and balancing the territorial and functional interests. Therefore, the most profitable approach is to combine economic with the political reasoning to the study of federalism, which can be helpful to analyze the current system of multi- level governance in the EU (Boerzel & Hosli, 2002).

3. The role of federalism as main instrument of the good governance

Valentin Lazea, chief economist of the National Bank of Romania, believes that fiscal federalism, highlighted by the Treaty on Stability and Coordination in the Economic and Monetary Union, will bring to Romania three advantages: the quasi-free European funds, the monetary discipline and the maximization of the projection of a small economy on global level.⁵

Ferrara (2010) points out that the EU institutional structure influences the behavior of administrators at EU level and that of the national and regional authorities, the costs and benefits of the regulations, respectively the expenses and the revenues of the public service providers. According to Ferrara (2010), the first justification of a need to create an institution links closely to its ability to spend the funds allocated. Secondly, at EU level the cohesion policy is planned multi-annually, but the EU budget is made and approved on an annual basis, given that the funds are assigned for every Member State for each year of the planning period. In case of the existence of the multiple levels of government, it increases the possibility of misallocation, given that both the national government level and the regional level may overestimate their needs only to receive a larger share of European funds. Subsequently, the mismanagement of the funds allocated inefficiently, can subsequently affect the decisions of the EU for the future allocation of funds. This has often led to a situation where some Member States were net beneficiaries of EU funds. Under these circumstances, it is not enough to apply the principles of fiscal federalism and make the best use of the European funds, what it counts more is the quality of the governance of national and local authorities, which have to use the expertise of their employees and other specialists

⁵ Valentin Lazea (2012), Declaration from a scientific debate on EU Fiscal Treaty, organized by the Romanian Central Bank.

for evaluating and planning properly the projects funded by EU, and to effectively manage and spend the allocated funds. In this sense, we may say that attracting and management of the EU funds should be based on good multi-level governance at all levels: EU, Member States, regions, local authorities.

Promoting the fiscal federalism as a form of fiscal decentralization can clearly bring benefits in terms of the public policy optimization. A corollary of the theory of fiscal federalism is that decentralization is likely to encourage constantly the efficiency through increased competition between the local authorities (King, 1984). In this regard, many scholars regard the decentralization as a paradigm for complex development and stimulating economic growth.

Many analysts see the decentralization, of any economic and social sector, as an answer to the problems of the centralized systems. Government decentralization, which is the most studied subject, is regarded as a solution to problems such as: the economic decline, the government's inability to fund public services and to the decline in the performance of overloaded services, the weak legitimacy of politicians in face of public opinion and the global pressures on countries with inefficient systems (Holger, 2007). Government decentralization refers to the restructuring or the reorganization of the authority, so that it will prevail a system of co-responsibility between institutions involved in governance at the central, regional and local levels, in accordance with the principle of subsidiarity, thus increasing the overall quality and effectiveness of the governance, while augmenting the authority and capacity of the sub-national levels (UNDP, 1999).

Of all the components of decentralization, the fiscal component has a special significance because the regulation of intergovernmental fiscal relations can find the right balance between the different objectives at each level and may resolve tensions between them (Sharma, 2005). Chanchal Kumar Sharma (2005) notes that fiscal decentralization success depends on the design of the used instruments. These include designing a mix of economic, financial and administrative policies, adequate sequencing and timing, providing a sustained pace of tax reform, balancing contrasting forces of centralization and decentralization. There is no single answer to the complex problems of decentralization and that is why is necessary to consider the specific conditions of each municipality.

Blöchliger & Vammalle (2012) pointed out that fiscal federalism and fiscal reform is a mixture of structural reforms, including fiscal consolidation and reform of the public administration. In their view, the fiscal reform has a number of features:

- Major tax reforms should be made by national governments and local authorities, rather than by interest groups that are outside the public sphere. As a result, the whole economy and society should benefit from the tax reforms, but in reality, the costs and benefits are unevenly distributed, and some individuals and groups may be the main payers, especially on short term.

- It is necessary to evaluate the impact of the fiscal relations reforms, especially on short term. The governments and the administrations are often required to quantify the short-term effects with high accuracy and the winners and losers of these measures, in order to have the exact idea of how the fiscal reforms, intergovernmental grants or tax rules affect certain categories of population and/or companies.

- Fiscal federalism reforms tend to be a “zero sum game” in the short term, if one level of government will lose and the other will win. Asymmetry between winners and losers in the reform process and the uncertainty about the size and distribution of future benefits could weaken the support for fiscal reform.

According to OECD experts, the fiscal consolidation plans have been an important step towards the identification of the areas of savings and reduction of the government spending, but did not go far enough for a number of countries to achieve fiscal sustainability.

Policy makers face a real dilemma when designing and implementing such plans, so while there is broad support for fiscal consolidation, the resistance occurs when proposing specific expenses cuts or revenue increases by tax growth. While health care spends a large portion of the government resources, the reform in this area cannot generate enough savings to balance public budgets. On the other hand, the infrastructure is a relatively small part of the government spending, but many countries are considering this in spending cuts. While protecting the education field from the expenses cuts may be important to ensure the future development of any country, the extended need for fiscal consolidation makes urgently necessary the reductions in some countries.

A strategic approach can help governments to identify when and where is necessary to have fiscal reforms. The “strategic perspective” is the ability to understand and to balance the government values, the social preferences, the current and future costs and benefits, as well as the expertise and the analysis, and to use this knowledge to plan coherently, to define the objectives, to make decisions and to determine priorities. “Strategic perspective” bases on the risk assessment and management, and incorporates decisions based on clear evidence of the policy development and implementation (OECD, 2011b)

Conclusions

The federalism is as a solution to many theorists for institutional innovation, efficiency, freedom, local autonomy, but still allows distortions in subunits (regions), in apparent conflict with the central normative egalitarianism (Follesdal, 2001). The fiscal federalism may affect the intensification of the inequalities in the regional development, due to differences in the tax collection, the fundraising processes and the management of financial resources.

The practical lesson is that a system with several levels of public finances requires a form of vertical transfer from the federal government to the poor regions/states, and a form of horizontal transfer from the rich regions/states to the poor ones (Montana, 2013). In Montani's (2013) opinion the European fiscal deficit is one of the characteristics of European democratic deficit and is impossible to escape from the fiscal deficit, without getting rid of the second and vice versa. This means that in order to overcome the European fiscal deficit, is required a political struggle for full political integration of all member states.

In the study entitled "Europe for Growth: For a Radical Change in the EU", Haug, Lamassoure & Verhofstadt (2011), examine the shortcomings of the EU budget and the crucial issue of its size. The authors underline that the EU budget amounts to 1% of the gross national income, which is an amount that has remained modest and stable in the past decade, although the scope of its activities has expanded considerably in the recent years. In the year 2011, it was set at 126.5 billion Euros in payments (141 billion Euros in commitments).

EU could have a bigger federal budget if the European states and their leaders are able to convince people that some public goods (balanced growth, full employment, green economy, security) can be provided by the federal government at a smaller costs, than paying for the same public goods (or the illusion of such public goods) provided by their national governments (Haug, Lamassoure & Verhofstadt, 2011). A fiscal federal system at EU level in the form of fiscal union can reduce the average tax burden of European citizens.

The mentioned above study findings refer to the potential economies of its member states and the EU, which could benefit from simplification of the EU funds procedures, which are currently scattered in different instruments and/or formulas, as well from a greater synergy between the European and national policies and budgets. The authors showed that during the crisis, characterized by a scarcity of the financial resources, there is an urgent need to coordinate the economic recovery of the EU member states and to create incentives for significant investments. These will sustain the economic growth, which is very necessary to

meet emerging needs in the EU new member states in order to meet the challenges of the future.

Consequently, "the good economic governance" has two major components: a good management of the existing financial resources at central and local levels, and the promotion of the sustained measures in order to identify the new funding, the new budget revenues, through enhancing the investments, the business environment and the economic growth.

References

- **Boerzel, T. & Hosli, M.**, 2002, *Brussels between Bern and Berlin: Comparative Federalism meets the European Union*. Working Paper Political Sciences 2/2002, Universitaea Vrije, Amsterdam, ISSN 1569- 3546.
- **Blöchliger, H. & Vammalle, C.**, 2012, *Reforming Fiscal Federalism and Local Government: Beyond the Zero-Sum Game*, OECD Fiscal Federalism Studies, OECD Publishing, ISBN 978-92-64-09841-1
- **Claeys, P., Ramos, R. & Suriñach, J.**, 2008, *Fiscal sustainability across government tiers*. Springer-Verlag. IEEP (2008) 5:139–163.
- **Ferrara, A.**, 2010, *Cost-Benefit Analysis of Multi-Level Government: The Case of EU Cohesion Policy and US Federal Investment Policies*. Routledge Studies in the modern World Economy. London and New York.
- **Follesdal, A.** , 2001), *Federal Inequality Among Equals*, Arena Working Papers 01/8, Centre for European Studies, Faculty of Social Sciences. Oslo.
- **King, D.** (1984). *Fiscal Tiers: The Economics of Multilevel Government*. London: George Allen and Unwin.
- **Junghun, K. & Vammalle, C.** (2012). *Institutional and Financial Relations across Levels of Government*, OCDE Fiscal federalism Studies- KIPF, OECD Publishing, ISBN 978-92-64-16689-9.
- **Holger, D.** (2007). *School Decentralization in the Context of Globalizing Governance: International Comparison of Grassroots Responses*, Springer, p. 28-29, ISBN 1402047002, 9781402047008.
- **Haug, J., Lamassoure, A., Verhofstadt, G.** (2011). *Europe for growth: for a radical change in financing the EU.*, CEPS Paperbacks, ISBN 978-94-6138-085-2.
- **McKinnon, R.** (1997). *Market-Preserving Fiscal Federalism in the American Monetary Union* in M. Blejer and T. Ter-Minassian, eds., *Macroeconomic Dimensions of Public Finance: Essays in Honor of Vito Tanzi*. London: Routledge, 73-93.
- **Montani, G.** (2013). *Fiscal Federalism for a new Europe*. University Union of European Federalist. <http://www.federalists.eu/uef/news/fiscal-federalism-for-a-new-Europe>.
- **Oates, W.E.** (1999). *An Essay on Fiscal federalism*. Journal of economic Literature, 37(3):1120-49.
- **Oates, W.E.** (2002). *Fiscal Federalism and European Union: Some Reflections*. Conference "Il futuro dei sistemi di welfare nazionali tra integrazione europea e decentramento regionale, coordinamento, competizione, mobilità, Pavia Università.
- **Olsen, Johan, P.** (2000). *How, then, does one get there?*, An institutionalist response to Herr Fischer's vision of a European Federation Arena Working Papers 00/22. Centre for European Studies, Faculty of Social Sciences, Oslo.
- **Picciotto, R., and E. Wiesner**, eds. (1998). *Evaluation and Development: The Institutional Dimension*. Washington, D.C.: The World Bank.
- **Sharma, Chanchal K.** (2005). When Does decentralization deliver? The Dilemma of Design. *South Asian Journal of Socio-Political Studies* 6 (1):38-45, 2005a.
- **Sharma, Chanchal K.** (2005). The Federal Approach to Fiscal Decentralization: Conceptual Contours for Policy Makers'. *Loyola Journal of Social Sciences*, XIX(2):169-88.
- **Sharma, Chanchal K.** (2011). Beyond Gaps and Imbalances: re-structuring the debate on intergovernmental fiscal relations. *Public Administration*. Vol. 90.

- **Super, David, A.** (2005). Rethinking Fiscal Federalism. *Harvard Law Review*, v. 118, no. 8, iunie 2005, p. 2544-2652.
- **Sbragia, Alberta** (2004). *The Future of Federalism in the European Union*. European Community Studies Association Canada (ECSA-C) 2004, Biennial Conference "A Constitution for Europe? Governance and Policy Making in the European Union". Montreal.
- **IMF** (1997). *Good governance, IMF's role*. Washington, D.C: International Monetary Fund Publication Services, SBN 1-55775-690-2.
- **IMF** (2007). *Manual on Fiscal Transparency*. Washington DC, Glossary
- **OCDE** (2011a.), *Making the Most of Public Investment in a Tight Fiscal Environment: Multi-level Governance Lessons from the Crisis*, Paris: OECD Publishing, <http://dx.doi.org/10.1787/9789264114470>
- **OCDE** (2011b.), *Fiscal Consolidation: The Need for Evidence- Based Decision Making*, in *Government at a Glance 2011*. Paris: OECD Publishing, http://dx.doi.org/10.1787/gov_glance-2011-6-en
- **United Nations Development Program** (1999). *Decentralization: A Sampling of Definitions*, p. 2, 16, 26.

Web sites

- <http://www.britannica.com>
- EU, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=com:2001:0428:fin:en:pdf>
- World Bank, <http://info.worldbank.org/governance/wgi/index.asp>
- UN, <http://www.un.org/en/globalissues/governance>
- UN, <http://www.unescap.org/pdd/prs/ProjectActivities/Ongoing/gg/governance.asp>

COMMON AGRICULTURAL POLICY – THE MAIN DRIVER OF SUSTAINABLE RURAL DEVELOPMENT IN EUROPEAN UNION

Andreea Drăgoi¹
Cristina Bâlgăr²

Abstract

Being one of the oldest common policies, common agricultural policy (CAP) has undergone several reforms being remodelled as "the project of a united Europe" was enriched with new meanings. In this context, it should be noted that, in recent years, CAP has been reshaped by a major reform that has set new goals and ways of achieving them under the framework of "Europe 2020" Strategy. Our paper aims to highlight that through the last transformation, CAP has evolved from a policy with a strong degree of interventionism, to a policy that supports rural development, preserving the environment and the competitiveness of European agriculture.

Keywords: *Common Agricultural Policy, rural development, competitiveness, agriculture.*

J.E.L. Classification: *Q, R, Q1, Q10, Q18, R51.*

Introduction

Is the Common Agricultural Policy still necessary in the current EU financing context?

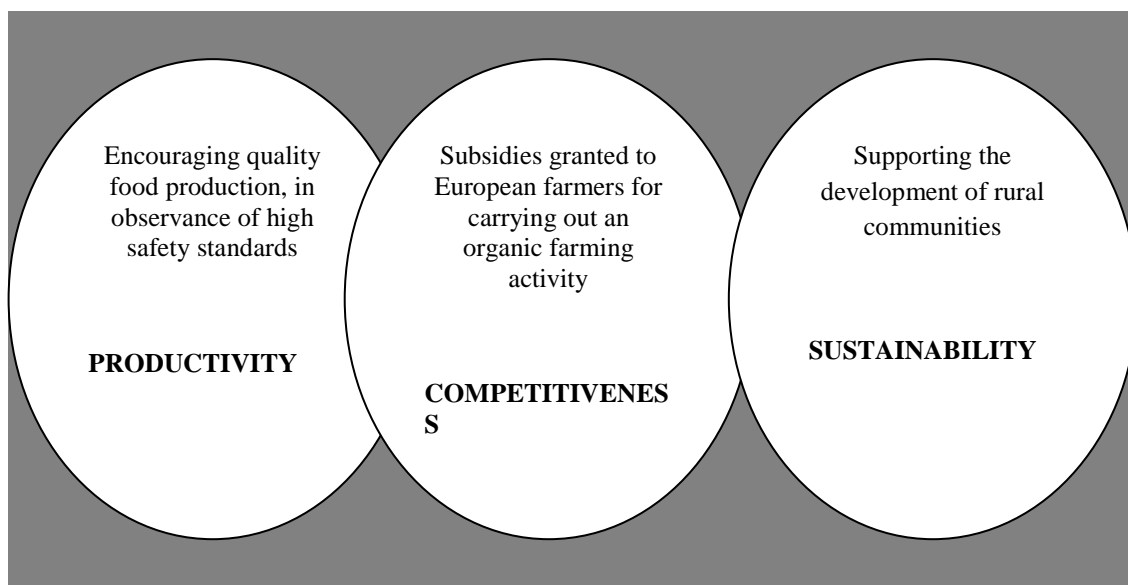
It must be specified that the term "common policy" reflects one of defining features of the CAP, namely that for around 90% of the agricultural production, the decision no longer belongs to the Member States, but to the European Union. There are two reasons that led to the emergence of this policy. The first was the need to "streamline" European agricultural product trade and, especially, the desire of exporting countries to secure the placement of their products. The second reason is a certain fear of a situation in which the workforce released from agriculture as a result of mechanisation could not be simultaneously absorbed by the other sectors of the economy, in which case agricultural income would decrease even further when compared to industrial incomes.

Being one of the most controversial and reformed European policies, the Common Agricultural Policy (CAP) has changed significantly since the 1950s (the year when the foundations of its functioning were laid) up to the present, becoming from a policy that was based on the subsidizing of production and the protection of domestic markets against non-European producers, a policy where subsidies are no longer aimed at stimulating production, favouring instead rural development and environmental protection (see Figure 1).

Figure 1: Major objectives of the Common Agricultural Policy in the European financing context

¹ Ph. D., Senior Researcher with the Institute for World Economy, Romanian Academy, Bucharest, Romania, e-mail: andre.emanuela@gmail.com.

² Ph. D. (c), Senior Researcher with the Institute for World Economy, Romanian Academy, Bucharest, Romania, e-mail: anacristinabalgarg@gmail.com.



Source: Own synthesis based on scientific literature

1. The CAP reform – objectives and ways of implementation

Some critics of the CAP³ argue that it is a “costly luxury” for the European Union, considering that the support given to the Community agricultural production represents interventionism that stands in the way of achieving the true competitiveness of this sector.

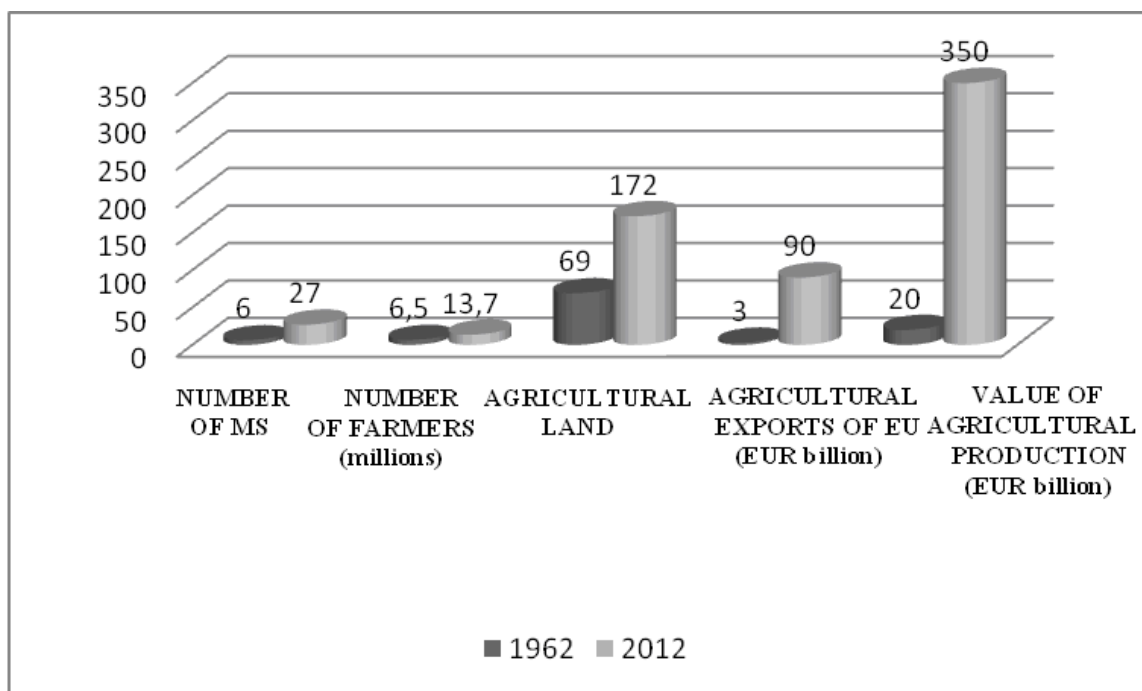
Under these circumstances, having regard to the difficult economic period faced by the European Union at present, several analysts raised the question: is the CAP actually necessary and, moreover, can it guarantee a sustainable development of the rural areas in the EU (as this policy proposes as its declared objective in its most recent reform)?

In order to answer this question, it must be specified that the initial objectives of the CAP also included the modernisation of the villages and the increase of the living standard of the rural population. However, the focus on the subsidies and on production reduced the rural environment – with all its social, cultural and economic aspects – to its agricultural-economic dimension. In other words, the CAP placed too much focus on subsidising agriculture and too little focus on stimulating rural development. This is in fact the reason why the 2011 reform attempted to shift the focus towards rural development.

A short assessment of the CAP in facts and figures shows that, although its objectives have not always been attained to a satisfactory degree, there is an ongoing and undoubted progress in terms of the CAP contribution to the increase of the Community agricultural production (see Figure 2).

Figure 2: The evolution of the most important figures in the agricultural field at EU level as a whole

³ Their opinions were expressed in the Community Report entitled *The CAP in perspective: from market intervention to policy innovation, Agricultural Policy Perspectives*, published in 2011.



Source: European Commission - DG AGRICULTURE, 2012.

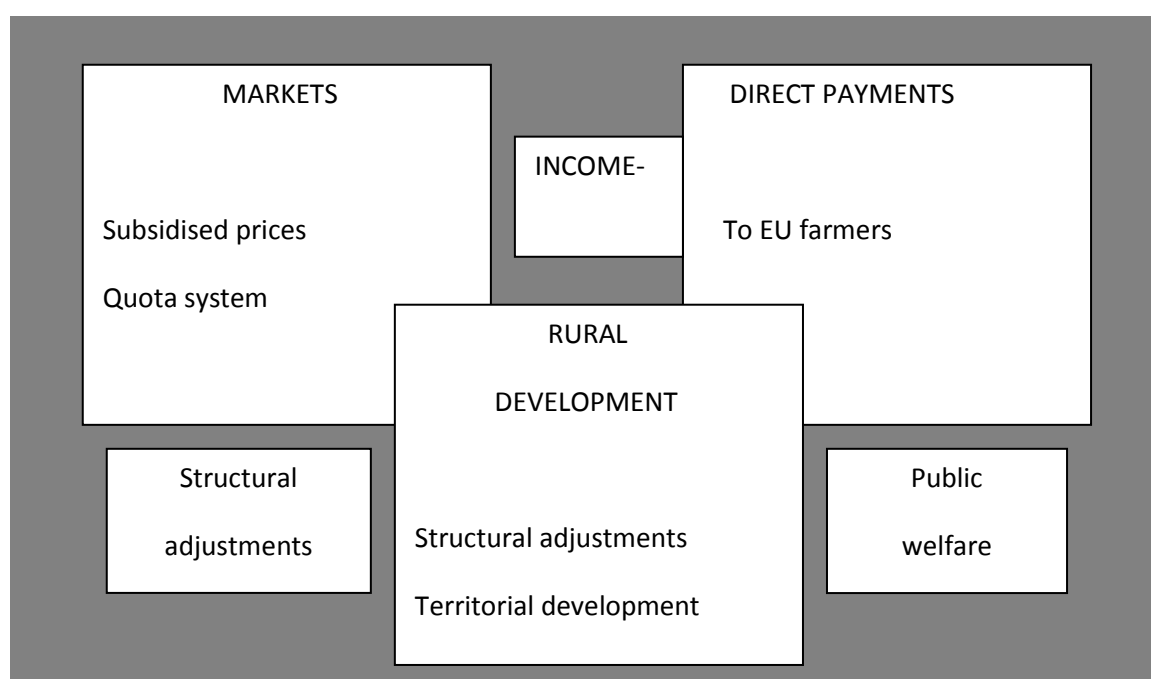
As regards rural development (with the application of the 2nd Pillar – modernisation of villages and of agriculture, the development of economic branches alternative to agriculture, the protection of the environment and of the rural landscape, since 1999), it was found that a perfectly unitary European policy was no longer possible. The granting of equal subsidies for agriculture was a simple process, but the modernisation of villages and the development of alternative branches needed different measures, adapted to the specific situation of each Member State. As such, Member States were given more freedom in adopting the programmes for the modernisation of the rural area.

On 12 October 2011, the European Commission adopted a proposal for the reform of the rural development policy with major implications for the future directions of evolution of the CAP⁴. Based on the European Commission's proposal, which provides for common regulations for all the funds operating under a single strategic framework, the 2nd Pillar of the CAP must collaborate in a coordinated and complementary manner with both the 1st Pillar and with other EU funds (especially the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund and the European Maritime and Fisheries Fund (EMFF)). The funds are managed within a Common Strategic Framework (CSF) at EU level, which is to be transposed into national partnership agreements including common objectives and rules regarding their operation. By establishing common rules for all the funds operating within a common strategic framework, the projects will become easier to access by the beneficiaries and easier to monitor by the local authorities. The Common Agricultural Policy continues to evolve, and its necessity and efficiency are all the more visible as agriculture may represent one of the drivers of EU economic development. The CAP regulations are the framework within which the EU rural area may develop in a harmonised and balanced manner, thus avoiding excessive production, as well as an exclusively extensive method of production. At present, we consider that the three fundamental pillars for the future

⁴ European Commission – Proposal of Regulation of the European Parliament and of the Council on the support for rural development, 12.10.2011, Brussels.

of the CAP are: market measures, direct payments and rural development, as shown below in Figure 3.

Figure 3: The CAP Pillars and their interrelations



Source: Own synthesis based on scientific literature

As stated in the specialised literature (Datar, 2013), in order for the Member States to successfully meet the general objectives of the CAP, the measures applied under the national rural development strategies must take into account the interrelation between these three areas. While the direct payment system ensures a minimum income level for the farmers in the Community, and the market intervention measures regulate the prices of certain products, the rural development measures contribute to the increase of the welfare of the population and to the enabling of the structural adjustment of farms and agricultural holdings.

Any change operated in one of the abovementioned areas must also take into account the impact on the related areas, minimising the negative consequences and the potential distortion of competitiveness. As such, the CAP may have a decisive contribution to the establishment of national and regional priorities regarding specific issues of the agri-food chain or the situation of agriculture and forestry in terms of the environment or climate or regarding specific issues in the rural areas, such as the peri-urban pressure, unemployment or low demographic density.

Certain analysts (Hannes, 2004) consider that EU enlargement has considerably modified the “rural map” of the Community and, as a result, fifty years since its establishment, the CAP must face more complex challenges and offer solutions that are adaptable to the specificity of each Member States.

Consequently, CAP has been designed and operates as a complex system of Community regulations and financing programmes, so that the EU resources allocated to rural development priorities or to the agricultural sector may provide solutions according to the strengths, weaknesses and possibilities of each Member State.

2. The new approach of the agricultural policy regarding rural development

At present, the Common Agricultural Policy faces a series of challenges that call for the adoption of strategic decisions for the long-term future of agriculture and rural areas in the EU. In order to be effective in facing these challenges, the CAP must operate in the context of healthy economic policies and of sustainable public finances which could contribute to the fulfilment of EU objectives. In this context, it must be noted that in the opinion of certain analysts (Espinosa, 2010), the Europe 2020 Strategy offered a new perspective for the CAP reform, with the main directions for development to focus on finding the most adequate solutions to the new economic, social and environmental problems faced by the EU at present, contributing at the same time to the sustainable development of the agricultural sector in the Community.

In the new European context, reshaped by the international economic crisis, the Common Agricultural Policy faces a series of challenges that have led to a resizing of the objectives and regulations on rural development and agriculture and, on the other hand, as a consequence of its harmonisation with the objectives of the Europe 2020 Strategy. Therefore, an ample CAP reform process was initiated at EU level, resulting in the adoption by the European Commission of the Communication entitled *Agricultural policy after 2013: greener, fairer, more competitive*.

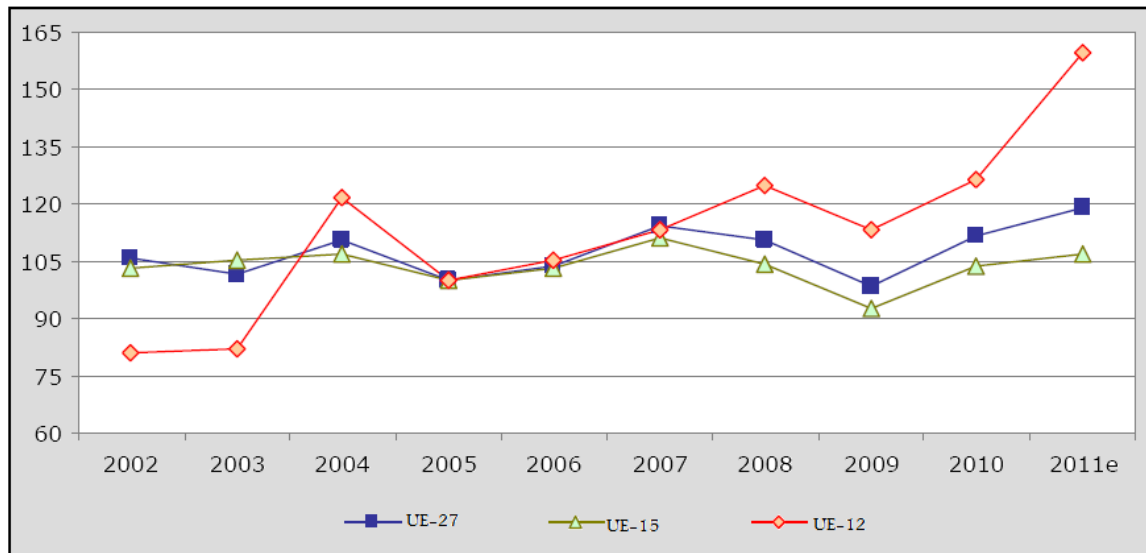
In the specialised literature (Matthews, 2012), it is considered that any significant reduction of agricultural activities in the European Union would have negative effects on economic growth, implicitly leading also to unemployment in the related sectors, especially in the agri-food production chain, which relies on the agricultural sector for obtaining high-quality, competitive and safe raw materials. In fact, it must be mentioned that at present, EU agriculture faces a much more competitive market, as world economy becomes ever more integrated and the trade system becomes more and more liberalised. According to the Community experts' forecasts, this trend will continue in the following years, and this is a challenge for EU agriculture but it also provides opportunities for the exporters of agri-food products. Therefore, it is important to increase the competitiveness and productivity of the EU agricultural sector.

Given that food demand at global level will continue to increase in the future, the European Union should be able to contribute to meeting this demand. As such, it is essential that EU agriculture maintain and improve its production capacity, while keeping the commitments undertaken by the EU with respect to international trade and the consistency of policies favouring development. A "strong" agricultural sector is vital for the food industry⁵ to remain an important part of EU economy and trade.

In this context, in our opinion, CAP development directions must also take into account the fact that, at present, EU agriculture faces the inherent difficulties of the aftermath of an economic crisis that has severely affected agricultural producers in the Community and the rural areas, by directly correlating them with the more ample macroeconomic developments that affected the cost of agricultural production. After a decade of stagnation, agricultural income decreased considerably in 2009, (by approximately 40% per work unit), the income per inhabitant in the rural areas being considerably lower (by approximately 50%) compared to urban areas (see Figure 4).

Figure 4: The evolution of agricultural incomes at European Union level as a whole between 2002 and 2011

⁵ Food industry represents 13.5% of the total of the employed workforce and 12.2% of the gross added value of the European processing industry.

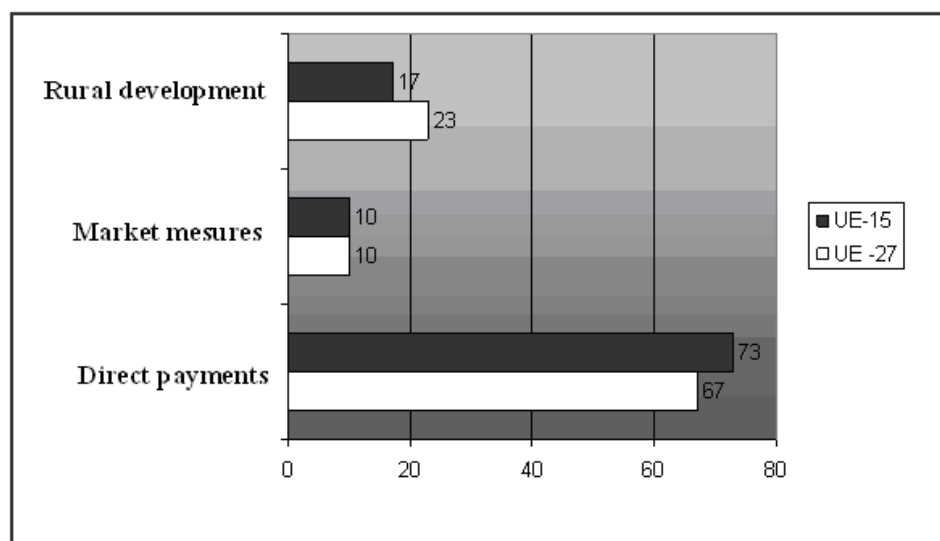


Source: Eurostat – *Economic accounts for agriculture, 2012*

Note: EU-15 designates the old EU Member States, and EU-12 designates the new Member States, including the countries that joined the Union in 2007, Romania and Bulgaria.

As shown by the chart above, the trend of incomes in agriculture was mainly an upward trend between 2002 and 2008, both in the older and in the newer Member States, but the onset of the international economic crisis led to their dramatic decrease in 2009, followed by a redress in 2010 – 2011. In this context, it must also be underlined that the Common Agricultural Policy contributed to the support of the incomes of EU farmers, through the direct payment system, representing a real support for European farmers affected by the collapse of the demand as a result of the effects of the international economic crisis. Between 2007 and 2010, the distribution of expenditure under the CAP supported this trend, which led to less funds being allocated to the rural development objective (see Figure 5). However, it has to be noted that once the “acute” phase of the crisis has been overcome, EU funds will have to be redirected with priority towards this latter objective, which may constitute a pillar for sustainable and socially inclusive growth, in accordance with the objectives of the Europe 2020 Strategy.

Figure 5: The distribution of expenditure under the Common Agricultural Policy in the period 2007-2011 (in % of the total funds allocated)



According to the data provided in the most recent Report of the European Agricultural Guarantee Fund⁶, published in 2012, in the EU budget, 83% of commitment funds are allocated to veterinary and phytosanitary measures under the policy area *Health and consumer protection*, and the rest is equally divided between expenditure for political strategy and coordination under the policy area *Agriculture and Rural Development* and for the fisheries market products, under the development area *Maritime Affairs and Fisheries*. According to the same Report, in the *Agriculture and Rural Development area*, the expenditure related to market measures amounted to EUR 3,334.1 million, and the expenditure related to direct support amounted to EUR 40,178 million. These Community statistics indicate that, at present, a large portion of the funds under the CAP are still mainly oriented towards the European agricultural sector, with a need to their being redirected towards a stronger support of the 2nd Pillar – Rural Development.

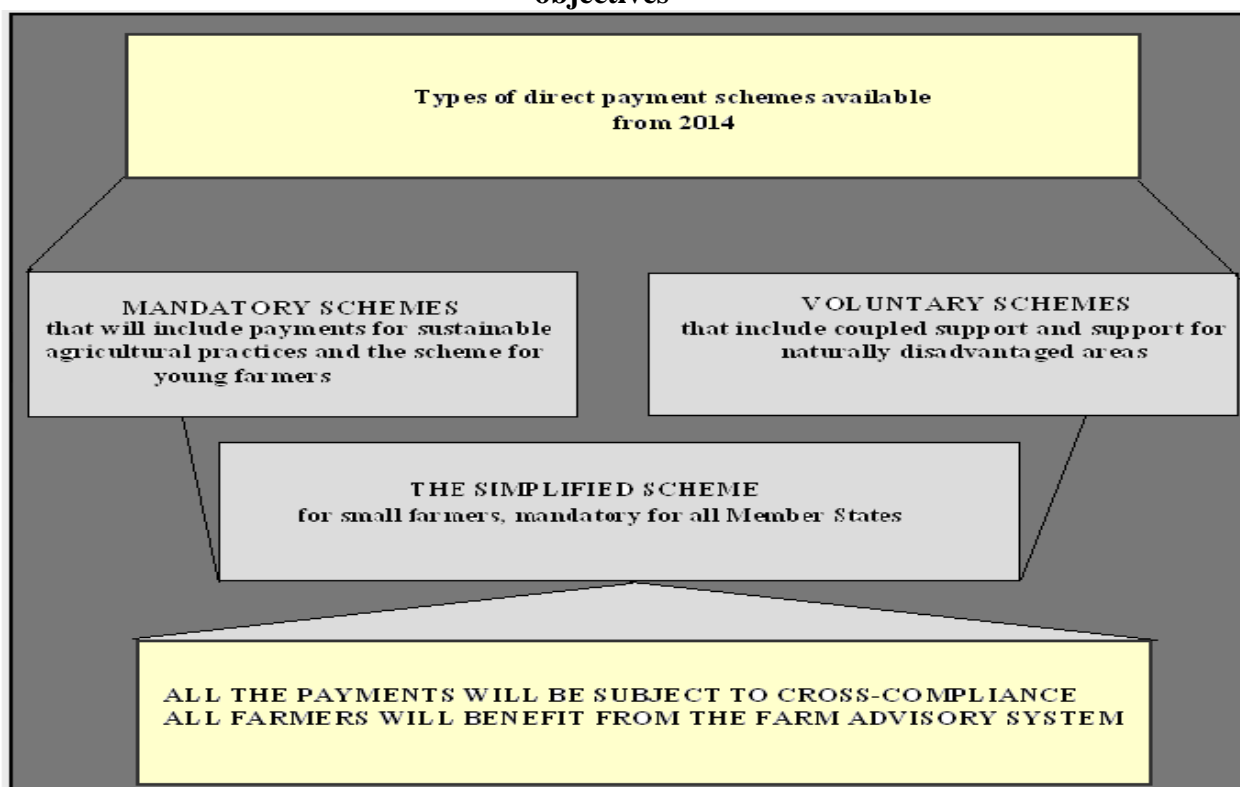
3. Financing of the competitive development of the European rural sector through the CAP: developments, trends

At present, in the specialised literature (Sassi, 2009), it is believed that an increasing number of rural areas have begun to be supported by factors outside agriculture, due to the diversification of their socio-economic structure.

However, in a large part of the EU, agriculture remains an essential driving force for rural development. The vitality and potential of many rural areas continue to be closely related to the existence of a competitive and dynamic agricultural sector, which is attractive for young farmers. This is characteristic especially for the predominantly rural areas, where the main sector comprises approximately 5% of the added value and 16% of the employed workforce. It also has to be noted that agriculture plays an important part in the rural areas due to the generation of related economic activities, in connection with the processing of products, tourism and trade (see Figure 6).

⁶ European Commission - *5th Financial Report from the Commission to the European Parliament and the Council on the European Agricultural Guarantee Fund*, Brussels, 2012.

Figure 6: Key-elements of the CAP reform in the context of the Europe 2020 Strategy objectives



Source: European Commission – *The CAP towards 2020: Meeting the food, natural resources and territorial challenges of the future*, Brussels 2010

Note: With the CAP reform, production support has been gradually eliminated and has been integrated in the single payment scheme, namely in the direct payment system available at present to European farmers. Certain types of support have however remained related to production, being called “coupled” support. Nevertheless, most aid is “decoupled” and granted within an income support scheme, without being related to production.

In accordance with the CAP reform proposal, in the post-2013 period, a significant part of the EU budget must continue to be allocated to agriculture, which is of strategic importance. As such, it is proposed that EUR 317.2 billion be allocated to the 1st Pillar and EUR 101.2 billion to the 2nd Pillar in 2014-2020, for the performance of the main activities under the CAP.

These funds will be supplemented by additional financing for research and innovation, food safety, and funds for the disadvantaged persons; there is also a fund of EUR 3.9 billion provided for emergency situations in the agricultural sector, while EUR 2.8 billion will be allocated to the European Globalisation Adjustment Fund, bringing the total budget to EUR 435.5 billion in the period 2014-2020.

Conclusions

As shown by the current development trends of the Community financing framework for the Common Agricultural Policy, the distribution of support for rural development will be based on objective criteria, with the less developed regions to continue to benefit from higher rates which will also be applied to measures such as those concerning the transfer of knowledge, producer groups and interregional cooperation across the EU.

Therefore, in order to answer the question referred to at the beginning of our analysis, it may be considered that the CAP is necessary for ensuring an upward trend of the economic development in the “rural Europe,” as agriculture will continue to occupy an important position in the future development of the EU, not only in terms of ensuring food security, preserving the environment and fostering the rural environment, but also in the face of new challenges, such as climate change, providing at the same time a fair living standard for farmers. At present, the rural areas in the EU cannot be considered to be uniform territorial entities. Many of them enjoy a relatively favourable situation in the EU, especially having regard to their physical proximity to the large urban centres, an advantage that they directly benefit from. Since in the current CAP vision for sustainable rural development agriculture is no longer the only “driver” of economic development for the rural areas, the rural development policy needs to be strongly oriented towards the growth of employment in activities carried out outside farms or in non-agricultural activities, taking however into account the need to involve farmers in the multi-sectoral local development strategies, and the efforts of Member States will have to be directed also towards non-agricultural investments and towards innovation and diversification activities, in order to create a prosperous rural economy.

References

- **Datar, John**, 2008, *Policy Vision for Sustainable Rural Economies in an Enlarged Europe*, in West-European Working Group Paper nr. 26, Brussels;
- **Espinosa, Elena**, 2010, *How to Reform the Common Agricultural Policy to Improve Agriculture's Contribution to the Europe 2020 Strategy*, Real Institute Elcano, October;
- **Hannes, Palang**, 2004, - *European Rural Landscapes: Persistence and Change in a Globalising Environment*, Kluwer Academic Publishers, Brussels;
- **Matthews, Alan**, 2012, *Post-2013 EU Common Agricultural Policy, Trade and Development: A Review of Legislative Proposals*, International Centre for Trade and Sustainable Development, Paper 39;
- **Sassi, Maria**, 2009, *Agricultural convergence and competitiveness in EU*, in *Economia e Diritto Agroalimentare*, Pavia Nr. 2;
- **European Commission**, 2010, *The CAP towards 2020: Meeting the food, natural resources and territorial challenges of the future*, Brussels;
- **European Commission**, 2011, *Proposal of Regulation of the European Parliament and of the Council on the support for rural development*, 12.10., Brussels;
- **European Commission**, 2011, *The CAP in perspective: from market intervention to policy innovation, Agricultural Policy Perspectives*;
- **European Commission**, 2012, *5th Financial Report from the Commission to the European Parliament and the Council on the European Agricultural Guarantee Fund*, Brussels;
- **Eurostat**, 2012, *Economic accounts for agriculture*.

TRADE PROMOTION APPROACHES TO STRENGTHEN THE INTERNATIONAL COMPETITIVENESS OF ENTERPRISES

Octavian-Liviu Olaru¹

Abstract

Starting from the concept of export promotion in the new world economic context, there are presented the role and attributions of Trade Promotion Organizations, institutional structures created by UNCTAD in cooperation with WTO, implemented in many countries all over the world, Romania included, with a logistic and methodological support on behalf of the initiating organizations.

Trade Promotion Organizations (TPO), governmental and non-governmental, are representing the main institutional link in the above mentioned field of activity, with a wide range of attributions in supplying the exporting companies with specialized services.

Keywords: *foreign trade promotion, TPO, efficiency, export.*

Introduction

International trade depends on a range of factors that may change in the future and influence not only the extent but also the nature and impact of trade.

Trade is principally driven by countries' production possibilities, which can be described, for instance, by technology and endowments of labour, capital and natural resources, the demand for traded goods and services (which depends on people's preferences and incomes), as well as trade costs, both geography and policy related.

A trend emphasized throughout a recent WTO report, with a major impact on other developments is the emergence of global supply chains. Countries and producers increasingly specialize in certain stages of production depending on their particular comparative advantage.

The need for firms to organize their supply chains across different countries has led to an increasing demand for regional agreements that cover more than preferential tariffs. The harmonization of standards and rules on investment, intellectual property and services has become a standard part of new trade agreements.

In order for international supply chains to operate smoothly, certain national policies need to be harmonized – or rendered mutually compatible – to facilitate business activities across borders. This generates a demand for deep forms of integration. Developed countries were the first to sign regional agreements aimed at providing rules to accommodate internationally fragmented production. With the expansion of international production sharing, developing countries too began to enter into deep integration agreements, especially at the regional level. Both North-South agreements (between developed and developing countries), such as the North American Free Trade Agreement or the Euro-Mediterranean agreements, and South-South agreements (between developing countries), mostly in Asia, include provisions that go beyond preferential tariff reductions.

Trade in services has grown faster than trade in goods over the last two decades, advances in information and communication technology enabling a rapid expansion of services trade. The share of services in both manufacturing firms' inputs and outputs has increased and the "frontier" between goods and services is increasingly blurred.

¹ Professor, Ph.D., Faculty of Economic Sciences, "Nicolae Titulescu" University, Bucharest, (e-mail: livolaru@yahoo.com).

Based on a study of the Swedish manufacturing sector, Kommerskollegium has identified a trend of the “servicification” of manufacturing. In particular, the study identifies two developments. First, it notes that purchases of services account for an increasing share of a manufactured product’s total cost. In other words, manufacturing companies are purchasing more and more services. Secondly, the study finds that services account for an increasing amount of manufacturing firms’ sales. Put differently, manufacturing firms are selling more and more services. According to Kommerskollegium, these developments mean that trade in services and trade in manufacturing are becoming more interdependent.

The extent to which countries will adjust to change and take advantage of trading opportunities depends in no small part on government commercial policy. In many areas, action needs to be taken at the national level in areas such as education policy, infrastructure investment, innovation incentives, legal certainty or social protection. In other areas, like international economic relationship promotion, joint action at the national and international level is required in order to coordinate regulatory approaches, mobilize political support and develop adequate resources.

The importance of international trade is widely recognized not only by the business sector, but also by governments. Governments all over the world have reviewed and streamlined their trade policies during the last decades. Significantly, efforts have gone beyond the commercial policy framework. Nearly all countries have adopted special trade promotion and development programmes. These programmes have focused on providing more efficient trade support services in areas such as trade information, financing, logistics, customs procedures and communications.

A recent survey issued by the International Trade Centre UNCTAD/WTO estimated that the budgets for public trade promotion programmes, alone, amount to an average order of magnitude of 0.1-0.2% of national exports per year. This is equivalent to global expenditure on trade promotion of some US\$ 18-20 billion for 2012. If one includes the budgets of non-commercial trade support services by non-governmental institutions such as chambers of commerce and industry associations, the amount would be significantly larger.

In spite of this considerable resource endowment of trade promotion programmes, these programmes need to be selective in terms of products, functions and/or markets. An equal distribution of trade promotion resources over all products, functions and markets would obviously not make sense, as resources would be spread too thinly to reach anywhere a critical mass.

1. Strategic Guidelines in Export Promotion Activity

Trade Promotion Organizations (TPOs) have a broad mandate to provide or coordinate trade support services in the above mentioned area.

Certain basic conditions must be present for a trade promotion organization (TPO) to be effective, no matter what form the organization takes. Studies on experiences of TPOs show that the following conditions should be present:

- The organization’s main role and field of action should be clearly defined commensurate with the authority, resources, and autonomy granted to the TPO. The definition will have an important influence on the structure of the organization.
- The organization should have a legal position within the overall governmental structure to provide it with the means and required authority to implement its task. There should be a close and logical relationship between the position and authority it is granted and the responsibilities it is assigned.
- The organization’s corporate purpose should be clearly stated in order to minimize or avoid any confusion about its aims and any duties unrelated to its main objectives.

- Adequate human and financial resources must be available. The technical nature of the TPO means that it should also be given the necessary freedom to manage its staff adequately, despite limits resulting from civil service regulations and practices.

According to analysis of statutes and other regulations that govern the creation and operation of TPOs in various countries around the world, their objectives are defined in two ways. One definition covers promotion and support of all export products. The second definition covers promotion and support of those products considered to be non-traditional, in order to diversify the export mix.

The organizational features of a TPO should be flexible enough to allow for several strategic options, because different strategies may be appropriate for different products and markets.

Their strategic options include the following:

- Market penetration is selling more of existing products to existing markets. This strategic option offers limited possibilities. Sales growth is often constrained by market growth. This strategic option would be appropriate when resources for promotion are limited, and when it might not be possible to expect more ambitious results.
- Market development is selling the existing range of products in new markets. This strategy may give more promising results compared to product development. However, it may block growth and diversification of the export supply, because it takes attention away from the possibilities of diversifying the export supply.
- Product development is the development of new products for existing markets. New products are developed based on current knowledge of the needs and preferences in existing markets and on the capabilities of the supplying country.
- Product and market development is the development of new products for new markets. This may be the most difficult strategy to follow, because it involves adapting products and having promotional activities in new foreign markets.

Certain factors will have a strong influence on the efficiency of any TPO, and they should be examined carefully. These factors include:

- Responsibilities and activities of each unit within the TPO affect efficiency. There should be a detailed methodology that clearly describes organizational functions and specifies areas of responsibility and scope of action for each division, department, and section. This should include clear job descriptions for all positions. The descriptions should specify the technical qualifications, including professional experience, required for each position.
- Adequate, effective mechanisms for co-ordination within the TPO and with other bodies in the public and private sectors should be established. Such coordinating mechanisms can be provided by management committees and similar units or working groups to deal with specific problems.

2. Relations of A TPO with the Business Community

The TPO should not work in isolation from the business community. A TPO must be ready to adjust the scope and nature of its services according to the requirements of the export sector.

Having representatives from the business sector on the coordination board of the TPO will improve relations between the TPO and the business community. In most cases, however, additional measures are needed, and the following recommendations can be considered:

- TPO staff concerned with manufacturers and exporters should maintain frequent contacts with them, and information obtained should be recorded systematically on standard forms. TPO staff should respond to all requests, in order to improve confidence in TPO-business relations.

- Working groups should be established to study, design and implement specific promotional programmes, and activities. Working groups should include key representatives from relevant sectors in ways that take their points of view into consideration.
- Industry advisory groups/committees should be established under the sponsorship of the TPO and act as a feedback mechanism to provide the TPO with inputs for implementing industry-specific promotional programme and activities. These committees should include key representatives from relevant sectors, and their points of view should be taken into consideration.
- The staff of the TPO should keep in close contact with export associations, sectoral groups and organizations and chambers of commerce and industry. Such contacts are the most effective channels of communication with the business sectors in many countries.
- The TPO should organize market and industry seminars to disseminate information as frequently as possible, in order to motivate the business sector towards greater involvement in the export trade.
- The TPO should have consultations, dialogues, and workshops with the business community to discuss external trade impediments affecting their exports to overseas markets. These views could be incorporated in lobbying representations and market access negotiations, either on a bilateral or multilateral basis.
- The TPO should also have periodic dialogues with the transportation and logistic sectors about ways to enhance the effectiveness of the trade administration system.

In summary, the TPO should act in response to the needs of the private sector when developing its interface with the world market.

3. Overview of TPO Functions

In practice, trade promotion activities are a function of several factors in any country. There is usually one central governmental export promotion body to provide the policy framework and mechanism for co-ordination and consultation among the various sectors or organizations involved in foreign trade. Such TPOs can specialize in a few key functions or perform a broad range of services. The type and extent of their activities depend on the resources available to them, such as the experience of the organization, the quality of its work force, its network of linkages and financial resources.

Typical TPO activities may be classified into four general categories:

- Identification of products and markets.
- Promotional activities abroad.
- Trade information services.
- Specialized support services.
- Preparing profiles on products and companies.

Identification of products and markets. A TPO has a significant role in laying the groundwork for an export promotion programme. The TPO can give assistance by doing the necessary studies to identify what products to promote and decide which markets offer the greatest opportunity for export growth. Moreover, the TPO could participate in designing and developing marketing strategies for specific sectors and products, incorporating into these strategies all recommended measures and actions for achieving export targets.

A useful and practical approach in this respect is to adopt the product-market framework for an export promotion programme. As the term suggests, each programme concentrates on a specific product or group of products. Activities are directed mainly at helping the specific sector or a selected group of companies to gain entry into certain markets.

The product-market framework means allocating resources to focused activities for maximum impact designed to achieve export targets. Three features of this approach are:

- Products are identified for the purpose of designing a marketing strategy for a specific sector, including all necessary action and support activities that help generate or increase exports.
- A programme based on the product-market framework can address specific concerns of the sector, particularly obstacles to export growth, and provide the bases for coordinated or co-operative actions, including joint export promotion and marketing activities.
- The programme can help individual companies to develop their own marketing strategies and programmes and to identify specific areas where support or assistance is required.

Planning and implementing a programme with a productmarket framework could be done by a central export coordinating body, although institutions and organizations from both the public and private sectors might also participate. The significant role of the TPO is to lay the groundwork in preparing the programme and to do the necessary studies to identify the products to be promoted in identified markets.

In many cases, a country does not have a clear idea of what products to promote in international markets. This leads to haphazard trade promotion efforts, often as a reaction to inquiries made by foreign buyers, with uncoordinated, ineffective export assistance. Identifying priority export products is necessary to maximize the impact of all activities and efforts aimed at achieving national export targets.

Promotional activities abroad. The main thrust of the export promotion and marketing efforts is to attract the attention of targeted markets abroad and to project the desired image for the country as a source of products. Trade promotion activities abroad are thus crucial functions for most TPOs. The availability of resources and international commercial representation will determine the extent of a TPO's activities abroad. The TPO can provide an invaluable service to exporters by intensifying its promotional efforts in selected foreign countries. Activities related to trade fairs, sellers' missions, inviting foreign buyers to visit local manufacturing plants and facilitating subcontracting arrangements are some examples of a TPO's efforts. A TPO's overseas network of commercial representatives will play an important role in the planning and implementation of the overseas marketing programme.

Trade information services. The quality of business decisions depends on pertinent and timely information. Exporters need to stay current in their awareness and understanding of market developments and trade opportunities in order to maintain their positions or establish edges over their competition. A TPO should pay attention to the trade information needs of exporters and have appropriate mechanisms for acquiring such information systematically and disseminating it in a timely way. Moreover, a TPO provides basic and useful support to the export community if it can facilitate contacts between foreign buyers and exporters.

Specialized support services. Specialized export services aim at providing exporters with skills in various foreign trade techniques, thus helping them to become more competitive in the international market. Training, advisory services and facilitation services, plus other forms of technical assistance, may be provided concerning export procedures and documentation, export financing, packaging, costing, pricing and legal procedures. The range of assistance and services can be as wide and as varied as manufacturers and exporters may require.

Preparing profiles on products and companies. A TPO's effectiveness can be measured by its ability to respond to trade inquiries and facilitate matches between foreign buyers and local exporters. When a foreign buyer makes urgent inquiries, a TPO should be

able to immediately provide accurate information on the names of reliable exporting companies, appropriate descriptions of their products and exportable quantities that meet with the buyer's requirements. In order to be effective and efficient, one of the most basic and useful services of a TPO is the preparation of registries or directories of exporters to be disseminated to foreign buyers and to the country's commercial representatives abroad.

Preparing product profiles is primarily aimed at giving foreign buyers written information about types and groups of available products. It is possible for a TPO to prepare product supply survey. The product profiles will describe the different exportable categories and give some details of the nature of the products, volumes available for export, prevailing prices, and information on producers and exporters.

Company profiles, based on the export supply survey, will show not only the general characteristics of the companies, but also information on their products and production capacities. The product and company profiles should include:

- Categories of exportable products and exporters.
- Industry capacity and export volume.
- Price variation.
- Company characteristics.

This data will be useful to a TPO as an information base for:

- Registries or directories of exporters.
- A target base for company participants for specific trade promotion events/activities.
- A dissemination list for international market news.
- Initiating an industry grouping or core group of exportready companies for dialogue sessions on developments affecting the industry.

The publication of registries or directories of exporters, as well as product and company profiles, are extremely useful tools for the promotion of high-priority products. Moreover, these publications complement efforts by individual companies or groups of companies to publicize and promote their products abroad and gain entry into certain markets.

4. Conclusions

In keeping with the experience of the EU countries in field of specific practices and techniques aiming to foster their international economic relationship, foreign trade promotion activity has to represent for Romania, one of the most important components of the national economy development strategy. This activity has to be developed in accordance with the provisions of the international agreements in which Romania is a signatory part, as well as with the international market rules and procedures. Within this framework, the promotion of the Romanian companies dealing with foreign trade activity by an adequate conceived system of governmental and non governmental TPOs is acquiring new dimensions, having to become one of the main pillars of the XXI century economic development of the country. This problem has to be taken into consideration by the Romanian governmental and non-governmental bodies, taking in view that each economic operator acting in the field of foreign trade should take big efforts in order to penetrate and maintain its position on a very competitive international market.

References

- ITC - UNCTAD/WTO – Trade Promotion Organizations – A variety of Approaches, Geneva, 2008
- ITC - UNCTAD/WTO - TPO Best Practices. Strengthening the Delivery of Trade Support Services, Geneva, 2011
- ITC - UNCTAD/WTO, World Directory of TPOs and other Foreign Trade Bodies, Geneva, 2011
- ITC - UNCTAD/WTO, Geneva, Priorities on Export Trade Promotion and Competitive Advantage, 2011

- ITC - UNCTAD/WTO, Geneva, The International Framework for Trade Promotion, 2011
- ITC-UNCTAD-WTO- The role of the TPO: Ensuring network credibility through service, referral and coordination, 2011
- Olaru, Octavian Liviu, Promovarea exportului, componentă esențială a strategiei naționale de comerț exterior, Editura Cavallioti, București, 2002

MICROECONOMIC ANALYSIS IN COMPETITION POLICY

Paul Prisecaru¹

Abstract

This paper presents some of the most important microeconomic tools used in assessing antitrust and merger cases by the competition authorities. By explaining the way that microeconomic concepts like “market power”, “critical loss” or “price elasticity of demand” are used by the modern competition policy, the microeconomics scholar can get a practical perspective on the way that these concepts fit into the more general concept of “competition policy”. Extensive economic research has shown what are the market forces and economic factors that determine how cartels, which are at the core of antitrust policy, are established and sustained over time. One of the most important of these factors is the markets exposure to innovation, especially disruptive innovation. In these markets, the paradox, from a competition policy perspective, can be considered the fact that collusion is one of the least important concerns, due to the specific elements that determine the nature of competition. Instead, the main anticompetitive risk in the markets exposed to intensive innovation is unilateral conduct by which dominant incumbents can exclude competitors.

Keywords: *antitrust, market power, critical loss, cartels, price elasticity of demand, disruptive innovation.*

J.E.L. Classification: *D430; K210; L400; L100; L130.*

Introduction

In this article I will present the principles and economic models used in the analysis of anticompetitive practices by competition authorities and the main challenges in this area. In the last half century, the role of microeconomic analysis has increased substantially in antitrust, especially due to the growing influence of the Chicago School of economics and the development of industrial organization. These two factors have resulted in a remodeling of the instruments used by the competition authorities and have led to a new interpretation of the different behaviors of companies in the market, which is called "effects-based approach." Moreover, microeconomic analysis brought to the fore the concepts used in the past only in academia, such as "elasticity of demand" (used in the definition of relevant markets) or "market power" (used in determining the existence of dominant positions).

1. Market power concept

Market power is a key concept used in the analysis of anticompetitive practices, but it should be noted that the mere possession of market power is not a violation of antitrust law. In cases where it is established the existence of market power, it is subsequently taken into question the company's behavior to determine the existence of a possible anti-competitive practice. Thus, in many antitrust cases targeting abuses of dominant position, the element determined with microeconomic theory tools is the existence of market power.

1.1. Definitions of market power

Microeconomic theory divides economic agents into companies that can not influence the price (*price-takers*) and companies that can do this, which are firms with

¹ Deputy director within Competition Council, Ph.D. Student in economics in the National Institute for Economics, Romanian Academy

market power. This distinction is based on the demand curve on the market taken into consideration. In case it is a single company that sells a single product, we may define P as the price the firm receives for its product, X represents the production of company and $X(P)$ is the demand curve as the firm perceives it, with $X'(P) \leq 0$. If necessary we may use inverted demand curve under the form $P(X)$. A firm that does not have control over the price will be $P(X) = P$ regardless from X , on a range of relevant changes of company's production. On the other hand, a company with market power can determine increases or decreases in prices through changes in its production: $P'(X) < 0$ in the same range of relevant variation. Such a firm has "technical market power" if it is faced with a downward demand curve and not horizontal.

1.2. Practical aspects of the concept of "market power"

In practice, almost all companies have a degree of technical market power. Even if the notion of perfect competitive markets is extremely useful for theoretical constructions, real markets deviate more or less from this ideal model. An important reason why this phenomenon happens most of the time, is that the marginal cost is less than the average cost, particularly for the products with high fixed costs and without production capacity constraints. In such cases, prices must exceed marginal costs for companies to remain viable ones in the long-term [1]. Although theoretically the society may dispose that all prices are equal to marginal cost and where it is necessary to subsidize the industries, such a level of regulation is regarded as unfeasible, and in most economic sectors the free market system is better than other systems, as it is based exclusively on the interaction between supply and demand. Antitrust law only serves to ensure a maximum level of competition in these markets. Given the quasi-ubiquity of certain levels of market power, the impossibility of their total elimination and inevitable cost of intervention through antitrust instruments, the mere fact that a firm has market power is not a significant fact in itself. However, the technical concept of market power from microeconomics has the important advantage that fits to precise measurements, which makes anti-competitive practices that lead to an increase in this power to be identified. Standard measure of technical market power of firms is based on the difference between practice prices and marginal cost. In the theory of monopoly prices, the company sets prices to maximize its profits.

Profits are given by $\pi = PX(P) - C(X(P))$, where $C(X)$ is the cost function of the company. Differentiating depending on the price we get the standard expression governing the price policy of a company that produces a single product:

$$\frac{P - MC}{P} = \frac{1}{|\varepsilon_F|},$$

where MC is the marginal cost of the company, $C'(X)$, and

$$\varepsilon_F \equiv \frac{dX}{dP} \frac{P}{X}$$

is the elasticity of demand facing the firm, meaning "firm specific demand elasticity" [2].

The left side of the formula that describes the pricing policy of a company with a single product actually represents the percentage difference between price and marginal cost, called Lerner Index, which represents a natural means of measuring technical market power:

$$m \equiv \frac{P - MC}{P}.$$

2. Elasticity of demand and hypothetical monopolist test - microeconomic tools for defining relevant markets

In the antitrust area, there are several elasticity types which have applicability in defining the relevant markets, of which the most important ones are price elasticity of demand and cross elasticity of demand (Tiffin's coefficient).

2.1. Price elasticity of demand measures the proportional change in demand for a good or service as a result of a proportional variation in the price. A high elasticity of demand indicates that a small change in price leads to a much larger proportional change in the quantity demanded in the market. In this case, companies in the market can not increase profits through price increases because consumers will respond by lowering the amount consumed in a too large extent to make the price increase profitable.

2.2. Cross elasticity of demand measures the proportional change in demand for a good or service in relation to the proportional change in the price of another good or service. A high cross elasticity between two goods or services indicates that the two have a high degree of substitutability. For example, if the price of product X increases leading to an increased demand for product Y, cross elasticity is positive and the two products are in the same relevant market. Also, if the price for product X increases and demand for product Y decreases, the elasticity is negative and the two products are considered complementary (e.g.: gasoline price increases lead to lower demand for cars with high fuel consumption).

In many cases that involve market power, cross elasticity can provide misleading results because the prices can be raised to a level where demand is relatively sensitive to price (the limit of what consumers are willing to pay) and this makes other products or services seem interchangeable. Another problem may occur when there are differences between the elasticity of X unto Y as compared to the elasticity of Y unto X. In this case it is advisable to define the relevant market different from the usual one, depending on the order in which cross elasticity is measured.

2.3. Hypothetical monopolist test

Another model widely used in the analysis of relevant markets is the so-called "SSNIP test [3]" or "hypothetical monopolist test". This method refers to sending some questionnaires to the customers of firms in the market in which they were asked how they would proceed if one company would sell goods or services in question in the relevant geographic area and would require a permanent and small increase but significant of prices. More precisely, consumers or customers of firms are asked whether, starting from current prices deemed competitive, a hypothetical increase of these prices by a percentage between 5 and 10% for more than one year would result in switching the supplier of products or services. Responses to this question indicate the degree of demand substitutability and the degree of supply substitutability, i.e. if consumers would switch to competing companies and / or if new competitors enter the market.

Hypothetical price increase is only relevant in the context of economic exercise of identifying market borders, rather than relying on this process for assessing market power. In applying this test one should not use a very broad statistical basis (geographical area or group of consumers) and the main reference indicator should be the end consumer.

In the EU, the percentage of the price hypothetical increase is between 5 and 10%, depending on the sector, whereas in the United States it is generally 5% but there are used more conditions in which this price increase takes place, such as:

- Statistical evidence about consumers who have changed or consider switching the supplier due to relative price increases;
- Evidence about suppliers who base their business decisions on the possibility that a large proportion of consumers consider product substitution in response to relative changes in price or other competitive variables;
- Influence of downstream competition;
- Timing and costs of product substitution.

The conditions listed above are not an exhaustive list and they may undergo changes or additions depending on the specific economic sector in question.

Hypothetical monopolist test is subject to an error margin occurrence, especially in complex markets where consumers do not have a homogeneous behavior in the use of that product and when linking products with joint costs is widely used or the price structure is not transparent.

As it is shown in the next figure, "critical loss" is really the answer to the question: how many customers should change the supplier of goods and / or geographical area to make a price increase (in this case by 10%) unprofitable? If the rectangle marked "-" representing the loss of sales volume is higher than the rectangle marked "+" representing the gain due to the price increases, then it can be considered to have been reached "critical loss" and the considered company does not have significant market power.

Mathematically, a price increase is unprofitable if:

$$(p_1 - c_1)Q_1 < (p_0 - c_0)Q_0$$

where we have:

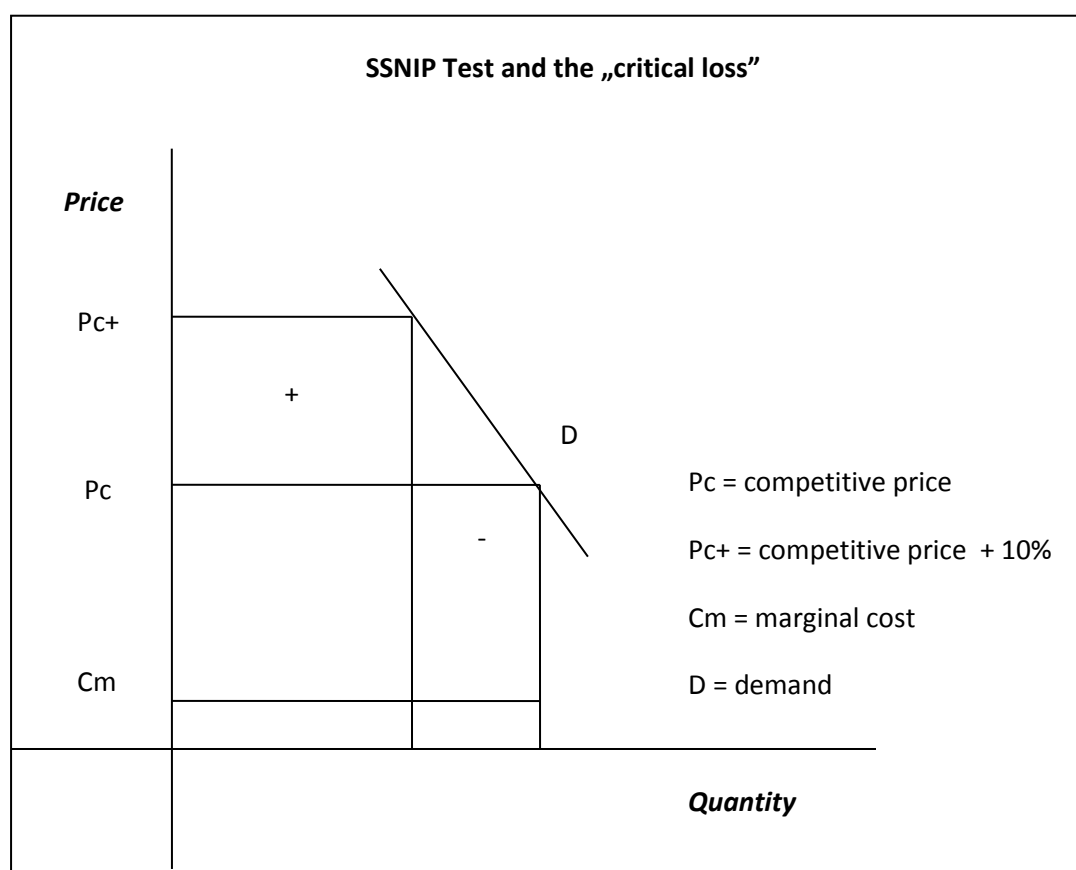
p_0 - Original price

p_1 - Increased Price

$c_1 = c_0$ - Unit variable cost

Q_0 - Quantity originally sold

Q_1 - Quantity sold after price increase



This relatively simple formula is used by competition authorities in most cases of horizontal mergers and abuse of dominant position. Also, for the purpose of identifying the relevant market borders the "critical loss" instrument may be applied in cases of cartels and concerted practices. One of the fundamental advantages of this type of analysis is the fact that

these basic principles are used in practice even by the companies that want to know whether a price increase is profitable or not.

One of the most contested conclusions resulting from the "critical loss" analysis refers to the fact that higher profit margins reduce the anticompetitive effects resulting from horizontal mergers. The argument behind this conclusion is that the size of profit margins in a market is directly proportional to the size of profits losses due to reduced sales as a result of rising prices. Thus, in markets with high profit margins it is needed a smaller "critical loss" for determining the unprofitable character of the price increases. According to O'Brien and Wickelgren (2003) this reasoning is inconsistent with economic theory, companies setting their margins in order to maximize profits. The more substitutable products for a company's product, the lower the profit margin will be in order to prevent the consumers from switching to competitors. On the other hand, as there are fewer substitutes, the higher the profit margin will be. Thus, when two or more competitors are merging, the competition level in the market is affected more when profit margins are higher than when they are lower and prices of newly created entity tend to grow more in the first case. Following the demonstration of O'Brien and Wickelgren (2003), Federal Trade Commission [4] from U.S. imposed a more careful application of microeconomic tools in merger cases generally and an analysis of "critical loss" especially.

3. Economic instruments used to predict the cartels emergence

Theoretical literature on the emergence and operation of cartels focuses on the compliance by independent firms of agreements through which market competition is restricted. Since cartels [5] are illegal, such agreements are not subject of contracts and, as a consequence, they can only exist in a self-imposed form. The economists define the term "collusion" as: a self-imposed deal of cooperation. It should be noted that this definition does not imply that collusion or more precisely the concerted market behavior was made without a prior communication between the parties. Rather, it is emphasized the self-sustainability of the understanding, absolutely indispensable in the context of its illegally status. Even if there is no communication between the parties, or believed that, in most microeconomic models referring to cartels, recent researches in the field have projected a new light on the role of this factor.

In the following I will present the specific characteristics identified in the literature and confirmed by empirical analyzes, as being relevant to the study of cartels sustainability in a market. It should be mentioned that these features are not sufficient and necessary for the cartels sustainability, but directly affects the likelihood of emergence of this phenomenon and because of this fact they are essential elements in microeconomic analysis of the anticompetitive practices.

3.1. Number of firms

In general, economists expect the incidence of cartels and the number of market participants to be negatively correlated. Firstly, a large number of participants increases the likelihood that firms with different production costs[6] to coexist in the same market, this fact reducing the likelihood of cartels. Secondly, a large number of participants make it more difficult to monitor the compliance with the understanding. Finally, as the number is higher, the lower the market share held by each of the participants, making more tempting the deviation from cartel policy and the deterrent effect of any possible punishments the competitors may impose to be more reduced.

Of the Romanian economists that have demonstrated the importance of firms number for the competition level it is necessary to remember Iancu (1992), and Moşteanu (2000 and 2001). Due to the nature of the transition from state centralized economy to a market economy, the old state monopolies and oligopolies automatically become private ones

generating many problems to competition environment, this being anticipated by Iancu (1992). Thus, within the Romanian economy it became evidently the direct link between the number of firms and the degree of competition in the markets.

3.2. Market entry barriers

If the barriers level to market is low, the current high prices will attract new competitors in the future, leading to a substantial reduction of future earnings from cartels and to mitigation of possible punishments for those who leave the cartel. In fact, as it is shown by Iancu (1992), in such a market, an additional pressure force acting on the participants, besides those performed by customers and competitors, is represented by what economists call the "potential competition". Thus, as it is shown in Grout and Sonderegger (2005) cartelization is difficult to sustain in markets with low barriers to entry, *regardless of the number of existing competitors*.

A similar reasoning applies currently to markets with high barriers, in which it is anticipated a significant reduction of them in the future. For example, let's assume the existence of a product protected by a patent to expire over a few years. Other companies in the industry know this and, unless the protected product production involves significant fixed costs, after the expiry of the patent, the market will become competitive. In a market where there is such a "potential competition", cartels can not be long-lived, being unsustainable or at least unstable.

3.3. Inventories and production capacity constraints

The role of production capacity constraints on the feasibility of cartels is ambiguous. On the one hand, a company with a limited production capacity has a reduced interest to undermine its rivals and can not meet the additional demand generated by the fierce competition. On the other hand, limited production capacity makes less efficient its power to punish those who deviate from the cartel practices being known that the harshest penalty that companies may apply is to produce at full capacity.

Brock and Scheinkman (1985) provided a good illustration of this ambiguous effect. In a symmetric environment where all firms have the same production capacity constraints, these authors showed that there is a determining relationship between the size of production capacity owned by each firm and the cartel sustainability. When additional production capacity [7] is small enough, in the market is dominating the effect which induces the perception that penalties for non-observance of cartel are quite low. On the other hand, when the additional production capacity is large enough in the market the effect that makes the deviation from cartel practices to be inhibited is dominating. Thus, increasing the production capacity of market participants has the effect of increasing the cartel sustainability.

While Brock and Scheinkman consider production capacity constraints as exogenous factors, Davidson and Deneckere (1986) explicitly model the production capacity, considering that excess of production capacity is an essential element of cartels balance. This is primarily due to the need to punish deviations from the cartel's policy by threatening with the production at full capacity. In this framework, extra production capacities are even a prerequisite for supporting cartels.

Empirical findings have shown that the *formation of* cartels is often linked to the emergence of a production overcapacity, caused usually by a severe drop in demand. In the case of "petrochemical cartel" [8] this effect was evident: very steep decline in demand that preceeded the formation of the cartel generated a structural overcapacity of production throughout the European market. The problem was so severe that most producers were operating at a loss before the formation of the cartel, which resulted in a climate where business leaders have sought to meet to find solutions.

Asymmetries in terms of production capacity also play a role in this picture, encouraging cartelization when aggregate capacity is high and discouraging it when it is low. This finding has interesting implications for the analysis of how mergers affect the possibility of horizontal cartels. On the one hand, a horizontal merger reduces the number of competitors in the market, facilitating cartelization, and, on the other hand, asymmetries are greater in terms of production capacity, especially when are involved in the merger the largest firms in the market. If the aggregate production capacities are limited, the latter effect limits opportunities for cartelization, generating an entity that is extremely hard to discipline by others. The result of these observations is that each horizontal merger case must be analyzed individually, using microeconomic tools, not only to highlight the potential risks of creating or strengthening a dominant position on the market, but also to identify any positive effects by restricting the possibilities of cartelization .

3.4. Dynamics and demand stability

In a known article Rotemberg and Saloner (1986) analyzed the response of production oligopolistic structures to significant fluctuations in demand. Adopting a simple vision, but illustrative, in connection with the business cycle, they assumed that demand level in the market is determined independently for each period, so that the anticipated level of future demand is independent of the present one. Thus, the anticipated cost of punishing deviation from cartel policy is different from the present state of the demand. However, the current level of demand affects short-term incentives to divert because a reduction in prices is more attractive when demand is high. When the economy is in good times, the temptation to reduce the price below the level set by the cartel and thus to gain market share is stronger than when the economy is in contraction, even if the expected opportunity cost due to the penalty for deviation is the same. **The conclusion is that when demand is high, the cartel stability is more difficult, according to microeconomic theory. According to the same reasoning, cartels are more stable in the periods of low demand.**

According to Haltinger and Harrington (1991), the assumption that demand is independent for each period is imprecise, more suitable for the analysis being the cyclical movement model of demand over time. They demonstrated that the most difficult point in the cycle for cartelizing the companies is when demand is at its highest level and there are expectations that it will decline sharply. Likewise, cartelization is more likely when demand is low and is expected to increase it. Antitrust jurisprudence supports these findings; many cases can be found where significant decreases in demand generated some market cartels.

Bagwell and Steiger (1997) extended the analysis to situations where demand is stochastic and persistent, demonstrating that the cartelization phenomenon may be sustained more easily when the anticipated period of economic growth is long enough and recession period is short enough. Furthermore, the analysis of both authors showed that the temporary demand shocks cause the instability of cartels, regardless of the stage of growth or downturn in the market.

One conclusion that one may draw from those presented above is: **demand volatility discourages cartelization.** Also, the **expectations of demand growth often feed the anti-competitive arrangements.** If the demand is stable at present, but it is expected to increase in the future, the opportunity cost of punishment for the deviation from cartel established policy is higher, discouraging companies to lower prices or increase production. That finding applies in markets with high entry barriers, in the other markets existing the possibility of an exogenous competition pressure where it is anticipated an increase in demand.

3.5. Frequency of interactions between firms and adjustments

The frequent interactions between competitors, and also the frequent price adjustments facilitate the collusion between companies by shortening the reaction time to deviations from cartel policy. The greater is the period between deviation and punishment,

the more important is the market share of the company cutting prices or increasing the production and it enjoys the benefits of deviation.

Snyder (1996) states that the impact of frequency of interactions between competitors on cartelization phenomenon is even more important when there are large buyers in the market, because they may focus strategically the orders at certain times in order to reduce the frequency of interactions between sellers.

It should be noted that while the communication between companies is easy, the importance of interactions between competitors for cartels stability is significantly reduced.

3.6. Market transparency

The importance of market transparency in determining the competitive behavior was determined for the first time in microeconomic theory by Nobel Prize laureate in economics George Stigler, in 1964. Subsequently, important contributions were made by Green and Porter in 1984, and then by Abreu, Pierce and Stacchetti in 1986.

If we assume that firms can not monitor the conditions of demand, sales and prices of competitors and demand fluctuates randomly from one period to another, companies recording sales declines can not determine whether this phenomenon is due to a fluctuation in demand or to price reductions of rivals. Assuming that after a period of low sales the affected companies do not change the behavior in the market, whilst maintaining the cartel policy, this would completely eliminate the concept of punishment for deviation, creating a strong incentive for cartel members to reduce prices secretly. It results the fact that collusions resist only when the firms react to sale decreases by triggering of price wars. This argument ceases to be true when companies may communicate with each other and providing verifiable information about the sales. In such a situation, the participants in the cartel can check for possible deviations by examining the evidence from competition, this thing compensating the impossibility of direct observation of the demand evolution.

At any point in time, some firms may have lower costs and others higher costs, due to, for example, the changes in local business environment, labor relations from companies, inventory management, etc. In such situations, jointly maximizing the sharing of profits implies an inverse correlation between market shares and corporate costs. Because companies can not monitor their costs, an efficient allocation of market shares within a cartel can be achieved if they exchange information about costs. Thus, companies will have a major incentive to report higher than real costs.

In conclusion, unlike a situation where all relevant information is public, the absence of such information represents a constraint on cartels. Information asymmetries between competitors create an incentive to compete, but they may be removed by the communication between companies, which is facilitated by various means, such as employer associations.

3.7. Cost asymmetries and quality differences.

Cost asymmetries and quality differences result in a higher level of competition hindering the cartels emergence. Firms with lower costs and/or producing higher quality goods are harder disciplined by their rivals because commercial damages that may be brought to them by a price war are relatively low. Thus, a firm in a cartel which has the advantage of quality should have a larger market share to offset the benefits that could be obtained from the deviation from the agreement. On the other hand, this would affect the motivations of lower quality producers to participate in the cartel. The same reasoning applies to cost differences.

An interesting result of these findings consists in determining the impact that innovation has on the cartels. Because the innovation process increases the asymmetry of costs and quality, cartel occurrence is less likely in the innovative markets.

3.8. Horizontal product differentiation

A well recognized aspect in microeconomic theory is represented by the fact that price elasticity of demand decreases when products are differentiated horizontally. On the one hand, companies will have fewer incentives to deviate from the cartel policy as the extra market share they can earn is limited by consumer preferences. On the other hand, a low elasticity of demand makes possible punishments for deviation to be more difficult to apply, the damages caused by a price war between the cartel and deviating companies being quite limited. According to Raith (1996) and Symeonidis (2002) cartels hardly resist when the markets are not transparent and the products are horizontally differentiated, and when multiple companies sell a wide range of products the benefit resulted of the deviation from cartel policy is greater than the opportunity cost of supporting a punishment on the behalf of cartel side.

3.9. Multimarket contact

According to Edwards (1955): "*When firms meet each other in several markets, many of these contacts may blunt competition's edge.*" Typically contact between the same companies in several markets leads to broadening of the scene they compete on. The effect of this is an ambiguous one: on the one hand one may increase the gains from deviating from the cartel; on the other hand one may increase the impact of possible punishments. In a perfectly symmetric situation these two forces may cancel each other, and the contact on several markets has a neutral effect on the cartels stability. In the cases where firms are not in similar situations, contacts in multiple markets will generally lead to an increased likelihood of cartels emergence.

For example, if there are cost asymmetries between which are negatively correlated across markets, it is likely an agreement between firms, in which each company would be allocated a dominant position in the market on which is more efficient. In such a scenario, the major part of the additional demand generated by the deviation from agreement will be achieved in the market on which the company reducing the prices has the highest costs, and at the same time, the bulk of the lost profits following a price war will come in the market with the lowest costs. The first effect leads to decrease of the gains, and the second effect leads to the increase of losses as a result of the deviation.

3.10. Common shareholding

There are many cases where companies purchase the shares of their rivals as passive investments, to participate in the gained profit but not to the decision-making process. Mauleg (1992) and Glio and Spiegel (2003) studied these models of passive investment/joint shareholding and showed that they have two opposite effects on the likelihood of emergence of anticompetitive agreements. Firstly, common shareholding weakens the firm's incentives to compete, because they basically internalized some of the losses they cause by competition to the rivals on which they own stocks packages. Secondly, a stake in a rival company also decreases the motivation to punish the possible deviation from cartel policy.

Another important element to be taken into account in joint shareholding is that this factor facilitates communication, eliminating some of the information asymmetries and, thus generating a higher level of stability of a possible cartel.

3.11. Bargaining power of demand

In microeconomic theory it is recognized that when buyers are large and have bargaining power, cartels resist more difficult because these buyers will use the power they hold strategically to generate price wars between vendors. For example, buyers can focus on large purchasing orders in certain periods to make the interaction between sellers less frequent, or refuse to buy at a time to introduce the suspicion that one of the cartel members has reduced prices. These effects of high bargaining power of buyers may be partly offset by a superior mechanism for communication between members of the cartel.

3.12. The importance of technological innovation

An element that may be added to those already established in terms of influence on the probability of cartels emergence, is represented by the importance of technological innovation in the market, and closely related to the importance of innovation and the knowledge in the economy, as shown by Iancu (2006). According to Schumpeter (1942), technological innovation is the engine of development of capitalist society and the process of "creative destruction" removes the old technologies or business models leading to increasing of economy dynamics and generating an important pressure on the economic agents. Basically, due to the constant process of technological innovation, monopolies and oligopolies are under constant threat, but not on behalf of competitors using the same technology or business model, but on behalf of disruptive competitors.

American professor Clayton Christensen (2003) is the artisan of "disruptive innovation", a concept that fundamentally distinguishes from "sustaining innovation". The latter aims at obtaining clients from the upper levels of the market and represents a confrontation from which strong companies in the market emerge as winners. Disruptive innovation, in turn, creates new markets or brings products and services to groups of users at the lower level of already existing markets.

In this context, it is obvious that the effect of innovation on competition is one overwhelmingly positive, in the markets cartel emergence being less likely in innovative markets. These anticompetitive practices are discouraged primarily by the possibility to attract disruptive competitors, which generates a constant competitive pressure. Moreover, the cartels found in these markets by the competition authorities over time are virtually non-existent, which is partly explained by the specificity of these markets of the type "*the winner takes it all*" [9], due to which unilateral conduct is of greater concern than cartels.

Conclusions

Looking at some key examples of microeconomic theory used in competition policy we may see that in this area, economics has an overwhelming influence on how the law is interpreted and applied, but there are areas where microeconomic concepts are ambiguous. Modern tools in antitrust policy largely target economic objectives like consumer welfare and economic efficiency.

One aspect on which the economic approach has failed to shed sufficient light is related to the core of competition policy: anti-cartel enforcement, specifically what are the economic conditions for cartel formation. Nevertheless, in most antitrust cases, economic theory dictates the long-term remedies, most of which are structural by nature. By contrast, legal solutions have an immediate character and impact, that is the punishment of corporations, but they can not represent appropriate remedies in the long term.

If a company with a significant market power is sanctioned, it may recover the loss by increasing the prices, and thus consumers will pay an indirect tax to the state. In such cases the economic solutions, of a structural nature, are likely to restore the equilibrium in the market.

In conclusion, we can say with reasonable certainty that economics is, at present, the most important component of the three dimensions of antitrust policy: investigation tools, objectives and solutions.

Notes

[1] According to Chamberlain (1933) and Robinson (1933), firms in markets with low entry barriers but differentiated products have market power in from technical point of view.

[2] In fact, the elasticity of demand facing the company is endogenous because the cost varies with the price with the exception of the special case in which this is constant. Usually all formulations of microeconomics refer demand elasticity at the balanced price level.

- [3] Small but Significant Non-transitory Increase in Prices.
- [4] Federal Trade Commission is the second antitrust institution in USA
- [5] In this context the cartel concept is used to define both agreements and concerted practices.
- [6] The production costs may be different both from the point of view of level and in terms of the structure. In some cases, the structural differences are caused by the level differences. For example, in industries that traditionally have high fixed costs an innovation of a competitor can significantly increase the share of variable costs, giving him a significant competitive advantage.
- [7] The additional capacity is defined as company possibility to overcome balance production.
- [8] In this case, in 1989 the European Commission fined with an amount equivalent to \$ 50 million, 23 European petrochemical companies accused of price fixing.
- [9] The winner takes it all - a concept used to describe a market in which one company manages to gain dominance and finally became a quasi-monopolist. Practically on these markets there is only an initial competition and then by winning this battle, the most powerful company generally manages to completely eliminate the opponents.

References

- **Abreu, D., Pierce D. and Stacchetti E.**, 1985, *Optimal Cartel Equilibria with Imperfect Monitoring*, Journal of Economic Theory, 39: 251-269.
- **Athey, S. and Bagwell K.**, 2001, *Optimal collusion with Private Information*, The Rand Journal of Economics, 32 (3): 428-465.
- **Bawell K. And Staiger R.**, 1997, *Multilateral Tariff Cooperation During the Formation of Free trade Area*, International Economic Review, vol.38(2), May
- **Brock, W. and Scheinkman J.**, 1985, *Price Setting Supergames with Capacity Constraints*, Review of Economic Studies, 52: 371-382.
- **Christensen, C and Raynor M.**, 2003, *Innovation as a business solution*, Curtea Veche Publishing House-Harvard Business, 2010
- **Competition Council**, 2009, *Report of investigation to analyze the real estate market real estate transactions and related services*, Rapporteur: Paul Prisecaru, Bucharest, October.
- **Davidson C. and Deneckere R.**, 1986, *Long run competition in capacity, short run competition in price, and the Cournot model*, RAND Journal of Economics, vol.17, nr.3
- **Edwards, CD**, 1955, *Conglomerate Bigness as a Source of Power*, in Business Concentration and Price Policy, NBER Conference Report, Princeton, Princeton University Press.
- **Gilo, D. and Spiegel Y.**, 2003, *Partial Cross Ownership and Tacit Collusion*, Unpublished Manuscript, Tel Aviv University.
- **Grout Paul and Sonderegger Silvia**, 2005, *Predicting Cartels*, Economic Discussion Paper, A report prepared for the Office of Fair Trading, March
- **Haltiwanger, J. and Harrington, J.**, 1991, *The Impact of Cyclical Demand Movements on Collusive Behaviour*, The Rand Journal of Economics, 22: 89-106.
- **Iancu, A.**, 2006, *Knowledge and Innovation. An Economic Approach*, Romanian Academy Publishing House, Bucharest.
- **Iancu, A.**, 1992, *Treaty of Economics Vol III - Market, competition, monopoly*, Expert Publishing House, Bucharest.
- **Malueg, D.**, 1992, *Collusive Behavior and Partial Ownership of Rivals*, International Journal of Industrial Organization, 10: 27-34.
- **Moşteanu, Tatiana**, 2000, *Competition. Theoretical and practical approach*, Economic Publishing House, Bucharest.
- **Moşteanu, Tatiana**, 2001, *Pricing, competitive balance and social welfare*, Economic Publishing House, Bucharest.
- **O'Brien, D. and Wickelgren, A.**, 2003, *A Critical Analysis of Critical Loss Analysis*, Federal Trade Commission - USA.
- **Raith, M.**, 1996, *"Product differentiation, Uncertainty, and the Stability of Collusion"*, London School of Economics, STICERD Discussion Paper Series EI/16: 49.

- **Rotemberg, J. and Saloner G.**, 1989, *The Cyclical Behavior of Strategic Inventories*, The Quarterly Journal of Economics , 104 (1): 73-97.
- **Schumpeter, J.**, 1942, *Capitalism, Socialism and Democracy*, Harper Perennial Modern Classics, 2008.
- **Snyder, CM** ,1996, *A Dynamic Theory of Countervailing Power*, The Rand Journal of Economics , 27: 747-769.
- **Stigler, G.** 1964, *A Theory of Oligopoly*, Journal of Political Economy , 72: 4-61.
- **Symeonidis, G.**, 2002, *Cartel Stability with Multiproduct Firms*, International Journal of Industrial Organization , 20: 339-352.

THE SITUATION OF IRAQI OIL INDUSTRY AND ITS PROSPECTS

Al Dulaimi Haidar Ali¹

Abstract

Iraq is a major oil producer and exporter (the second one after Saudi Arabia), member of OPEC and was able to reform its oil sector and to gradually pass to a market economy system, by restructuring and privatizing its oil production, processing and distribution. Some medium term and long term priorities set for economic development are presented in the article and also investment and business opportunities existing for domestic and foreign investors.

Keywords: *oil, gas, production, diversification, strategy, priorities.*

J.E.L. Classification: *E 61, F 63, Q 13, Q 32.*

Introduction

Iraq is now a major player on the world oil market and was able to restore a large part of its production capacities and to resume a robust economic growth despite the violence, terrorist activities and heavy political disputes. The former forecasts for oil production proved to be too optimistic but Iraq will soon become a very important oil producer and a country with a more diversified economic structure. Iraq is investing a lot of funds in oil exploration, exploitation and processing, petroleum products distribution and export facilities and intends to develop petrochemical sector, other processing industries, agriculture, commercial and public services, social fields. Iraq intends to make a good use of high gas resources and to export a large part of its production. Privatization and upgrading of oil and gas industry is made with the support of important foreign investors, like Chinese ones, but domestic capital will play an essential role in the future economic development.

I present some medium term priorities, focused on the increase of oil and gas production and on exports too, but some important directions for a long term vision are based not only on oil sector but also on institutional and legislative building, on market institutions and forces, on a better micro and macro management of economy (a better governance at all levels), on the promoting and financing scientific and technological activities.

Iraq needs good relations not only with USA, that practically controls many economic activities in Iraq, but also with other countries, like its traditional partners from Europe and Asia, among them I could mention Romania, which enjoys great respect and appreciation in Iraq.

1. Reform of oil sector

After removal of Saddam Hussein, the oil production sector and other sectors of Iraqi economy came under US control, that together with the new Iraqi governments have failed so far to develop a clear and solid economic policy either on short, medium or long term. In order to rebuild Iraq, affected by several major conflicts, it is required the normal operation of the oil sector for creating an important flow of oil revenues, this imposing the concentration of Iraqi efforts in the next years for rehabilitating and renewing the oil

¹ Lecturer, Ph.D., University of Al-Qadisiya, College of Economic & Administration, Iraq, e-mail: haidar_irak77@yahoo.com

production system in order to reach at least the level attained before 1990. To achieve this

objective it is necessary to stop the decay of the oil industry, the state being in need of services of the foreign companies in the drilling, development, construction, technology, management activities, etc.

Reform in the oil sector implies the recovery of the total structure of this sector and it may not be valid only for the parent company (National Oil Company), but it has to consider the cooperation of domestic private sector with external private sector participating in oil discovery processes, development and production, by means of carrying out the outsourcing of services from oil industry by the parent company and by establishing of some services companies. These satellite companies require the conclusion of contracts with foreign companies working in the oil field, in order to improve the oil modern processing technology as well as to ameliorate the modern management processes, organization, administration and management of companies from this field.

For upgrading the petroleum sector at an appropriate level to ensure its competitiveness one should greatly stimulate the domestic and foreign investments. To ensure the domestic investments it is seen as the potential source the substantial income provided by the oil sector, and for foreign ones it is needed a strong government and business environment capacity to attract foreign investment for developing the oil sector.

There were considered two variants of Iraqi oil policy reform (Al Dulaimi Haidar Ali, 2009): (1) On the medium term, i.e. 5-10 years, the focus must be on the guidelines for providing of all financial, economic and human resources under the intensive program for taking Iraq out of current crisis, and removing the heavy legacy left by the former regime of Saddam Hussein and also by large destructions due to former military actions and stopping terrorist activities, especially in Baghdad area. The main objectives are the restoration of infrastructure and compliance with all external obligations of Iraq, this requiring the rising to a maximum level of Iraqi oil production and exports, taking advantage of extra foreign investments and foreign aids to ensure the largest possible effect of allotted financial resources. It is clear to any objective observer involved in analyzing domestic economic situation and implicitly the distribution of national income, that this period will require a higher good use of oil resources and an increasing trend of gross domestic product (GDP).

(2) On the long-term the focus is laid on the improvement of the internal structure of GDP and on building a balanced economy, gradually reducing the high dependence on oil resources and increasing the diversification of economic structures through the development of services and other industries in order to meet the new internal and external requirements based on a higher productivity and competitiveness.

Oil should be used in the right way because it is the most important natural source in Iraq, and it should be considered the ensuring of transparent contracts or conventions for oil discovery, production, export concluded with foreign companies, by assuming an important role of national oil companies and by endeavour to fair allocating the revenues coming from petroleum resources to Iraqi citizens, avoiding large differences among social categories existing in other states.

Reforms and new discoveries in the oil sector bring some good hopes for a Iraqi prosperous future, it will only be attained if there is a competent and responsible management for achieving this objective, as required by the application of the Oil and Gas Law, which occurred at 15 February 2007, aiming at developing oil fields and the ample oil reform.

After major political change from 2003, economic policy was revised in Iraq, implicitly on the redemption of high old debts of the country. It was resumed the oil production, which began to develop and grow, a process associated with an increase in world oil prices after 2007. Because Iraq's economy absolutely depends on oil, that stage is called

the stage of single economy that allowed the government to reorganize the economy and to revive it by focusing all the efforts for reconstruction using oil revenues during the first 5 years of the new regime.

The Iraqi government drafted in the second part of the last decade a 10-year plan for the reconstruction focused on raising the oil production, predicting an output up to 6 million barrels/day within 3 years. Development in this area began in the 2005-2007 period and by the end of 2008 the production reached 2.5 million barrels/day, being estimated at the beginning of 2009 that oil production will reach 3 million barrels/day and then 6 million barrels/day in 2012. Previous estimates proved to be too optimistic, oil production will reach only 3.4 million barrels/day -170 million tonnes- in 2013 (3.75% of world production) and exports were only 1.9 million barrels/day - 95 million tons- in 2012. To achieve this policy development, it was reserved a great share of revenues for extraction, transport and processing for the oil sector. Iraq is the 5th country in the world as regards the oil reserves, according to the U.S. Energy Information Administration, and surpassed Iran as the second OPEC's largest producer by the end of 2012. The problems of poor infrastructure, high levels of terrorist activities, the exaggerated political disputes have affected the achievement of a substantial increase in oil production level in the last years. In 2012, Iraq was the world's sixth largest oil exporter, exports being directed mainly to U.S.A, India, China, South Korea, Canada, Italy, Spain. Unfortunately most of the petroleum gas production is burned in the atmosphere instead of being used for other purposes, Iraq is the fourth country in the world that burns gas to flare.

Excess of oil revenue, which has recently been forecasted, will be focused on developing the key economic sectors, priority being given to the agriculture. Iraqi government has made a program to develop this sector, which in a not too distant future will compete with petroleum sector regarding the incomes of agricultural production, food industry and other related industries, due to the large availability of arable land and water.

At the same time many oil revenues have been allocated to other sectors: industry, transport, trade, banking, tourism, real estates, other services, technological and scientific field, health, education.

For the growth and contribution to support and strengthen the gross domestic product that was planned for a period of 10 years after the fall of the former regime (2003), Iraq's economy should not depend only on oil revenues but also on other economic sectors. Unfortunately violence and terrorism that followed for almost 10 years have prevented the Iraqi governments to run most of these projects.

Due to the fact that Iraq has the largest oil reserves in the world (according to the estimations made by some Iraqi and foreign experts and endorsed by Iraqi government) that may reach 350 billion barrels-48 billion tonnes, it is obvious Iraq will play an important role in the world economy, as it will possess the last oil large reserve in the world. Therefore a great attention of Iraqi government and society is paid to economic development and investment of oil revenues in the economic growth of Iraq. Regarding the agricultural sector (3.4% of GDP) which is one of the largest productive sectors in the region, Iraq will probably become a leading food supplier for the Middle East, if it will be developed a national master plan for the development of agricultural and food production.

Summarizing the above mentioned ideas, I may say that the Iraqi government policy is based on stimulating the investments in the oil sector to achieve a production level as high as possible, especially in context of the reversal in oil prices, causing a positive change in the balance of payments situation and supporting important investment surpluses inside and outside Iraq so that their total amount to form the basis of Iraq's economy transformation from a system similar to a socialist one (slow economic and social progress) in a true market

economy, ensuring prosperity for all citizens. It is worthy mentioning that Iraq has besides huge natural oil and gas resources a quite skilled labor force and some well-known scientific achievements implemented with very high efficiency due to its previous efforts that were made to acquire and exercise this knowledge in the course of its history. Therefore, I find quite proper the Iraqi current state policy based on the development of a strong economy, using existing financial resources/revenues. It must be known that the purpose of government lies in implementing this strategy after 2013, through the rapid growth of oil production up to 6 million barrels/day and then to 12 million barrels/day by the end of this decade, bringing a significant currency infusion to the Iraqi economy, which may cover all its future financial needs. But a strong increase of Iraq oil production and also Iran's oil production may lead to a certain decrease of oil prices in the future. As concerns the future of crude oil there are a lot of scenarios and many political and economic uncertainties for making accurate and reliable predictions (Petre Prisecaru, 2007).

The excessing part of oil revenues will be allocated in Iraq for the development of science, research, education, as a strong basis for the modernization of the Iraqi economy and society. Basically the most important resource in a modern society is the human resource, not the natural resources, since the great economists like Roy Harrod, Domar Evsey, Bob Solow and Paul Romer had well demonstrated and argued that the only way a country may maintain a high/constant growth rate is by encouraging and promoting human capital (Marcel Ionescu-Heroiu, 2013). The paradox of the countries that have rich natural resources but have not been able to achieve significant economic progress is known as The Dutch Disease and it learns us that natural resources should be exploited in a sustainable and intelligent manner, by developing other economic and social sectors, especially those having spillover effects and placing a great emphasis on human resources. The future of Iraqi oil, set by the new oil and gas law, will be the most determining factor for the gradual transformation of Iraqi economy from a predominantly public sector to a private one, preserving the ownership rights of huge/giant oil fields in the state hands on short term, knowing that these oil fields recently discovered in Iraq are divided into the following content types: huge fields, very large fields, large fields, medium fields. It may be noted that the Iraqi government offered some privileges for encouraging the oil extraction (and processing) in some huge fields held by major foreign companies, such as Al Ahdab oil field, which was offered to a Chinese company. Gas fields associated to oil ones have been offered to Shell company, the effect being revealed only after 2009, knowing that there are other possible oil fields (around 500), still undiscovered and unexploited.

The discovered wells were multiplied from a few hundred to more than 1,500 in the year 2008 it was forecasted the development of nearly 15,000 wells over the next ten years, in the plan presented by The Oil Ministry of Iraqi government

The future of the oil industry, petroleum and natural gas and other metals such as phosphorus, uranium and mercury will gradually turn consistent with economic transformation of Iraq into a market economy, by improving the business climate and legal guarantees granted to foreign and local capital. Investments in other sectors will gradually show their real importance and will progressively record larger profits than the oil economy.

The Iraqi governments laid down ambitious and detailed plans for the reconstruction of the country and for the creation of a modern oil industry, in consonance with the requirements of the domestic and global market. This industry will also enclose the initiation of research and exploration stages for new deposits, which will allow not only the increasing of oil processing and production of oil derivatives in Iraq, but their transport using carrying facilities and special ports for transporting the crude oil to important areas of oil refinery in foreign markets. The Iraqi government has considered the development of petroleum industry

by building new modern refineries able to meet the growing needs of internal market and demand of foreign markets. All these are designed to ensure a better use of crude oil and to get large profits for supporting the development of the Iraqi economy. The government paid a lot of attention to environmental impact of extending oil processing, making important studies for evaluating the environmental impact, for risk reduction and for promoting the sustainable development concept, including the subject of negative externalities of oil processing.

The first step was the construction of small refineries with a capacity of 10,000 barrels/day to respond to internal needs. In 2008 it has been started the building of a refinery with a capacity of 30,000 barrels/day, along with a larger one, with a capacity between 100,000-300,000 barrels/day, hoping that future large refineries will be built to ensure the requirements for petroleum products of global markets. Also, attention was focused on infrastructure and transportation of crude oil and petroleum products from producing fields to the areas of domestic consumption and to the export ports. At the same time the government also focused on diversifying the transport means, by using pipelines, tanks, railways and sea ships. Private sector is currently engaged in transport activities, by connecting and taking over the wells oil extraction to supply points, in this regard there have been involved many domestic and foreign companies since one does not need too much money for investing in this activity compared to those needed for refinery processing or for special oil export ports.

2. Situation of oil industry ownership

The term property has been used in two different senses during the mankind history and linked to political philosophy, the oldest meaning and most extensive used was referring to the degree of education or to the right to use or to give up to something. But in the modern sense it refers to the right to obtain the possession of a real estate. This means that every person has the right to property, and it means that everyone has full control on his body and mind, on his work and the results of his work. Property has limited features, it is born from the core of an informal/unofficial institution, and extends to the economic, political and social fields. When you want to transfer property rights through specialized means this leads to quantitative and qualitative changes in the nature of these functions, in the objectives and means of carrying out them. This overall change in the ownership functions arises due to the changes in the strategy and the management of ownership functions, in the changes of political, economic and social interests, that surround this topic, in the monopoly of managerial product of those activities.

Iraqis are proud with national ownership over oil resources (oil wealth) and as such the existence of a strong national oil company, which is strictly independent and has real economic objectives, may contribute to the development of the oil industry, and oil property may be very useful for the rest of the national economy, provided that it has a very good management. Private sector, including local companies, foreign companies and multinational oil companies play an important role in this project of resource property capitalization because it has enough financial and technical resources that are not available to the state sector, provided that private and public interests are brought together and transparency and opening are observed by all stakeholders. Basically one should be fully clearness on the provisions of all treaties, conventions, agreements for all stakeholders, as the participation of private sector in the oil export, distribution and processing is an essential aspect for the development of Iraq's oil industry, for increasing its exports and for strengthening the links between Iraqi oil and the rest of the economic sectors.

The choice of ownership form on discovered and undiscovered oil reserves is decided by the Iraqi people and this ownership on oil and gas reserves, as well as general operating

and administrating principles should be clearly and transparently specified in the Iraqi constitution. Property management issues on the exploration and transportation of oil by pipeline and loading ports may be subject to special laws in this area. Government should promote a serious and responsible strategy for the privatization of the Iraqi oil industry, firstly by solving difficult problems arising from large political, economic and social divergencies. The goals of this strategy and estimated results may be the subject to an academic approach, but also of large debates with the public participation on several main aspects of ownership changes in this industry (Musbah Abdul Aziz, 2005):

- * Need to form a political, economic, legal, institutional system in the country.
- * Need to form an appropriate institutional system for the management of oil industry.
- * Focus on the main aspects of the ownership transfer in the oil industry.
- * Fair transfer of the ownership, this transfer should be made in accordance with market mechanisms.
- * Taking into consideration of large social shortcomings which affected many Iraqi people and many Iraqi counties.
- * Taking into consideration of promoting national interests in the face of foreign ones, without affecting economic and administrative efficiency standards.
- * Logical connection of the ownership issue with the future development and growth needs of the economy and with the legal and justified desire of the Iraqi people to remove traces of poverty and underdevelopment quickly.

Islam religion specifies different forms of ownership, at the same time Islam calls for the ideal of dual property (property with various forms) instead of the ideal of unique ownership forms adopted by capitalism(private) and socialism(state). Basically Islamic economic system of property rights ensures the private, public and state property, and reserves for each of the three mentioned forms of property the special space in which they operate (Abdulah Hussain, 2000).

Improving the economy infrastructure and privatization of the public sector, especially in the oil sector, are necessary for the prosperity of the economy and its stability after years of disastrous economic policies of Saddam Hussein regime. Both processes are favourable to the main Iraqi partners, that is to U.S. and its allies, to Middle East and developing countries.

Returning Iraq as the main actor on the global oil market will provide a higher availability of resources, perhaps a greater market stability and more financial resources for the Iraqi people, ensuring increased and multiple opportunities for regional and transnational companies on the whole. Rebuilding of oil and gas infrastructure, and their privatization will become a good example that it may be followed by the oil privatization activities from other countries.

3. Oil market in Iraq

3.1. Oil Storage

Oil storage area may be achieved under the earth, in its natural fields or it may be put in tanks and in pumping and isolation stations (temporary storage) but it may be in the tanks located in export ports, in the tanks of processing refineries and in the tanks of strategic reserves. One may speak on the international oil storage, as there are special tanks for strategic oil reserves, which are very large and may influence the trend of international oil prices.

In 2005, the Iraqi Oil Ministry has prepared a project for a full liberalization of the storage and distribution sector and for moving it to the private sector and has provided additional import permits for oil derivatives and for building pumping stations.

These changes would include the authorization of private sector to import the main petroleum products, especially petrol and diesel, but also to store, transport and sell directly to citizens, and also to build and manage the pumping stations networks, which may allow to private sector to sell products at commercial priced agreed with the Iraqi Oil Ministry. The foundation of projects for strategic storage(inventories) is of major importance in different periods of time, as they take part in supporting the fuel distribution system existing in Iraq. These projects are of great importance for the economy as they may prevent or mitigate any decrease or shortage of petroleum products of any kind, through their implementation it will be supplemented the storage capacity, which allows the sale of the stored products when the world price is increasing. If this project is carried out entirely, it would enhance the potential of national economy because new jobs will be created and the skills of Iraqi personnel, working within this project, will be increased to a great extent.

3.2. Medium-term strategic vision

Iraq's economy with a GDP of about 242, 5 billion \$ (7,200 \$ per capita) in 2012, of which industry had a share of 64. 9%, services of 31.7% and agriculture only 3.4%, relies heavily on oil, as oil represents 84% of Iraqi exports (\$ 93.91 billion \$) in 2012. Gradual destruction of Iraq's economy occurred during three decades due to the wars, oil embargo and political instability, which had negatively affected the fundamentals of this economy. Therefore, the government is required to make great efforts to rebuild the country's fundamental base of economy and to apply a detailed scientific program for the development of key economic sectors. It calls for major efforts to succeed in the direction of investments made for country's reconstruction, in rehabilitation of labor force at all levels, in renewal of training and education programs, in recovery of skilled migrants, attracting of foreign scientific experts in order to potentiate the scientific activities and free movement of factors of production, in a better integration of the Iraqi economy in the world economy with the aim to increase productive activity across all sectors of the economy by transforming the state economy into a market economy (Al Dulaimi Haidar Ali, 2009).

From all that was shown it may be pointed out that there is nothing more important for the government and the new regime than to develop and modernize the oil and gas industry in the first stage aiming at increasing the flow of foreign currency, with the objective of enhancing and diversifying the production in order to achieve higher profits and revenues as compared to the current situation.

3.3. Long-term strategic vision

In my opinion it should start the rebuilding of the oil industry in several stages, due to the fact that its destruction was caused by the policy of the previous regime. This means submitting many efforts to ensure the availability of funds, obtaining a close collaboration on behalf of producer countries and large international companies from this domain, these objectives may be achieved through(Al Dulaimi Haidar Ali, 2009):

- 1) Making new complete and general geological studies in all regions of Iraq, the provision of geological maps for this purpose, extending the operations for discovery, exploration and drilling of new wells and placing them into production. This practically started after the government issued a specific law (Petroleum Products Investments Law) and adopted The Oil and Gas Law in 2007;
- 2) Creating a national oil industry based on modern technologies by replacing all the obsolete means of production with modern ones and ensuring high production capacities;
- 3) Renewal of processing, transport and storage means;
- 4) Reconstruction of transport lines and stations, renewal and creation of new lines, pumping and separation stations;

- 5) Developing of new transport means to support the growth of production activity, renewal of export ports in other regions;
- 6) Establishing a complex refinery process inside Iraq (in the free export ports);
- 7) Giving importance to research and development objectives from petroleum institutes, forming and training of personnel skills in oil sector that are able to use new methods in the production processes, renewal of existing outlets and endowment with modern technology;
- 8) Developing of an international oil market in Baghdad or Basra oil (commodity -oil and gas- market));
- 9) Opening of investment opportunities in all economic fields by changing current valid law on investments by granting ownership rights to private investors (real estate);
- 10) Paying particular attention to those specialists who work in this area by creating a specialized oil institution, which will cooperate transparently with the reputed institutions existing on international arena;
- 11) Rational use of petroleum financial resources through diversification of the Iraqi economy, by developing petrochemical industry and other industries that would complete the development of non-oil sectors;
- 12) Maximizing of oil revenues by increasing oil export volume;
- 13) Maintaining Iraq as a main oil supplier in the world market, having a significant role in the world energy balance;
- 14) Periodical restructuring of the Oil Ministry, to keep pace with the strategic evolutions and developments in international market;
- 15) Effective participation of Iraq in strengthening OPEC role in the world energy market and a possible involvement of Iraq in a similar organization in the field of natural gas;
- 16) Meeting the needs of Iraqi internal market of oil and gas in a continuous and sustainable way;
- 17) The rapid development of electricity production, which is currently quite insufficient and is causing a lot of troubles in the economy and in the households.

It is known that petroleum and gas represent important strategic products that are vital for all states in the world. According to this, it is in the interest of all importing states to understand and respect the producers sovereignty over their own oil production and proper use, to have fair prices for both producers and the consumers, because this strategic product is quite limited in terms of quantity and it is difficult and costly to develop alternative resources, such as green energies. The global economic development (in all sectors) depends on the energy use and, above all, on the oil and gas availability, so the Iraq oil industry is connected to the requirements of the global economy, which is now in its phase of globalization.

Based on this idea, the new Iraqi regime has developed and implemented new economic policies, petroleum products being considered strategic ones, because they greatly influence the development of national and world economy. Iraqi economy is linked now more or less to the world economy and there are interdependencies and intercorrelations, which call for new long-term vision. Iraqi government representing the new regime has understood the need for cooperation with the United States, the EU and other countries in order to transform the economic policy of Iraq and especially the oil sector from a system similar to a socialist economic system into a free market system within the framework of globalization process.

Conclusions

Oil remains a vital strategic product for the all world economies, ensuring important revenues which will continue to form an essential economic wealth for all countries

possessing this product. This wealth is actually an insurance bill that provides a fixed and safe income, so Iraqi government must extract oil in an amount that meets the needs for foreign currency, and maintaining sufficient reserves underground. In my opinion, this procedure will be applied until at least we may provide the political stability and citizen security in the country. Based on the fact that oil revenues do not represent financial surpluses, but only a part of the national wealth, it is not in the interest of Iraq that they are scattered through excessive purchase of consumer goods. Instead, a large part of them must be invested in economic and social sectors. Funding of these consumer expenses and purchasing of consumer goods should be made from incomes brought by investments targeting economic growth and substantially contributing to the increase of goods exports.

The best way to invest these revenues is in major economic projects developed with industrial countries or by acquiring economic objectives from these countries, or from the bank interest of oil financial funds, especially in this stage of economic stagnation provoked by financial and economic crisis that has hit European countries, United States and some Arab countries.

The largest part of Iraqi investments abroad is targeted to foreign countries developing oil projects, meaning that the investment value will increase due to increased oil and gas prices which remained at very high levels in the last years. Also Iraqi and Arab oil-producing countries participation in purchasing a transport fleet, the use of incomes for building dams, water tanks and for setting up a common Arab bank and other economic projects will contribute to a rapid economic development and to the rising of living standards.

Many Arab oil-producing countries have resorted to allocating a large portion of oil revenues for foreign investments in real estates, banking sector and tourism due to poor absorption capacity of their economy, but Iraq may use its oil resources in the development of both the agricultural and the food industry, in investing in the tourism sector, in the construction of joint regional projects with other countries, for example petrochemical projects, processing industries, common commercial banks and others sectors that increases the participation share of non-petroleum sectors to gross domestic product, given the fact that oil is an exhaustible resource, and other substitutes could reduce the dependence on oil in the next decades. Huge wealth/resources that Iraq possesses, especially oil, may play a leading role in developing the country's economy in all branches.

In the first stage, the best strategy for Iraqi oil revenues is to use them in the oil industry, by building oil refineries for processing distributed on a rational scale in the country. The main role of these refineries is to produce petroleum products that will meet domestic needs and to export the surplus of these products to the world market for increasing foreign currency earnings. It is in Iraqi interest to process and transform the crude oil into petroleum products (gasoline, diesel, kerosene and paraffin) with prices that exceed the price of crude oil and thus to absorb a certain number of unemployed people. Upgrading of oil industry by introducing modern techniques of production will increase the output from a quantitative and qualitative point of view, based also on projects which include petrochemicals, polymers and fine chemicals.

Because oil is an exhaustible resource, it is important that oil revenues are used to develop the agricultural sector, because Iraq is quite rich in land fertility and has enough water supply which distinguishes it from the rest of the neighboring countries. History proves that agricultural wealth was the base in the construction of Mesopotamian civilization which was the first human civilization well-known in the world. The agricultural sector has not lost its leading role to date in terms of the construction and development of Iraq.

In addition to the development of oil industry and agricultural production, as mentioned above, it is possible to use solar energy for heating and lighting in Iraq and also in other areas that also require funding to build and develop them. Iraqi oil depletion trend is

however one on a very long term, because the oil reserves will last still some decades, but any responsible government would focus on a diversification plan for the state natural resources and economic activities, and reduce the excessive dependence on one or two resources. This important strategic vision should be included in any strategic economic priorities set by Iraqi authorities for an optimal use of financial resources, allocated not only for oil production and export but also for other economic and social sectors.

References

- **Abdul Aziz, Musbah**, 2005, *The bases of petroleum industry*, Dar Al Amin Publishing House, First Edition, Cairo;
- **Haidar Ali, Al Dulaimi** 2009, *Crude Oil in Iraq's Economy*, Ph.D. Thesis, Craiova University;
- **Hussain, Abdulah**, 2000, *The Future of Arab Oil*, Arab Union Studies Centre, Beirut, Liban, November
- **Ionescu-Heroiu, Marcel**, 2013, *Mirage of resources. Why Romanian economists don't talk about when they talk on gold and natural gas*, Foreign Policy Romania, Bucharest, July-August;
- **Prisecaru, Petre**, 2007, *Uncertain Prospects and Different Scenarios on Oil Prices*, Romania's Energy and Sustainable Development, Expert Publishing House, Bucharest
- **New Culture Review**, 2005, *London's Congress*, nr 316, Irak;
- **OPEC**, *Annual Reports*, 2000-2010
- **International Energy Agency**, 2012, *Key World Statistics*.
- **International Energy Agency**, 2012, *Oil Market Report*, March 19.
- **US Energy Information Administration**, 2012, *International Energy Statistics*.
- **Wikipedia**, 2012, *Economy of Irak*

SWEDEN AND TURKEY: TWO MODELS OF WELFARE STATE IN EUROPE

Simona Moagăr Poladian¹
Andreea-Emanuela Drăgoi²

Abstract

Our paper analyzes two models of economic development: Sweden and Turkey. The main objective of this analysis is to highlight in which way two countries with different development strategies, economic geography, mentality and culture have managed to maintain growth before and during the global economic crisis, becoming gradually genuine models of welfare state. The analysis undertaken in this paper is, consequently, divided into two parts. The first shows the Swedish model of welfare state, that was an inspirational one in the '70 and '80, and its specific strengths and vulnerabilities. The second part summarizes Turkey's economic development over the past decade, emphasizing comparative advantages that have made it the 16th largest economy of the world and its strategy in terms of managing the international economic crisis. The final part of our comparative approach aims to respond to the following question: may those two economic models be considered proper economic lessons for the other states that are confronted with economic vulnerabilities?

Keywords: *welfare state, model of economic development, comparative advantage, international economic crisis.*

JEL Classification: D7, D78, E, H, E01.

Introduction – the concept of welfare state

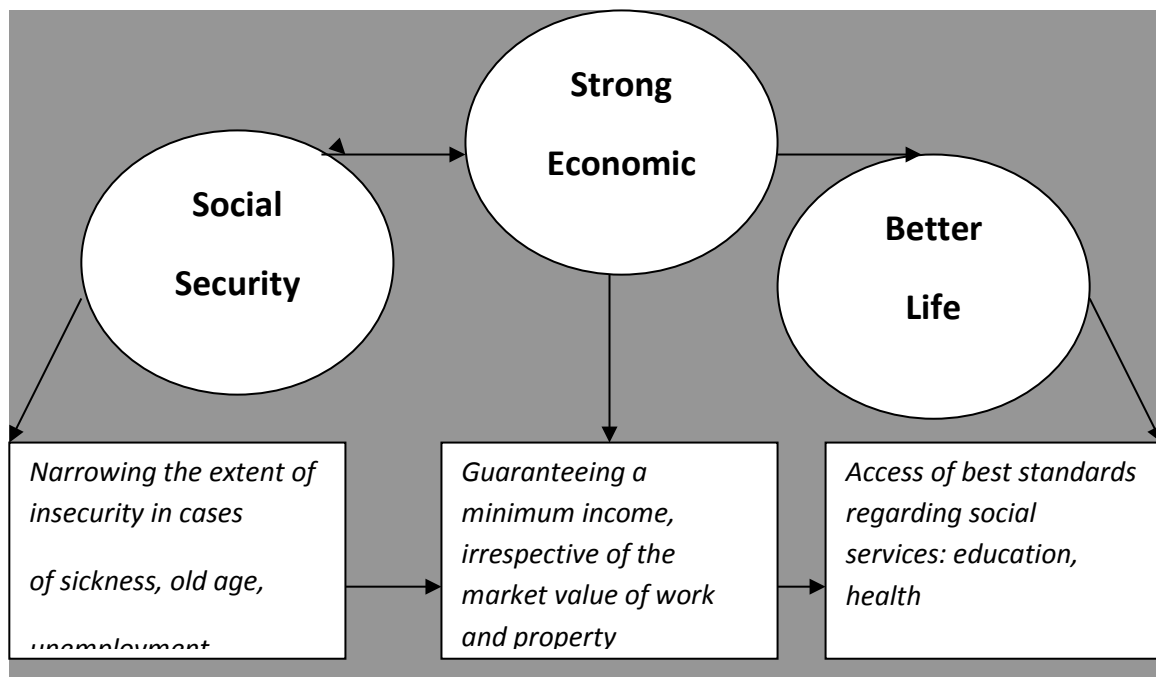
As stated in the literature in the field (Pierson, Castle, 2010), the current challenges of the new contemporary economies (globalization, European integration, demographic and political changes) have made necessary the reconsidering of the welfare state paradigm. Some analysts (Daly and Lewis, 2000) argue that the concept of welfare state involves three fundamental dimensions: a strong economic growth, a powerful social security system and a better life quality for the citizens of the state in cause.

Others (Briggs, 2006) considers that a welfare state is a state in which organized power is deliberately used (through politics and administration) in order to modify the play of market forces on three directions: first, by guaranteeing individuals and families a minimum income, irrespective of the market value of their work and property, secondly, by narrowing the extent of insecurity by enabling individuals and families to meet certain social contingencies (for example sickness, old age benefit and unemployment) which lead, otherwise, to individual and family crises, and thirdly by ensuring that all citizens, without distinction of status or class, are offered the best standards available in relation to a certain agreed range of social services.

¹ Ph.D., Senior Researcher in the Institute for World Economy of the Romanian Academy, Bucharest, Romania, e-mail: smpoladian@yahoo.com.

² Ph. D., Senior Researcher with the Institute for World Economy, Romanian Academy, Bucharest, Romania, e-mail: andre.emanuela@gmail.com.

Figure 1: The paradigm of welfare state



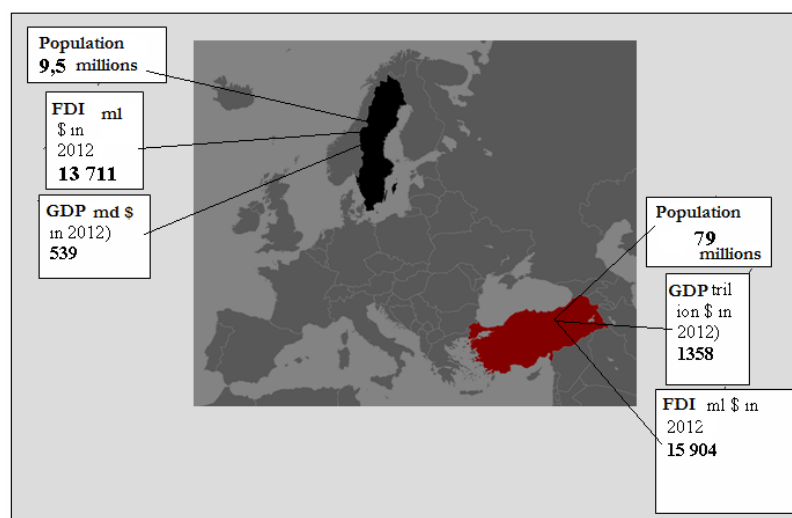
Source: Authors synthesis based on literature in the field.

1. Why choosing Sweden and Turkey for our comparative analysis?

In some theoretical approaches (Baar, 1993) on the concept of welfare state it is argued that the concept itself defies precise definition, but it is our opinion that we cannot talk about genuine welfare in the absence of strong economic growth. As a consequence, both states (Sweden and Turkey) have at least the minimum premises to provide welfare for their citizens, because they both have managed to maintain a good economic development before, and even after the international economic crisis.

Although there are clear distinctions between those states in terms of geo-economics, as some analysts have observed (OECD, 2013), the economic performance proved by those two states in the last years is undeniable.

Figure 2: Sweden and Turkey – brief geo-economic presentation



Source: Authors synthesis based on literature in the field.

Sweden – a small, but prosperous Nordic state

Sweden had maintained the neutrality in the Second World War and this option had permitted to accumulate wealth and to avoid huge losses the other European countries had recorded.

Presently, the middle class represents approximately 79 % from the total population, being one of the highest proportions on the world. In 2012 Sweden was on the 10th position on GDP/inhabitant in comparison to 3rd place at the end of 70's.

Sweden is among the first eight European states with the highest income tax rates in the world and the first among the Scandinavian region that has an average level of 48%. The highest income tax rate of 56.6% is recorded in Sweden, in order to cover the substantial social costs like free education, a large part of healthcare and public transport.

Sweden's welfare expenditures amount to 37.9% of GDP, including education, in accordance to OECD statistics in 2012.

Turkey –Rising of a geo-political power

More than half a century, Turkey was "the only democratic and secular muslim state" and an eastern outpost of the West. Currently, we consider that, economically, Turkey has the potential to become a new development performer (like China) of the Middle East region and has the political potential to emerge as a pan-Islamic Commonwealth. Presently, Turkey is no longer defined as a border state, a country at the periphery of the EU, but rather as a central country, with a pivotal political power that may afford it to disagree with the West when its national interest requires³.

Currently, Turkey is in the top 20 economies in the world and has a geographical position that enables to control a significant part of the flow of energy resources from Central Asia to Western Europe, both through existing pipelines to transport oil and natural gas and by those projected to be constructed. Turkey has also a favorable global political and strategic situation, most Muslim countries having a more cautious position to the West considering Turkey as a possible pan-Islamic leader.

2. Sweden – economic growth evolution before and after the crisis

The triumph of the Swedish social prosperity model has concerned responsiveness of many leaders of the world mainly under the present international economic circumstances when attention of the world is focused on finding a long term solution to the challenges brought by the crisis. The international financial crisis, which erupted in the autumn of 2007, has affected this country in a slight manner. In 2009, Sweden went into in a short recession caused mainly by the export demand reduction.

Structural reform measures that were right applied in the early of 90's are valuable in present too. The fact that Sweden hasn't passed through a similar recession cycle as the majority of European countries was mainly due to the success of reform that was applied at the early of 90's.

Sweden entered in a period of substantial interferences and radical changes at the end of '80s and the first part of '90s. The worst recession ever known after the Second World War had determined Swedish decision factors and population that their well-known model should be developed and upgraded to the real dimensions.

³ Turkey opposed to the integration of new states into the Black Sea Economic Cooperation Organization because it could be a precedent for a new analysis on the rights and legal status of the Bosphorus and Dardanelles straits - regulated by the Montreux Convention of 1936.

But the Swedish pragmatic behavior has managed to implement the proper measures. In the early 90's the new Centre-right government lead by Carl Bildt applied severe but proper measures that finally reformed the pension system, banking and taxes framework.

The main measures implemented by Swedish government were:

- Creating an independent Central bank;
- Pension reform;
- Wage increasing in line to rising competitiveness;
- Budgetary reform;
- Promoting exports;
- High competitiveness and specialisation in industry.

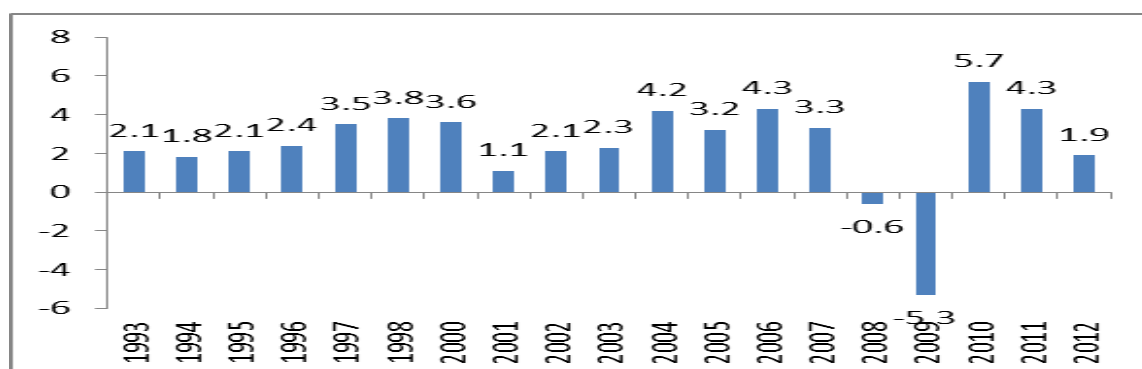
Now in Sweden there is a new restoring welfare model that successfully combines the markets liberalism with not so quite high taxes and also with social protection.

Sweden model has become in time a special lifestyle model in the whole world.

A more profound analysis of this model highlights the fundamentals that stimulate such a construction in one of the Nordic European states.

One of the most important facts that stimulate the distinction of the Swedish model is the 2.1 per cent average growth rate of GDP in the 1993-2012 periods that exceeded by 0.9 p.p. the European Union (see Graph 3) as a whole in the similar period. This gap between Sweden economic development and the EU as a whole could be the answer to the question if Sweden model is a real pattern for the other countries.

Graph 3: The evolution of GDP in Sweden between 1993-2012, %



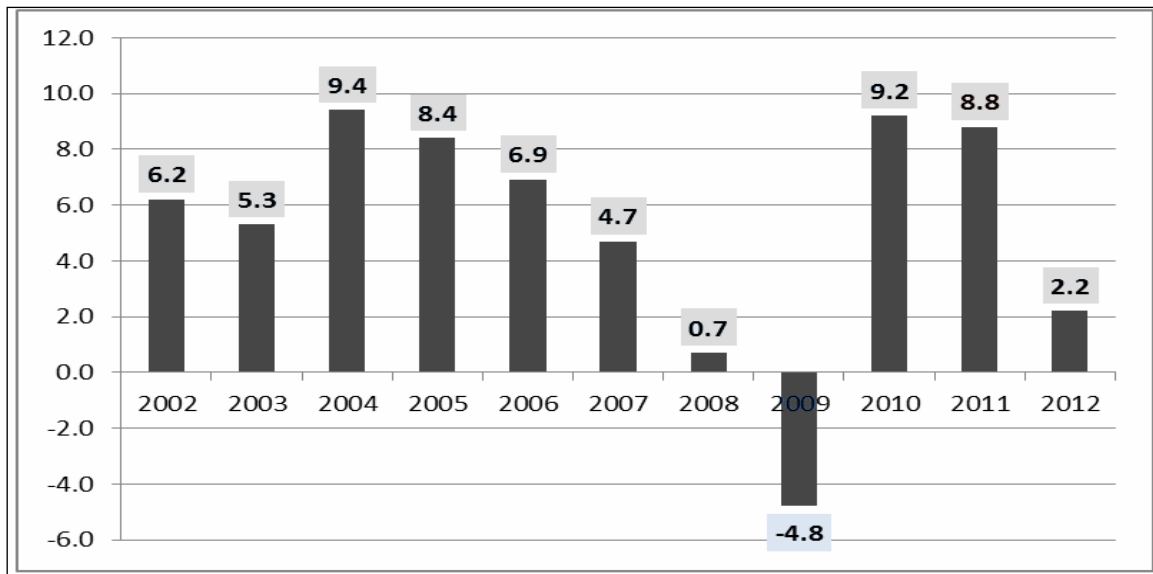
Source: Eurostat and national data, 1994-2013

In the Global Competitiveness Index Sweden constantly usually ranks in the first 10 places in the world. For instance in 2013 it ranks on the 4th position.

3. Turkey - economic growth evolution before and after the crisis

According to the latest national statistics (Turkstat, 2012), from 2002 to 2012, the economy of Turkey has maintained a constant growth rate with an annual average of 5.2%, interrupted only in 2009 (see Graph 4) the year of international economic crisis. In that year, Turkey registered a negative GDP rate (-4.8%).

Graph 4: Turkey's annual growth rates of GDP (2002 – 2012)



Sources: OECD, Economic Outlook, 2013 and Turkstat, 2013

As some analysts have shown (Oktem, 2012), the strong GDP growth, including GDP per capita (according Turkstat, GDP per capita has tripled from 3,492 USD in 2002 to 10,504 USD in 2012) is based on the national strategy (Medium Term Programme) which aims to strengthen macroeconomic and financial stability by decreasing the current account deficit, reducing inflation and improving public fiscal balances. The same analyst has shown (Oktem, 2012) that in the new economic world, in which the West is losing its powerful economic position, Turkey has what it takes to play a significant role on international stage: economic and political pragmatism and a functional economic development strategy that has enabled a fast recovery from the global financial crisis.

4. Sweden and Turkey – main drivers of economic growth

Sweden and Turkey are very different in respect of economic potential and even economic development strategy, but it is obvious that both countries have managed to perform well, registering even a fast recovery after the international economic crisis. In this part of our analysis we highlight the main comparative economic advantages (see Figure 3) that allowed those countries to perform well even in a period of international economic turmoil.

Figure 3: Sweden and Turkey – drivers of economic growth

SWEDEN	TURKEY
<ul style="list-style-type: none"> • Skilled labor force • High productivity of labor resources • High standards in education since the 90's • Deregulation of markets • Free competition • Investment in R & D • Political, financial and social stability 	<ul style="list-style-type: none"> • Sustained economic performance • Young and dynamic population • Skilled and competitive workforce • Innovative investment climate • Low fees • Facilities for start-up • Open economy

Source: Authors synthesis based on literature in the field.

When analyzing economic performance of both countries, we must underline that their economic performance is subject to some vulnerabilities, as we are about to show below.

4.1. Weaknesses of the Swedish welfare state

The Swedish model was built in an approximately 60 years of social democratic dominance, but the inefficiency has gradually been increasing by giving more credit for sustaining the standard of life instead of proper and effectively structural measures. Reaction was a dramatic drop from the third position as the richest country in the world in the latest 70's to the 17th position now.

Among the Swedish welfare state vulnerabilities there is also the ageing population determined mainly by a lower rate of birth that stimulates "open gate" for immigration since late of 70's. Like the rest of Scandinavian countries that have been confronted to ageing population, Sweden policy started to stimulate political asylum seekers especially those who have come from Eastern Europe, Iraq, Iran and Africa. Statistical data shows that in present around 15% of the Sweden population came from abroad. The substantial immigration flow that has been continuous in the last 30 years and implied high integration costs has pressed much on education, language training and social benefits.

An important problem that cannot be solved easily in Sweden is the unemployment rate of 22.9% among youth (between 15-24 year old), that means a higher proportion than the OECD average of 16, 2% (see www.betterlifeindex.org)

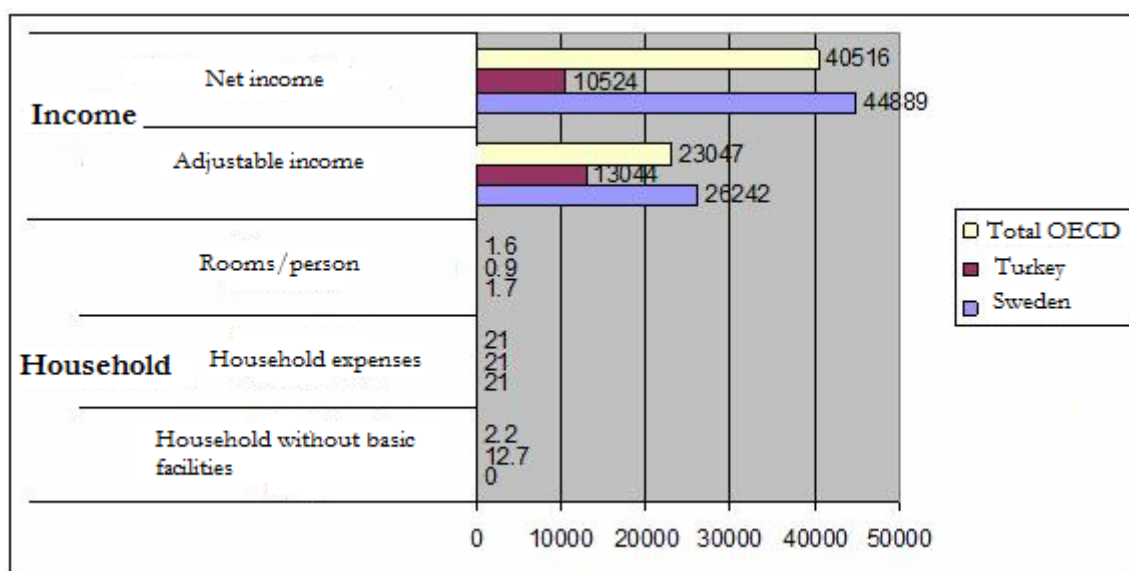
4.2. Weaknesses of the Turkish welfare state

Although the economic performance of Turkey is considered a remarkable one (OECD, 2013), in the field literature some analysts (Memisoglu, 2013) have shown that, the sustainability of its future development is subject to some vulnerabilities: high and volatile inflation, with an average of 75% between 1990–2001, unstable growth performance, with an average of 5.2% in the period 2002-2012, but in the range of - 4.8% to +9.4% and fragilities in the banking sector (poor lending activity, average credit growth of 3.6% between 1999 - 2012).

5. Sweden and Turkey performances according to Better Life Index⁴

Measuring better live performances is essential in order to determine if a state can be considerate a model of welfare, the value of macro-economic indicators being insufficient in order to draw clear conclusions on the matter, as we have shown previously in our analysis. In the context in which many of the global economies and societies have been affected by the global financial crisis, understanding how people's lives can offer a genuine vision of how the crisis has affected the welfare on global level and in the two specific countries that constitute the subject of our analysis. According to Better Life Index, Sweden is scoring well on education, life condition and net income (see Graph 5), while Turkey is performing well in terms of job security, employment and career opportunities.

Graph 5: Sweden & Turkey positions in terms of household income and facilities in 2012

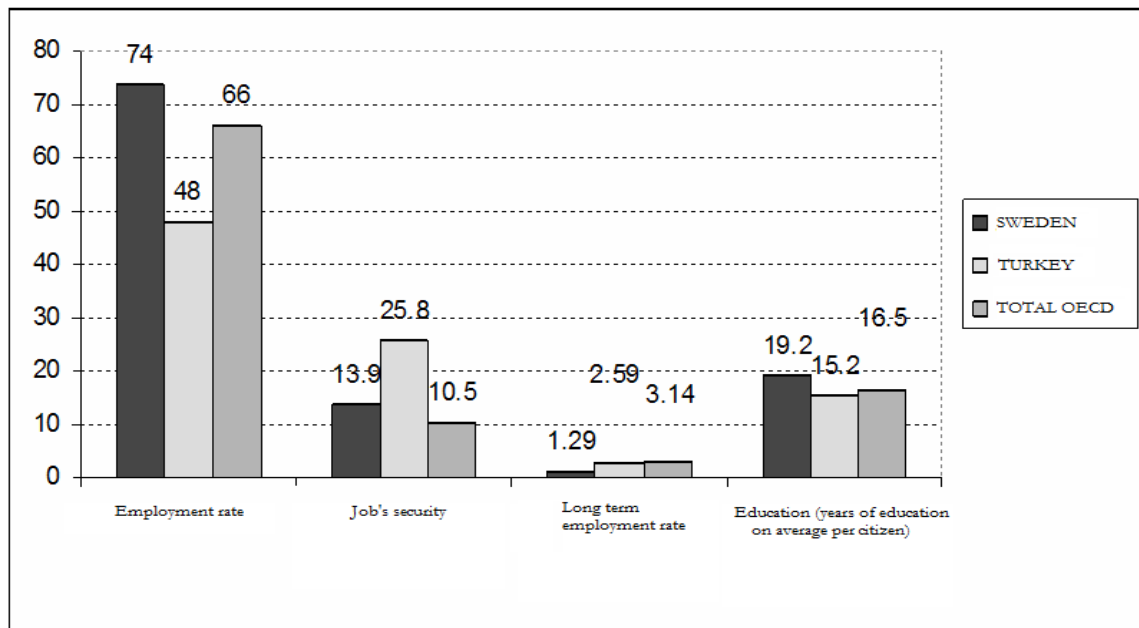


Source: OECD – Better Life Index Statistics, 2013

As we are about to show subsequently (in Graph 6), Sweden is scoring on the OECD countries average in terms of education and employment rate, while Turkey is scoring high on job's security and also on employment rate.

Graph 6: Sweden & Turkey positions in terms of education and employment opportunities in 2012

⁴ This index, developed by OECD allows comparing well-being across countries, based on 11 topics the OECD has identified as essential, in the areas of material living conditions and quality of life.



Source: OECD – Better Life Index Statistics, 2013

Conclusions

Sweden and Turkey's economic development, during and immediately after the global economic crisis, has shown that it is possible to register a rapid recovery after a slump in economic growth. The development of the Turkish economy shows that an open, flexible and adaptable economy can attract substantial FDI flows maintaining a sustained development pace on long term. The development of the Swedish economy reveals that the "welfare state" could be based on economic growth only when public resources are used responsibly and in a sustainable manner. After the most significant economic and financial crisis at the beginning of '90s, in Sweden the national welfare model has been restored and nowadays this model successfully combines the market liberalism with not so high income taxes compared with the previous levels and also to more specific and reduced social protection.

Are these two countries (Sweden & Turkey) possible "lessons" for Romania and other EU countries? Our analysis argues in favor of an affirmative answer. Although when we refer to those two models of economic development we must take into consideration the economic particularities of both states and also path dependence theory. However, the conclusion that emerges is this: sustainable growth that can withstand the shock of a major economic crisis is possible and it should be based on some vectors: open economy, productivity increase, free competition, competitiveness through innovation and investment in education and human resources qualification.

References

- Baar, N.A., 1993, *The economics of the welfare state*, Stanford University Press;
- Briggs, Asa, 2006, *The Welfare State in a Historical Perspective*, The British Journal of Sociology, No.2;
- Daly, M.; Lewis, J., 2000, *The concept of social care and the analysis of contemporary welfare states*, The British Journal of Sociology, No.1;
- Memisoglu, Cagri, 2013, *From Crisis to Stability: The Experience of Turkey*, Foreign Policy;
- Oktem, Kerem, 2012, *Turkey's economic strategy in the new world*, Foreign Policy, 2012;
- OECD, 2013, *Economic Outlook*, Paris, May;
- Pierson, Christopher, 2010, Castles, Francis, G. – *The Welfare State Reader*, Stanford University Press

A MATHEMATICAL MODEL FOR ASSESSING THE FACTORING ACTIVITY

Alexandru Olteanu¹
Mădălina Rădoi²

Abstract

Originally – being over 4,000 years old – factoring was first used in the fertile territory of old Mesopotamia at a time when the famous Code of Hammurabi was drawn up. However, many years passed until the British colonists started to use it on a large scale at a time when the metropolis would pay them sums of money for the merchandise that colonists sent to the old continent until they collected the invoices.

In Romania factoring started to play a major role in financial operations for it led to the increase of liquidities on the market.

According to the Romanian legislation, factoring is a contract concluded between a party known as “the client”, which supplies merchandise or provides services, and a banking institution or specialized financial institution known as “the factor”, whereby the latter ensures the financing source, collects the receivables and protects credit risks, while the client assigns to the factor the receivables resulting from the sale of goods or the provision of services to third parties.

Keywords: factoring, non-recourse factor, accounts receivable, conventional subrogation of accounts receivable, assignment of accounts receivable, right of recourse, factoring commission, financing commission, irrevocable letter of credit, letter of bank guarantee.

Introduction

In international practice (according to¹ The Convention of Ottawa / May 1988 – The International Institute for Unification of Private Law in Rome) factoring is defined as a contract relationship between a seller and a factor, whereby:

a) The seller assigns to the factor all accounts receivable resulting from the sales contracts – provision of services by the former to different partners – (these receivables are different from the ones for personal consumption) and notifies debtors as to this assignment;

b) The factor is going to provide at least two of the following services:

- financing on the basis of invoices (in general 80% of the value);
- administering accounts receivable;
- collecting accounts receivable when they fall due;
- protecting against risk of non-payment.

The financing service ensures immediate financing to a proportion of maximum 80% of the counter value of each invoice for merchandise delivery / provided services, of which the factor's commissions are deduced and the rest (20%) is paid when collected.

The administration service for accounts receivable deals with: identification and management of accounts receivable resulted from a factoring contract through accounting; separate

¹ Professor, Ph.D., Faculty of Economic Sciences, “Nicolae Titulescu” University, Bucharest, Romania, aolteanu@univnt.ro

² Associate Professor, Ph.D., Faculty of Economic Sciences, “Nicolae Titulescu” University, Bucharest, Romania, madaradoi@gmail.com

identification of financed invoices and invoices that surpass the non-payment risk-covering level; reporting invoices that have to be paid at the end of every month.

In its turn, the collecting service attempts to collect invoices when they fall due and to warn debtors who do not observe deadlines.

Finally, the non-payment risk coverage service against debtors is meant – in case of risk – to ensure that the factor generally covers the counter value of non-received accounts (20%) within 120 days after the accounts receivable fall due.

One has to remember that factoring is mainly created for companies which are interested in immediately obtaining liquidities for the increase of production and turnover and which use factoring for collecting accounts receivable, and protecting themselves against non-payment risk at specialized institutions (the factor). Consequently, while the credit may only grant financing, factoring offers a set of services: financing, surveillance, collecting, and protection against risk [4].

As regards credits, the analysis focuses on the creditworthiness of the borrower, while factoring mainly implies the analysis of the client's partners' creditworthiness. At the suggestion of its clients, the bank may pursue, as a factor, factoring operations for internal and external accounts receivable which are materialized in invoices that must be paid in RON and currency.

The selection of clients requires the analysis of the entire business and the deep understanding of all aspects involved by the business so that the factor might decide whether it is possible or not to pursue factoring operations.

The parties' obligations deriving from factoring operations are mentioned in the factoring agreement whereby the client assigns the accounts receivable to the factor who obliges himself to take over the activity of surveillance, collection, financing and protection against non-payment risk in exchange of a tax [2] (AGIO).

The assignment of accounts receivable is achieved through a conventional subrogation, through the simple sending of invoices, without any other formality, so that the factor becomes the owner of the accounts receivable.

As the owner of accounts receivable, the factor does not normally have the right of recourse against the client. The possibility to give up the right of recourse depends on: the indubitable existence of commercial receivables; the materialization of accounts receivable in effective provision of works and services or in certain sales of merchandise of the law of the negotiable instrument [1]; the lack of any financial links between debtors and the client; the lack of litigations, disputes between the two parties; the provision by the client of any information on the aspects that might affect the good pursuance of factoring operations once the client has received such information.

One should mention that the factor reserves the possibility – by a written notification – to withdraw the agreement or to modify the stipulated conditions for certain debtors that are specifically identified so that these decisions would not affect the already accepted receivables. In motivated situations the factor can refuse to agree with an accepted debtor's accounts receivable.

The factor does not guarantee the good pursuance of the economic agreement which lies with the client entirely.

As a condition prior to the pursuance of factoring operations, credit officers are obliged to check whether products were manufactured and delivered effectively.

Factoring operations can be pursued only if invoices have not been assigned with a view to reimbursing other debts and if these debts do not fall due within 180 days since they were issued. If invoices were credited from another source, financing through factoring can be granted only if the granted credit can be reimbursed with those sums.

The client is obliged to provide the factor all information that is relevant for him and for the good pursuance of the business, the invoicing procedures and the accounting evidence up to the complete liquidation of operations resulting from the factoring agreement.

The payment of accounts receivable is regularly made by the bank-factor in the currency stipulated in the economic agreement. If the client asks for the payment to be made in a currency which is different from the one provided in the economic agreement, he assumes the risks and costs incurred by the exchange rate.

As to AGIO operations, they include the factoring commission, the financing banking commission, as well as other commissions and charges as required by banks / international factoring societies. The financing commission is regulated when accounts receivable are collected depending on the financed sums and the effective number of days of financing.

If a debtor refuses to pay, the factor will inform the client while motivating the non-conformity of the sold product or the provided service, as regards the clauses of the commercial agreement, except for the situations in which the refusal to pay is motivated by a solvability problem.

If the litigation is not settled by the client within 30 days from the date he was informed about it, the factor will ask the latter to make a payment that represents the counter value of the contested accounts receivable; taxes which have already been charged are not included. If the client cannot make the payment, the value of the accounts receivable will be recorded as “past due accounts receivable” and it will probably be recovered through forced execution if necessary.

If certain invoices, whose ownership was previously transferred to the factor, prove to be litigious because of reasons that are different from the debtor’s insolvency, the factor may withdraw – after 30 days since the litigation was notified – out of the subsequent invoices or the client’s account a sum of money that is equal with the sum incurred by the litigious invoices.

Factoring operations are guaranteed with accounts receivable (the invoices), which through the factoring operation are transferred in the property of the bank or of the financial society that took them over.

All the obligations of the factor and his/her client are provided in the general conditions – annexed to the factoring agreement – and are completed with particular conditions stipulated by each party.

Clauses adopted for factoring operations (in RON, respectively in currency) will be specifically provided in factoring agreements concluded by banks and those who benefit from such operations, separately for RON and currency.

Literature review

1. Analysis of internal factoring in RON

The promotion by a bank or financial institution of factoring services in RON is generally accomplished as non-recourse factoring, but, however, if deemed necessary, it can be accomplished as recourse factoring, i.e. the factor provides only financial and administrative services for accounts receivable. Thus, the bank will have two reimbursement sources for the granted financing, that is from the debtor and, if the latter does not pay, from the client.

Each application for financing will imply two aspects:

- analyzing the credit risk;
- analyzing the “business factorability”.

Since – no matter what type of operation is pursued: recourse or non-recourse factoring – the payment of the accounts receivable that the bank bought is made by debtors, it results that the credit risk assumed by the banks is directly linked to debtors. Thus, the bank will face credit risk in its relation to debtors within the factoring **coverage limit** upon which

it agreed and within the risk limits it established. Credit risk would be double for the bank and it would artificially increase the bank credit portfolio if the applicant also faced credit risk. That is why the applicant's creditworthiness will be analyzed without increasing credit risk for him.

In order to benefit from factoring services, clients must produce and trade goods and services which pose the least possibility of any litigation to occur. Thus, the goods that require a high degree of finishing (complex machinery), accuracy in execution (high fidelity devices and products) or an exclusivist outlet (for unique products) are not fit for factoring services.

On the basis of the application for factoring and subsequent to the analysis of the information presented by the client, as well as on the basis of the client's history or relationship with partners, the number of past litigations in which he might have been involved, his capacity to ensure quality products and services, as well as the required quantity of products and services, credit officers from banks will select clients that intend to benefit from factoring services by submitting the factoring form filled in by the client to the Factoring Department within the Bank Central, accompanied by an analysis of the applicant's creditworthiness.

On the basis of the factoring form and accompanying documents, the Factoring Service is going to analyze the "business factorability".

If the business run by the client meets the factoring requirements, the specialty service is going to require bank units to analyze the debtors' creditworthiness and to assent coverage limit availability for each debtor separately.

If the Factoring Service considers that the business is not fit for factoring, the application is rejected and the client is informed about this.

Bank units will identify which debtors are the clients of the banks and which are not, will analyze in reports the creditworthiness and credit risk for each debtor on condition that debtors meet the following criteria: high financial standing, good duty service, payment capacity before due terms, and a credit rating of maximum 3 etc.

For debtors who are not clients of the factor bank, the analysis of creditworthiness and credit risk will be made on the basis of financial situations which they are required to present.

If required information and situations are not presented, accounts receivable will not be collected through factoring operations.

Once the debtors' creditworthiness is analyzed and approved by the management committees of the bank units, the Client Analysis Directorate together with the Factoring Service within the Bank Central will subject the whole transaction to approval by competent bodies within the Bank Central.

Every semester factoring exposure limits established for each debtor are going to be revised any time proposals are made for maintaining / modifying total exposure limit for the debtor.

These factoring limits are included in the exposure limit and (where the case may be) in the risk limit for the debtors.

Subsequent to the approval of the transaction, the bank is going to conclude a factoring agreement in RON with the client. Once the factoring agreement is signed, the client is bound to notify the debtors as to the existence of the contract and as to the fact that all payments are going to be made in the account of and in favor of the factor. Notification letters are written for each debtor separately. Debtors will have to sign the agreement statement which is adapted to the factoring operation (instead of credit contract, a factoring agreement will be mentioned and terms communicated by the bank will replace contractual terms) and send the original document to the client in order to have it delivered to the factor.

Once the debtor is notified, it is mandatory for all original invoices, including their copies, to include the following information:

“The present invoice is assigned in favor of the Commercial Bank which is entitled to receive its counter value. The payment of the invoice shall be made by and in favor of the Commercial Bank(Central / Branch / Subsidiary) with premises in (address).....telex, fax.....in the account.....opened at, mentioning the number of the invoice and its issuer.

Any complaint or litigation related to this invoice shall be immediately communicated to the Commercial Bank, fax.....”.

Invoices accompanied by supporting documents (such as: delivery note, consignment waybill etc.) and the subrogation receipt will be offered to the factor. The latter will accept or refuse – within the limit of the approved limits – the payment of the invoices.

If necessary, the factor will make use of the right of recourse against the client, and the exercise of this right is possible after 30 days passed since the accounts receivable fell due. The right of recourse will be mentioned in the factoring agreement.

Accepted invoices will be immediately financed in proportion of maximum 80% of their counter value, in accordance with the limits agreed upon for the debtor(s) and in conformity with the conditions stipulated in the annex to the factoring agreement; commissions to the bank will be deduced from this percentage. When collecting the accounts receivable, the economic agent will be offered the rest of 20% of the value of the accepted invoices.

A special IT program will be used for recording all invoices per debtors, due terms, history, including invoices which were accepted and unaccepted for payment and which were taken over when collection is made, as well as invoices that have to be paid and the paid invoices etc. At the end of every month, the factor is going to offer economic agents centralized reports regarding administered invoices.

For an enhanced protection of the bank against the risk incurred by factoring operations, the bank will require, if necessary, further security, such as: assignment of accounts receivable from other contracts, margin deposits created from retaining parts of the sums that are used in the factoring agreement and the issuance of blank promissory notes by the client in favor of the factor; the bank may also ensure itself against financial risk of non-payment with insurance and reinsurance companies.

If, when the term falls due, the factor does not entirely/partially collect one or more invoices that are part of the factoring operation, he/she will act as follows: a) in case of non-recourse factoring, the bank will pay the client the difference of 20% of the agreed counter value of the invoice within 120 days since the invoice fell due; in the meantime the bank will exercise due diligence for recovering the sums that were not paid by the debtor or by the insurance-reinsurance company with which the bank ensured the risk of non-payment for the invoices; b) in case of recourse factoring, after 30 days pass once the due term is over, the bank will recover from the client sums which were not collected through the exercise of the right of recourse or by leveraging security.

2. Analyzing export factoring in currency

Besides the provisions related to factoring in RON and currency, other regulations are applied for external factoring. Thus, in order to be accepted, external invoices must meet one of the following conditions: the commercial export contract or any other similar legal document must provide an insurance payment (letter of credit or bank letter of guarantee); the risk of non-payment incurred by external debtors must be covered by an international factoring company approved by the Bank Central; an Eximbank insurance must be concluded against the country risk (except for Countries falling within the A category as indicated by

Bank Central); it is also necessary for an insurance to be concluded against non-payment risk posed by external debtors with any other insurance-reinsurance company that the bank agrees.

External (invoices) accounts receivable required by the client from the factor will be accepted and paid by the latter only within the limits imposed for each debtor and within the exposure risk limits established for external banks and factoring societies.

On the basis of the data presented by the client, the bank will contact banks and partner factoring societies that will analyze the external debtors' payment capacity. Banks and partner factoring societies will communicate to the bank their agreement / disagreement to take over the debtors' risk, as well as the coverage limit established for non-payment risk established for each debtor. The bank will communicate to the client the list of accepted debtors and any modification to the coverage limit made during the pursuance of the factoring operations.

The factor's client must inform his customers as to the factoring agreement concluded with the bank in currency through a "letter of notification" drawn up in accordance with the template imposed by the international factoring company / external bank or, as the case may be, by the bank; this letter will be accompanied by the subrogation receipt of his rights in favor of the factor. The factor may require the client any other document that would confirm or validate – in accordance with the law in force – the transfer of the accounts receivable through the factoring transaction, including the transfer of the accounts receivable to the international factoring company / the external bank.

As regards the irrevocable letters of credit and invoices [3] whose payment is guaranteed through a bank letter of guarantee, the financing will be made by the bank's client application, the subrogation receipt and the sales contract for accounts receivable in accordance with the exposure limits established by the General Directorate for Methodology and Risk Management.

Exceptionally, if the irrevocable letter of credit – accompanied by the documents required for payment by the external bank or accompanied by the delivered documents as provided for the letter of credit conditions and terms – is used as a the payment instrument, and, similarly, if payment is guaranteed through a bank letter of guarantee, the bank will be able to immediately pay all the accounts receivable (100%).

The factoring service monthly reports to the General Directorate for Methodology and Risk Management the situation regarding commitments for managing exposure limits approved for banks and factoring companies in relation to which the banks assumes a credit risk.

If, when the term falls due, the factor does not entirely / partially collect one or more invoices, which were the object of a factoring operation in currency, the factor will act as follows: a) the bank will pay the client the difference of 20% of the counter value of the accepted invoice within a period of 120 days that passed after the invoice(s) fell due; in the meantime, the bank will cash in the sum of money from the international factoring company; b) if the client concluded an insurance with Eximbank in order to be protected against the risk of non-payment due to external debtors and if the insurance policy was surrendered to the factor, the bank will pay the client the difference of 20% of the accepted counter value of the invoice after collecting damages from the insurer.

3. Proposal for a mathematical model applicable to the factoring activity

Trying to create a mathematical model applicable to the factoring activity is quite a difficult attempt. First of all, factoring implies operations of arbitrage which are meant to create liquidities. One can speak of a direct link between lack of liquidity and the necessity to

resort to factoring. Thus, the total commission paid by the economic agent who benefits from the factoring operation is recorded as a cost incurred for obtaining immediate liquidities.

In consequence:

The total value of invoices = commission + liquidity
(1)

The factoring operation cannot be, however, motivated only as a company's attempt to create liquidities, but also as an attempt to reduce the risk of non-collection or delayed collection of invoices on a long term.

One must not ignore the fact that an acute lack of liquidities will make the economic agent accept a higher commission for the factoring operation or the fact that this lack will make the economic agent resort to factoring. The graphical representation of this phenomenon may be seen below (figure 1):

a) The ideal case

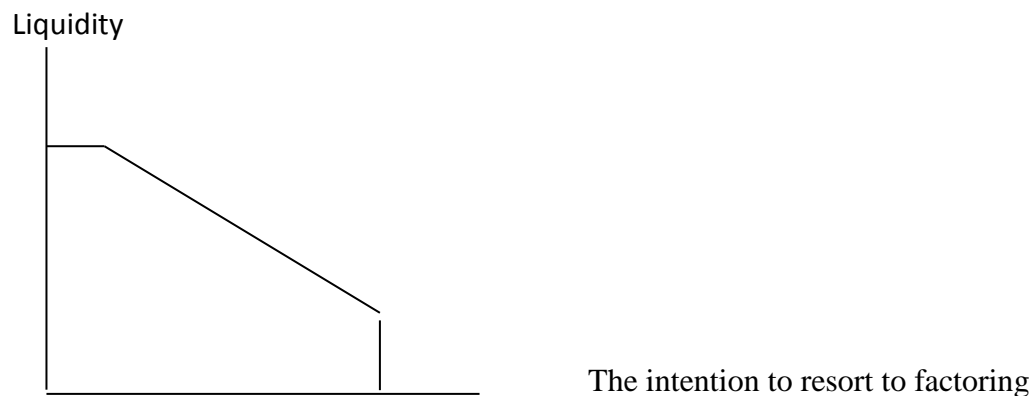


Fig. 1 The ideal case

However, there are other factors which can disturb the line, as one can see below:

b) The disturbed case

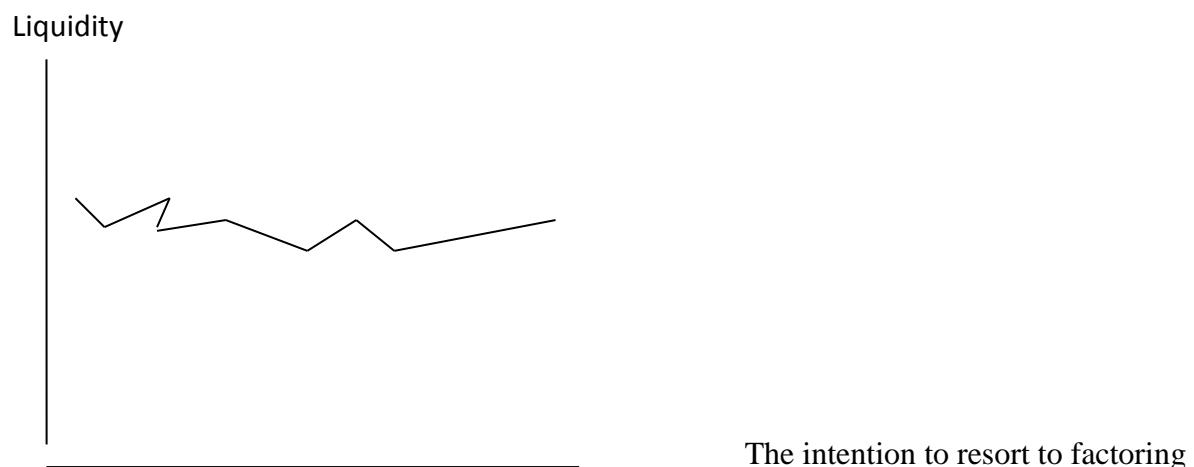


Fig. 2 The disturbed case

The factoring operation cannot be accomplished unless certain economic and social conditions are met.

In an instable economy regulated by an ever changing legislation, factoring cannot be accomplished in a proper way because the risk assumed by the factor would be too high.

On the other hand, the factoring operation would be ideal for firms lacking liquidities because they would pay the commission in order to immediately benefit from resources and transfer the risk of insolvency.

In a rational way, the economic agent will have to choose between liquidity and the cost of the factoring operation. This choice can be expressed as follows:

- Liquidity = $F(1)$

- Cost = $F(c)$

- $F(1) \downarrow = F(c) \uparrow$ risk is diminished

If we consider that the relation is linear, it will be expressed as follows:

$$\left. \begin{array}{l} F(1) = +ax + b \\ F(c) = -ax + b \end{array} \right\} \quad \text{where "a" is the liquidity coefficient}$$

If

$a < 0$

$F(1) \downarrow$

$F(c) \uparrow$

the graphical representation will be as follows:

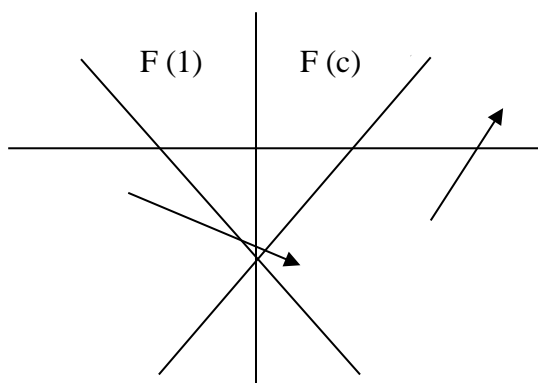


Fig. 3 The increase of cost and decrease of liquidity when liquidity coefficient is 0

If:

$a < 0$

$F(1) \uparrow$

$F(c) \downarrow$

the graphical representation will be as follows:

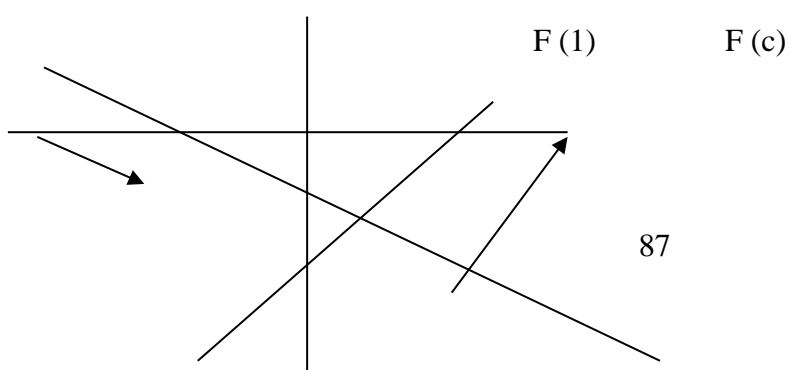


Fig.4. The increase of liquidity and decrease of cost in case the liquidity coefficient is higher than 0

In consequence, a positive liquidity coefficient indicates a proper level of liquidity, whereas the negative liquidity coefficient indicates a low level of liquidity if:

$$a = \frac{\text{liquid assets} - \text{current liabilities}}{\text{total assets}}$$

This relationship must be interpreted in relation to the premises we initially assumed. Thus, we have a linear function of liquidity and a linear function of cost. Lack of liquidity will determine the agent who must pay the invoices to accept a higher cost.

Considering the way functions were defined, one can notice that they are in inverse proportion.

The model presented above is an attempt to quantify the nature and intensity of the link between the two linear functions and to allow for a proper decision to be made to the interest of the economic agent who seeks to immediately obtain liquidities.

The following activities are not fit for factoring:

- building;
- ship repairing;
- manufacturing of fishing accessories;
- manufacturing of jewelry, fur coats and other luxury objects;
- manufacturing of cosmetics;
- services (except for international transport shipping services and services that allow the written confirmation of the beneficiary that the service was provided satisfactorily or that it will be provided entirely and in due time). One should also exclude from factoring those activities which imply:
 - dependence on one debtor or on few debtors (maximum 30% of the turnover, except for sales in loan); from one case to another, invoices presented by clients that depend on few debtors – depending on the existing security, quality certificates etc. – can also be accepted for financing;
 - issuance of invoices before merchandise is delivered or before the service is provided;
 - issuance of invoices which cover partially delivered merchandise and merchandise that is to be delivered;
 - issuance of invoices that cover stages of execution within a project whose cancellation leads to the nullity of all previously issued invoices;
 - issuance of invoices on the basis of contracts that forbid transfer / cession / subrogation thereof;
 - issuance of invoices that compensate imported merchandise;
 - issuance of invoices whose payment is made only if the merchandise is sold by an importer (payment that depends on selling);
 - return of unsold merchandise;
 - discounts that were not provided in contracts or that were provided with a higher value;
 - issuance of post-dated invoices (which allow the issuance of invoices on a previous date and extend the debtor's credit term without requiring the modification of the contract);
 - discounts of the counter value of the invoice as guarantee for good execution (especially in building), which will be returned when the warranty period expires;
 - long term warranty for products (2-5 years);

- issuance of invoices for samples, which risk not to be paid if the partner does not order the merchandise;
- payments in advance or on delivery;
- overdue invoices or invoices whose payment has not been made for more than 180 days;
- selling through intermediaries, if the owner of the merchandise / the provider of the service cannot be identified and there are no close relations between the producer and the intermediary;
- shareholder relationship between the producer and the beneficiary.

Conclusion

The factoring system has proved to be a facile instrument which ensures immediate liquidity for companies, as well as the running of the economic cycle by avoiding the risk of not collecting receivables from debtors. This financing system is much simpler in comparison with the system of credits and it ensures immediate financial sources for firms.

The application of the mathematical model to calculate the liquidity and cost of the factoring operation determines firms to choose factoring because it optimizes the efficient use of this financing system through a relation of proportionality between the linear function of liquidity and the linear function of cost.

References

- [1] Rodière R. "Droit commercial, effets de commerce, contrats commerciaux, faillites". Preciz Dalloz, Paris, 1970
- [2] Şaguna D.D. "Financial and tax law, Oscar Print Publishing House, Bucharest, 1994
- [3] Chaput Yves "Les effets de commerce", Press Universitaires de France, 1989
- [4] Basno C., Dardac N., Floricel C., "Currency, credit, banks", Didactic and Pedagogic Publishing House, R.A., Bucharest, pp. 260, 1994.

INVESTMENT FUNDS INDUSTRY IN ROMANIA

Adela Ionescu¹

Abstract

Capital market offers those who study it and those who use it as traders or as investors, a feature similar to a paradox. Her specific routine operations are regulated to the level of detail by laws, instructions, procedures or measures layouts while decisions on investments in securities and portfolio restructuring are taken under perpetual uncertainty. This has a twofold explanation, an objective one and a subjective one. Future prices, as well as successive conditions of stock exchange not necessarily flow from the past, thus one cannot predict their level and over them is hanging the conviction that any selected alternative action is probably the best without having any certainty that that is really correct and rational in an absolute mode. Even if the evaluation of factors influencing prices is a questionable one, there is the likelihood of good choices when doing a basic operation - selling or buying. Factors identified, evaluated and ranked may change in the next period their force of action or even the market structure so that exchange activity is at least difficult to determine. In this category is included the mutual fund industry, whose evolution in Romania was not without risk and has had a tortuous circuit thanks to immature capital markets and market actors but especially due to the permissive legislation during the start phase. A certain progress was recorded in the last 10 years, although the financial crisis made its mark on the capital market and revealed the negative impact of systemic risks.

Keywords: mutual fund, market risk, net asset value, market values, capital gains, securities, portfolio.

J.E.L. Classification: G 11, G 18, G 23.

Introduction

A mutual investment fund is a diversified portfolio of stocks, bonds, or other securities run by an investment management company. Funds must register with the a public authority (CNVM) and must comply with specific requirements. These regulations do not guarantee that a fund will be a profitable entity but they do provide certain safeguards.

The role of a mutual fund is to make investing activity a simple and cheap one. A very important advantage is that money is managed professionally. A specialized team takes buying or/and selling decisions, based on thorough detailed analysis. In addition, as market conditions change, the fund management is restructuring the portfolio so that financial objectives are achieved. The alternative would be to take these decisions by oneself, which would require an extensive knowledge of finance field and of capital market (Cornescu V., Crețoiu Gh., Bucur I., 2007).

Portfolio diversification is another benefit offered by mutual funds. These make investments in various stocks, and each fund investor owns a percentage of all the investments, according to the number of units held. Diversification of investments is one of the basic rules of investment as it leads to risk mitigation.

For example, a fund invests the same amount in the two kinds of stocks, which have different trends: a decrease of 10% and another 10% increase. Portfolio diversification causes the fund to lose nothing. Conversely, if it would have invested only in the first stock it

¹ Professor, Ph.D., “Nicolae Titulescu” University, Bucharest, Romania, ad.facultate@gmail.com

would have lost 10%. On the other hand, if he would have invested only in the second stock it would have gained 10%, but the risk assumed would have been higher.

Also, an important advantage of investments in mutual funds is the possibility to withdraw money anytime. Mutual funds are required by law to accept anytime to redeem securities issued. In this case, it is paid a withdrawal fee which depends on the period since the time of purchase of units. If the period is several months, withdrawal fee may be up to 10%. Subsequently, its value decreases and after 12 months many funds do not charge any commission. By this policy fund managing companies encourage investments on medium and long term.

The same idea is also designing tax system. If money is stored for more than one year then the tax due to the state is only 1% of income, compared to 16% otherwise. Investments in mutual funds are not guaranteed by the state and mutual funds are not participating in the deposit insurance fund. Investing in mutual funds is therefore more risky in this regard than a bank deposit of an individual with a value within guaranteed limits. There is the risk that investing in a mutual fund not to have the expected performance and even to lose the amount originally invested, partially or totally.

By making an investment portfolio, mutual funds reduce but not eliminate the market risk consisting of fluctuations in value of financial instruments which had been invested in. It also can not be overlooked the legal risk through the potential occurrence of legal constraints that lead to decreasing the value of units or suspend their redemption by the fund. Depending on the chosen time horizon it can be established then the risk which can be assumed. Usually, if the period is longer (over five years) a person may assume major risks while short-term investments require a more prudent approach. A higher risk however offers the opportunity to obtain a higher yield. All mutual funds are risky and do not guarantee recovery of the amount invested. From this perspective, the choice should take into account the sensitivity of the individual to the risks.

1. Investments funds in Romania

After a troubled period in the 90's when investment funds has passed through many difficulties, in the next decade the progress of capital market was quite impressive. On legislative side we have the 297/2004 Law regarding the Collective Investment Institutions (CII) which divided them into two categories: investment funds and investment societies. The most important provisions of this law refer to the organizational and functional aspect of the respective institutions and also an important part to the financial instruments for funds investments, according to the provisions of Directive 2007/16/CE. The authority that regulates and monitorizes the capital market and the institutions involved is The National Securities Commission (CNVM); it authorizes the establishment of any new investment funds and the societies that administrate the funds, the launch of a prospectus as well as the functional aspect of the fund. In 1996 besides CNVM, it was established the National Association of Funds Administrators which is a non governmental organization made up of 21 investment administration societies that administrate 50 opened investment funds and 8 closed investment funds, 5 investment societies and 2 depositary banks; the association having some important objectives: enforcing the capital market, promoting the concept of collective investments, forming and developing the organizational, legal and professional frame; enhancing the access to information for the investors and also for ordinary people (Zăpodeanu Daniela and Cociuba Mihail-Ioan, 2010; CNVM Report, 2012)

For a proper functioning the open investment funds in Romania need three entities: a) the **administration society**, that adopts the decisions regarding the investment fund and manages the investment portfolio; b) **the depositor**, who safely guards all the funds assets and calculates the value of the securities independent of the administration society; c) **the**

distributor: it may be a securities company or a commercial bank, and it has the role to sell the securities.

The open investment funds issue the securities that confer their owners' equal rights and are paid when subscription is made. The securities are bought at the issuing price, their prices are established based on the net assets plus some commissions and could be rebought at the owners request. The rebuying price is made out of the unit value of the net asset calculated by the administration society and certified by the depositor. The unit value of the net assets is calculated daily by reporting the net value of the funds assets to the total funds units in circulation.

The funds investment policy is established by the administration society according to the law and to the prudential conduct. According to the law provisions, the open investment funds may invest in (Olteanu A.2003) :

- exchange securities and other monetary markets' instruments in Romania and UE and with the approval of the NSC even in non-member states.
- bonds issued by other collective investment institutions (opened or closed)
- deposits
- derivated financial instruments
- other monetary markets' instruments.

The investment funds can be classified according to the liquidity and the risk of the investment (Anghelache, Gabriela, 2000):

- 1.Stocks funds: invest mainly in listed stocks; at least 66 % in stocks
- 2.Bonds funds: invest maximum 10 % in stocks and the rest in bonds.
- 3.Mixt funds: invest maximum 66% in stocks, the rest in non risky securities; they have a medium risk and are considered to be good medium and long term investments.
- 4.Monetary funds: are considered short term investments, having benefits comparable to the interest rates of bank deposits; they usually invest in monetary instruments (treasury bonds, deposits, etc.) more than 90 % and only 10 % in stocks.
5. Other funds: invest in lower exposed stocks than those of the stocks funds.

Referring to funds diversification one may mention that, in a few months, Romania is likely to have mutual funds that will take up certain risks and losses which are not currently being covered by the insurance companies, that is what the Minister of Agriculture and Rural Development, Daniel Constantin has recently declared in a working meeting examining the losses incurred by the producers in the wake of the milk market crisis: *The agriculture ministry will step up a range of measures in the upcoming period. Firstly, we need legislation that should set up the mutual funds in Romania and I mean those who cover the risks, or the economic losses or other kind of losses, which are not being covered by the insurance companies. Such mutual funds are operational across Europe and I think it is high time that we set up such funds in Romania too. Legislation is being put to public debate and I hope we'll have the funds set up in a few months, maybe even faster. It is a three-fold responsibility, of the producers first and foremost, since they must contribute too, but also of the member state, i.e. Romania and it is the EU contribution, on the other hand. Had we had mutual funds, today we wouldn't have spoken of such economic losses, because they would have been borne by the mutual funds'*

2. Investment funds performance within 2005-2012 period

Romania is a very conservative market in terms of adoption by investors open-end investment funds - this combined with the fact that the largest managers of funds are subsidiaries of commercial banks, makes the largest investment funds in the market to be

monetary and bond funds (sold by banks as alternatives to bank deposits). In the period 2005-2012 we may see a positive evolution of the open fund investments market in Romania, the number of funds members of The Association of the Fund Administrators from Romania increased from 23 to 63, the number of investors from 71,021 to 241.368 and the assets amount from 339 million lei to 8811 million RON. The funds became an convenient alternative for bank deposits, although the financial crisis had a certain negative impact on financial market, that is why many investors showed their choice for investing in the funds with a low degree of risk, with more liquidity and offering a better efficiency (Angela Crina Copil, 2013).

After the crisis the value of the net assets was positively influenced by a certain recovery of the quotations of the listed share and by the significant increase in the number of investors and in the volume of their investments. If at the end of 2009 the amount of net assets of the open fund investments was 3,35 billion RON, representing an increase by 256% over the level recorded at the end of 2008, in 2012 the amount reached 8,81 billion RON, representing a raise of 263% over 2009 level.

On 31.12.2009 the first five funds recorded the following total market shares: Erste Asset Management – 43,08%, Raiffeisen Asset Management –30,23%, BRD Asset Management – 8,49%, BT Asset Management – 4,86% and OTP Asset Management – 3,28% while on 31 January 2013 the market shares were the following: Erste Asset Management – 37,48%, Raiffeisen Asset Management –33,37%,ING Asset Management Bucuresti-12,43% and BRD Asset Management – 7,41%. One can notice that Erste Asset Management is the investment fund with the largest market share in 2009 and also in 2013.

At the end of 2012, the number of all investment funds was 138, of which 117 open investment funds and 21 closed investment funds. Taking into account the amount of administered assets by the investment funds, the largest share was detained by the bond funds (49,4%.) The highest share of the assets administered by the bond funds is explained by the policy of avoiding the systemic risks caused by the financial crisis that shifted the investors interest to investments with a reduced risk rate, as the bonds acquisitions are. At the end of 2012(31 December) the total amount of assets of the investment funds reached 11,21 billion RON, of which 10,79 billion RON was held by open investment funds of and 0,42 billion RON by closed investment funds. The number of investors in the investment funds has significantly increased during the last years reaching to 333.052 at the end of the year 2012, of which 91.684 investors in closed investment funds and 241.368 investors in open investment funds. The assets of the bond funds increased in December 2012 by 174,5% comparing to the beginning of the year, reaching a total of 5,06 billion. RON and only in December 2012 the bond funds attracted net subscriptions of 782.2 million RON. The share funds registered an increase of assets by 16,8% to 577.4 million RON in 2012(CNVM Report 2012).

3. Organization and Functioning of an Investment Fund in Romania

Open-end mutual funds stand ready to issue new units to incoming investors at the current price or „net asset value” (NAV), plus sales charge. They must also stand ready to repurchase or redeem units from existing investors in the fund at NAV, minus redemption charge. The NAV is calculated once per day based on closing market prices.

NAV is generally calculated daily at the close of trading. First, the total market value of all the portfolio holdings are computed. The total of the market values is added to the fund's cash and equivalent holdings. Liabilities (including expenses) are subtracted. The result is total net assets value. Dividing the total net assets by the number of units outstanding gives you the NAV per unit.(Ionescu Adela, 2004)

Total Return

The most important way to tell how well a fund performed is to check its total return, which includes the impact of appreciation, dividends and interest. In Romania a fund's total return is reflected in the fund's NAV. The formula for total return is:

$$\text{TR} = \frac{\text{dividends} + \text{interest income} + \text{capital gains}}{\text{NAV at beginning of period}}$$

Since this is reflected daily in the fund's NAV the important thing is to compare a fund's increase in NAV over a long time period and compare the returns of **similar** funds (funds with the same investment objectives).

Unit Sales Charges Or Expenses Associated With Funds

There are four basic types of fees or expenses associated with funds:

1. Sales charges which is the commission an investor pays a sales agent when purchasing units of the fund.
2. Redemption fees are paid by the investor when units are redeemed
3. Management fee is paid by the investors to the investment management company
4. Costs associated with buying and selling securities in the portfolio.

Sales charges are paid to the sales agent for his/her distribution of the fund's units. When investors calculate their returns they should always include any sales charges they paid in the calculation.

Some fund's charge no sales fees but have redemption fees, while others may have sales charges with no redemption fee and some may charge neither or both.

Average Cost

Cost averaging is investing a fixed amount at regular intervals, regardless of whether the market is up or down. More units are purchased at lower prices and fewer at higher prices.

Fluctuating NAV-based price changes in portfolio held by the fund at market close. You can find prices (NAV) for funding of newspapers. By law, mutual funds must publish at least weekly NAV. This information can also be obtained by contacting the Fund. (Anghelache, Gabriela, 2000)

Organizational Structure

Ownership

A mutual fund is a civil society based on a civil contract. Investors in the mutual fund bear the fund's investment risk.

Supervisory Council

This body is responsible for the contractual agreement between the management company and the fund. They safeguard the interests of the individual investors.

The Management Company

Daily administration is handled by the management company, which is usually the same firm that organized the fund. The management company also serves as an investment advisor buying and selling securities for fund's portfolio.

Depository

The depository keeps the fund's assets (stocks, bonds and cash) and usually it's a bank. The depository calculates the fund's NAV. It also handles payments and receipts for the fund's securities transactions.

The depository processes all sales and redemptions of units of participations and maintains shareholder records.

Principal Distributor

Usually a management company affiliate, the distributor (sometimes called an underwriter) distributes fund units of participation to the public. The distributor may act as a wholesaler selling units to securities dealers, who then sell to investors or it might deal directly with the public as a retailer.

Open-end fund's must be distinguished from closed-end-funds .

Closed end funds are diversified, professionally managed portfolios and regularly trade stocks on an exchange. They do not stand ready to issue or redeem shares. A closed-end fund may be bought and sold at a value more (called a premium) or less (called a discount) from its NAV.

The Prospectus

The prospectus is a legal document that discloses certain key information about a fund. Laws and rules issued by the CNVM governs the minimum content of information in a fund prospectus.

Types of Funds

The primary objective of any fund can fit in one of three *broad* categories(Adela Ionescu,2003):

1. *Income*. The emphasis is on producing a steady flow of dividend payments
2. *Capital Gains*. The manager concentrates on increasing the value of the principal amount through appreciation of the stocks held.
3. *Income and Capital Gains*. Some combination of the first two approaches.

The primary objective of a fund determines what type of securities it invests in.

Conclusions

Investment funds have many advantages:

- Earnings of the funds come from long-term investments, they are higher than those made by bank deposits, because the funds invest in shares or other financial instruments with better returns than interest (when the economy is growing);
- Risks of funds are lower than those of a direct investment in shares, as funds usually make diversified investments in order to reduce risks;
- There are many money market funds and bonds funds offering good gains and flexibility for the periods when the stock markets are declining. These funds are a good alternative to investing in stocks for troubled times or a way to reduce portfolio risks;
- Money invested in a fund may be withdrawn at any time, in whole or partially, without the loss of earnings accumulated up to that point;

- Investing in a managed fund is a good investment offering a good opportunity for an increasing indirect access to shares on the stock exchange for example, without having to analyze yourself what are the best stocks to buy;
- Through an investment fund you have an indirect access to a number of financial instruments that normally you would not be able to use (state bonds for corporate bodies, deposits negotiated directly with bank interest) or that you could use only at certain times and with greater efforts (bonds);
- Investing in a fund helps you understand the capital market mechanisms and then allows you to go ahead and buy penny stock;
- Investment funds are well suited for two key categories:
 - A. Capital market investors. If you are a stock investor you probably have not given much attention so far to funds. But funds allow you to diversify your investments, reducing the degree of risk of your investment strategy and they are especially important during periods of falling stock market;
 - B. People who have until now kept savings only in banks or in currency and which have now the possibility of portfolio diversification.

References

- **Anghelache, Gabriela**, 2000, *“Exchange and OTC market”* Economica Publishing House, Bucharest.
- **Cornescu V., Crețoiu Gh., Bucur I.**- 2007, *„Economy”*, CH Beck Publishing House, Bucharest
- **Copil Crina Angela**, 2013, *Investment Funds in Romania*, Oradea University
- **Ionescu, Adela**, 2004, *“Capital market”* Economica Publishing House, Bucharest
- **Ionescu Adela**, 2003, *Portfolio management”* ERA Publishing House, Bucharest
- **Olteanu A.**, 2003 *“ Portfolio risk management and financial securities market”*, Dareco Publishing House. 2003
- **Zăpodeanu, Daniela and Cociuba, Mihail-Ioan**, 2010, *The performance of investment funds in Romania in the context of crisis*, Oradea University.
- **CNVM**, 2012, *Report*
- www.infobursier.ro
- www.conso.ro
- www.bursa.ro

PARAMETRIC INSURANCE COVER FOR NATURAL CATASTROPHE RISKS

Serghei Mărgulescu¹
Elena Mărgulescu²

Abstract

With economic losses of over USD 370 bn caused by 325 catastrophic events, 2011 ranks as the worst ever year in terms of costs to society due to natural catastrophes and man-made disasters. In the same time, 2011 is the second most expensive year in the history for the insurance industry, with insured losses from catastrophic events amounting to USD 116 bn. Both the high level of damages and insured losses, as well as the unprecedented gap between the two values, made insurers and reinsurers worldwide to understand that some risks had so far been underestimated and they have to be better integrated in the catastrophes modelling. On the other hand, governments have to protect themselves against the financial impact of natural catastrophes and new forms of cooperation between the public and private sectors can help countries finance disaster risks. Viewed in a country's wider risk management context, the purchase of parametric insurance cover, which transfers natural catastrophe risk to the private sector using an index-based trigger, is a necessary shift towards a pre-emptive risk management strategy. This kind of approach can be pursued by central governments or at the level of provincial or municipal governments, and a number of case studies included in the publication "Closing the financial gap" by Swiss Re (2011) illustrates how new forms of parametric insurance can help countries finance disaster risks.

Keywords: natural catastrophes, pre-disaster instruments, parametric insurance, public-private partnership, risk modelling.

J.E.L. Classification:

Introduction

We witness during the last three decades to a significant increase in the economic costs of natural disasters. Thus, if in the 80's these costs (adjusted for inflation) have raised to an annual average of 25 billion USD, in the 90's they jumped to 95 billion USD and in the first decade of the current millennium the amount of damages increased to an annual average of 130 billion USD.

The main factors contributing to this growth are significant economic development, population growth, concentration of assets in areas exposed to catastrophic risks and accelerated climate changes of the last two decades.

Damage size varies of course from country to country depending on the nature and intensity of catastrophic events, but everywhere it is found that most of the damage still remains uninsured. On average, over the last 20 years, only between 20% and 40% of the damage was insured. Level of insurance coverage depends on the insurance market development. In this respect the calculation of insurance penetration in national economies (the ratio between gross written premiums and GDP) shows, in the non-life insurance sector, a persistence of a significant gap between developed countries, where this indicator stands at 8.6%, and developing countries with only 2.9%.

¹ Professor, Ph.D., "Nicolae Titulescu" University of Bucharest; margulescu@univnt.ro

² Lecturer, Ph.D., "Nicolae Titulescu" University of Bucharest; elena.margulescu@univnt.ro

1. Pre-disaster instruments

When it comes to major disasters, government intervention meant to restore the normal economic and social situation becomes unavoidable. Traditionally governments intervene after the fact, by means of budget spending, increase of taxes, loans or foreign aid request. On the background of the increasing impact of natural disasters it has grown the awareness of the idea that a more efficient portfolio of management tools for catastrophic risks should include both post and pre-disaster instruments.

In the category of pre-disaster instruments we may include:

- Building up financial reserves
- Provision of funds for major disasters (contingent financing)
- Traditional insurance (indemnity insurance)
- Reinsurance
- Alternative instruments of risk management used by insurance companies
- Parametric insurance for catastrophic risk transfer from state or local authorities to reinsurance market.

The advantages of pre-disaster instruments are obvious in terms of reducing the financial burden of the government after the occurrence of major disasters. They must be also integrated into a comprehensive risk management strategy at the country level. Such a strategy should be based on the modelling of the following aspects:

- the nationwide mapping of the exposure to catastrophic risks
- preventive measures of short, medium and long range
- the size of risk absorption on various levels: insurance market, municipalities, regions, country
- the availability of financial resources at the time of the disaster and its impact on the budget and economic growth
- the benefits of the public sector from the partnership with the private insurance sector in absorbing the more complex consequences of natural disasters.

In the private insurance sector there are to be found for quite a while a number of alternative to traditional insurance instruments offered as a result of innovative processes in the financial markets.

Examples of products that fall into what we call parametric insurance are:

-Derivatives. The hedging operations with derivatives are built on parameters and indices that reflect climatic variations such as temperature, frost, rain. These products can be found primarily on some commodity or mercantile exchanges, in a standardized form, such as on the Chicago Mercantile Exchange, which was the first to offer such products. A particular disadvantage of these products is that they can let hedgers with some residual risk, but this disadvantage can be overcome by a proper structuring of the climate derivatives on the OTC market. The insured resorting to this set of financial products is represented by manufacturing companies and users of equipment of air conditioning or refrigeration technology, agricultural producers, and others.

-Insurance-linked securities. These capital market instruments are used to transfer a wide range of risks, from natural disaster risks (the insurance of major disasters by means of catastrophe bonds, since 1997) to the risks associated with life insurance. The beneficiaries of these products are insurance companies that have implemented them as an alternative to reinsurance.

For the public sector, solutions are resulting from the public-private partnership with the insurance and reinsurance markets, but these can be structured to address the hedging needs both at a macro-level (governments) and at a micro level as well (local administrative authorities).

Catastrophic risk management is analyzed differently depending on the degree of development of the country. While in developed countries, due to the existence of mature insurance and reinsurance markets, there is no urgency for governments to absorb natural disaster risks in the sphere of their concerns, in emerging and less developed countries governments are obliged to play a more active role in managing these risks. Two are the possible directions of action:

1. Facilitation of risk redistribution on the private insurance and reinsurance markets. This can be achieved by government strategies and actions such as hydrotechnical works to prevent floods, judicious organization of fire services, imposing of appropriate standards in civil and industrial construction, strategies for preventing terrorist activities, etc.

2. Buying private insurance by state or local authorities. This initiative started in 2007 and already counts several types of agreements that have as a common denominator the parametric type of insurance.

The parametric insurance does not require loss adjusters to tally damage after a catastrophe occurs, a process that can take months or even years and which can delay a payout. The speed of payout is one of the significant advantages of this type of transaction: a parametric trigger is transparent, both for the insured and for investors, and it means that loss events can be handled faster and more efficiently than with other kinds of insurance-based solutions.

Governments act as buyers of innovative insurance or reinsurance products to protect themselves against the financial impact of natural catastrophes. Such partnerships do not just exist in theory, but real solutions are already available and can be replicated and adapted to the risk exposure in other countries and regions of the world.

2. Case studies

Swiss Re is one of the worldwide biggest reinsurers and in the same time one of the best positioned in structuring parametric insurance schemes. The various case studies included in the Swiss Re publication “Closing the financial gap” (2011) illustrate how new forms of cooperation between the public and private sectors can help countries to finance disaster risks.

It also shows that the applicability of such insurance schemes is not limited to emerging economies alone. They are equally valuable to communities in exposed regions of the developed world.

The following are short excerpts from the presentation in the “Closing the financial gap” of some parametric insurance schemes put together by Swiss Re in recent years.

1. Caribbean Catastrophe Risk Insurance Facility

Faced with limited economic capacity and high levels of indebtedness, Caribbean governments found their resilience tested to the breaking point when Hurricane Ivan swept across the region in early September 2004. Ivan was the tenth most intense Atlantic hurricane ever recorded, killing over 100 people and causing billions of dollars in losses. The Caribbean Development Bank (CDB) estimated the damage in the Caribbean Sea region at more than USD 3 billion. In the wake of Ivan, heads of government from the Caribbean Community (CARICOM) held an emergency meeting to discuss the need for catastrophe risk insurance as a priority issue in the region.

CARICOM subsequently approached the World Bank for assistance. This marked the beginning of what would become the Caribbean Catastrophe Risk Insurance Facility (CCRIF).

At the start of the 2007 Atlantic hurricane season, the Caribbean community formally launched the new facility with 16 participating governments. It was the world’s first regional fund utilising parametric insurance, giving Caribbean governments the unique opportunity to

purchase earthquake and hurricane catastrophe coverage at the most attractive pricing. Caribbean governments could now purchase coverage which would be triggered by a hurricane or earthquake with a probability of occurring once in 15 or 20 years, respectively. The maximum coverage available was set at USD 100 million for each peril.

It is a cost-effective way for an individual government to pre-finance liquidity needs and start with recovery efforts immediately after a catastrophic event.

CCRIF works in a similar manner as a mutual insurance company. It retains some of the risk transferred by the participating countries and transfers the remainder of the risk to reinsurance markets and provides participating countries with insurance policies at approximately half the price they could obtain if they approached the reinsurance industry on their own. Each country receives funds from the pool in direct proportion to the amount it has paid in over the long term.

United States Geological Survey (USGS) earthquake location data is used as input for the models which estimate earthquake losses. For hurricanes, National Oceanic and Atmospheric Administration (NOAA) storm data is used as the input for the hurricane model in order to estimate the damage.

In its first year of operation, the CCRIF made two payouts after a magnitude 7.4 earthquake shook the eastern Caribbean in November 2007. When a massive 7.0-magnitude earthquake hit Haiti in January 2010, the CCRIF's parametric earthquake insurance policy paid its full limit of just under USD 8 million, providing the nation rapid access to insurance proceeds after the quake.

2. Central America Natural Disaster Insurance Facility

Straddling the Pacific Rim of Fire and the Caribbean Plate, Central America sits on a hotbed of seismic activity, and waves from both the Pacific Ocean and the Caribbean Sea wash its shores. Earthquakes, hurricanes and floods are all recurring threats. The devastating effect that a confluence of such events can have was evidenced by the active hurricane season of 2005. The impact of Hurricane Stan, a relatively weak storm, was so severe because it coincided with torrential rains brought on by a non-tropical weather system. Stan caused flash floods and mudslides that killed over 1 500 people and led to USD 4 billion in damage. Coffee growers in Guatemala, El Salvador, Nicaragua, Honduras and Costa Rica were particularly hard hit, losing a substantial part of their crop.

To strengthen disaster preparedness in the region, the Inter-American Development Bank (IDB) partnered with Swiss Re in 2010 to develop an insurance mechanism for countries in Central America and the Dominican Republic. The new Central America Natural Disaster Insurance Facility provides participating governments with quick access to insurance proceeds following a disaster.

A key innovation of the facility is its use of an index that approximates the population nominally affected by a disaster. The Central America Natural Disaster Insurance Facility works in a similar way as the CCRIF. But it offers additional coverage for hurricane-induced landslides and reflects a more customised approach suited for nations of all sizes. This is why it can be easily expanded to include additional countries, large and small, and could be broadened beyond natural catastrophes to cover other insurable risks. Among them are weather-related risks that impact the agricultural sector or pandemic and epidemic risks that destabilise health care budgets.

3. MultiCat Mexico

In terms of lives lost, the Mexico City earthquake of 1986, which measured 8.1 on the Richter scale, was the worst disaster to hit Mexico in recent decades, resulting in over 9 500 fatalities. But in economic terms, Hurricane Wilma, which hit in October 2005, was the most devastating. Wilma caused total damages of over USD 22 billion. But only USD 13.8 billion of that was insured.

As early as the 1990s, the Mexican government identified disaster risk reduction as a national priority. The result of these efforts was MultiCat Mexico 2009 arranged by the World Bank in collaboration with Swiss Re. MultiCat uses risk-linked securities, so-called catastrophe bonds, to transfer earthquake and hurricane risks to capital markets. It is based on a parametric approach linked to pre-defined triggers: Quake magnitude (earthquake), barometric pressure (hurricane). Policy coverage USD 290 million. The MultiCat Mexico transaction comprises four tranches, each relating to a different peril or geographic area.

4. Alabama State Insurance Fund

The city of Mobile and its surrounding districts have one of the highest values of insured coastal properties in the nation today, worth a total of USD 92.5 billion. Public institutions in the district are protected through Alabama's State Insurance Fund (SIF), which provides insurance for state properties, colleges, universities and public schools. By 2008, the SIF covered potential damages of more than USD 41 billion across the State. Although much of the potential damage is covered by insurance, municipal and state governments – and ultimately taxpayers – are left shouldering the burden of paying for emergency relief and uninsured losses.

Alabama decided to opt for a new approach. In 2010, it became the first state nationwide to purchase parametric insurance cover, which transfers natural catastrophe risk to the private sector using an index-based trigger. Under the terms of the agreement, the SIF will receive financial compensation from reinsurer Swiss Re in the event that a Category 3 hurricane passes through a designated area of exposed coast. The payments can be used by Alabama's authorities for any purpose, including emergency response costs, replacing lost tax revenue and funding of increased insurance expenses.

5. Malawi weather insurance

Without enough rain, Malawi faces disaster. Over the last two decades, severe drought crippled the country no less than four times, most recently in 2005. The devastation it caused reached catastrophic dimensions for Malawian farmers and for society at large. But drought not only causes widespread crop failure, threatening food supplies and incomes. The risk of drought is also a major factor in keeping productivity low because even in good years farmers are leery of using inputs such as improved seeds and fertilizers for fear of losing their investment.

To help maize producers overcome the hurdle of uncertainty and boost agricultural output, the government of Malawi decided to promote index-based weather insurance as a way to tackle drought risk.

Its resolve translated into action in 2008 when it became the first sovereign entity in Africa to introduce such an instrument. Together with the World Bank, the government created a weather derivative that offers maize farmers a means to better cope with the financial impact of drought. Swiss Re entered into this transaction as counterparty to the World Bank. Under the provisions of this arrangement, Swiss Re commits to pay out up to USD 5 million to the World Bank which in turn pays the money to the Malawi government if the country's farmers suffer from a drought-related shortfall in maize production.

The transaction's key innovation lies in its use of an index linking rainfall with maize production. The Malawi Maize Index (MMI) applies a model to calculate the value of projected losses if precipitation falls below a certain level, mirroring the high correlation between maize yields and rainfall. If maize production drops 10% below the historical average, Malawi will receive a payout up to USD 5 million. This approach guarantees timely disbursements of funds and keeps administrative costs to a minimum, as there is no need for a case-by-case damage assessment.

6. Chinese agriculture risk insurance

Over the past decade alone, droughts, floods, typhoons, pests and diseases destroyed about 10 percent of annual crops, with some regions recording losses of over 80%.

The government decided to take action to boost agricultural output. In 2004 it launched the Three-Dimensional Rural Issues policy to give greater prominence to agriculture, rural development and farmers. As part of this plan, it identified agricultural insurance as a key financial instrument to stabilise farmers' incomes and improve their resilience to financial hardship from poor harvests.

In a country where the insurance market represents less than 1% of agricultural GDP, establishing an agricultural insurance industry is a daunting challenge. But since 2007, the China Insurance Regulatory Commission (CIRC) has taken bold first steps to make this happen, working with the central and provincial governments to extend insurance to farmers across the land.

With the CIRC's support in 2008, the Beijing Municipal Government entered into a ground-breaking partnership with Swiss Re to purchase reinsurance cover for its agricultural insurance scheme. This agreement provides tailormade reinsurance protection for livestock, crops and fruits against perils such as livestock diseases, flood, hail, wind and rainstorms. It covers about 400 000 farming households.

The immediate beneficiaries of the transaction are the insurance companies under the government-subsidised agricultural insurance scheme in Beijing. It specifies that the Beijing Municipal Government will pool all the agricultural insurance business within Beijing. Under the terms of the contract, the insurance companies will be responsible for any losses below 160% of the annual premium. Swiss Re and the state-owned reinsurer China Re will take up any losses between 160 and 300%, while those losses over 300% will be covered by the Beijing Municipal Government's Agricultural Catastrophe Risks Reserve. In the event of catastrophe loss, Swiss Re as the lead reinsurer will settle with the individual insurance companies.

This public-private partnership is the first of its kind in China. It marks a departure from post-disaster financing and a shift towards a pre-emptive risk management strategy.

7. Vietnam agriculture insurance

With an annual production of 39 million tonnes on over 7 million hectares of land, Vietnam supplies a fifth of global trade in rice and is the world's second largest exporter. When crops fail, rice farmers across Vietnam lose an essential source of income. As a consequence, they are often unable to repay their loans or make much needed investments for the next growing season.

To actively manage loan default ratios and exhibit more confidence offering loans to rice farmers in the future, Agribank and its insurance company Agribank Insurance Joint Stock Company (ABIC) decided to enter into an innovative insurance scheme that mitigates the impact of poor harvests.

Under the deal established in November 2010, ABIC will insure Agribank against the inability of its rice-farming clients to make loan repayments due to low crop yields. ABIC will transfer the risk via reinsurance to Swiss Re and Vina Re, Vietnam's national reinsurer.

The transaction is the first of its kind in Southeast Asia. It defines payouts according to an independent area-yield index that draws on data from Vietnam's Bureau of Statistics. The insurance product disburses funds if, after a natural catastrophe or disease, the rice yield in a certain geographic area falls below the expected output of an average yield.

To date, the new insurance programme will cover loans to rice farmers in up to ten provinces of Vietnam, with the potential to extend the scheme to the entire country. The advantages of this type of index-based product over conventional forms of insurance are its transparency, lower administration costs and faster payouts.

Conclusions

As a first priority, governments should ensure a functioning insurance market. This will help to absorb a big part of disaster losses suffered by individuals and businesses.

Then, pre-event financing solutions that build up reserves, contingent finance as well as sovereign insurance solutions can alleviate the remaining financial burden on governments. Post-disaster financing through budgetary means, debt financing or donor aid should only come into play to cover residual losses once all other risk transfer solutions have been exhausted.

By building up financial reserves or using insurance solutions, governments can reduce their financial burden after a disaster occurs. These measures also lower the volatility on the government budget and help improve planning certainty for the public sector. But disaster financing instruments should never be seen in isolation. Rather, they must be viewed in a country's wider risk management context.

Viewed in such a context, the purchase of parametric insurance cover, which transfers natural catastrophe risk to the private sector using an index-based trigger, is a necessary shift towards a pre-emptive risk management strategy.

References

- <http://www.swissre.com/rethinking/climate/>
- http://www.swissre.com/clients/corporations_businesses/events/New_report_by_The_Economist_and_Swiss_Re.html
- http://www.swissre.com/rethinking/Insuring_the_uninsurable_Swiss_Re_breaks_new_ground_in_Haiti_and_Senegal.html
- "Closing the financial gap" by Swiss Re (2011)

PARAMETRIC DISTRIBUTION FAMILIES USEFUL FOR MODELLING NON-LIFE INSURANCE PAYMENTS DATA. TAIL BEHAVIOUR

Sandra Teodorescu¹

Abstract

The present paper describes a series of parametric distributions used for modeling non-life insurance payments data. Of those listed, special attention is paid to the transformed Beta distribution family. This distribution as well as those which are obtained from it (special cases of four-parameter transformed Beta distribution) are used in the modeling of high costs, or even extreme ones. In the literature it follows the tail behaviour of distributions depending on the parameters, because the insurance payments data are typically highly positively skewed and distributed with large upper tails. In the paper is described the tail behavior of the distribution in the left and right side respectively, and deduced from it, a general case. There are also some graphs of probability density function for one of the transformed Beta family members, which comes to reinforce the comments made.

Keywords: non-life insurance payments data, actuary, parametric distribution, transformed Beta distribution, tail distribution behaviour.

Introduction

The insurance companies are responsible for covering claims which are aleatory in character. The quantum of claims can hardly be known, it can only be assessed through calculations based on the probability theory. Hence, the significance of a comprehensive information system comprising data and long-term assessments of the frequency and degree of risks has emerged. Based on such a system, one can approximate the evolution of potential payments to cover the value of claims and of insured accounts, as well as of the level premium system, being also able to adopt decisions linked to the initiation of new supplemental insurance programs to protect assets, people and liability insurance, or to the functioning and organizational structure of the insurance company.

An insurance company resembles a living organism, comprising several departments that must perform vital functions for the insured person to successfully survive. One of the main departments of such a company is the claims control department designed to prevent claims whenever possible and to diminish those that cannot be avoided. The claims control has always been an important function ever since the early days of the insurance system, which is gaining increasing importance nowadays.

In this paper we study a few parameter distribution models of insurance costs. There are a number of characteristics that our collection of distributions should have. Through those it is another one describing that some of them should have moderate tails, some should have heavy tails (see [4]).

The issue of the shape of the right-hand tail is a critical one for the actuary. If the possibility of large losses were remote, there might be little interest in the purchase of insurance. On the other hand, many loss processes produce large claims with enough

¹ Associate professor, Ph.D., Faculty of Economic Sciences, "Nicolae Titulescu" University of Bucharest, Romania, tsandra@xnet.ro

regularity to inspire people and companies to purchase insurance and to create problems for the provider of insurance. For any distribution that extends probability to infinity, the issue is one of how quickly the density function approaches zero as the loss approaches infinity. The slower it happens, the more probability is pushed onto higher values and we then say the distribution has a heavy, thick or fat tails. We avoid the adjective „long” because in insurance a long tail usually means that it takes a long time from the issuance of the policy until all claims are settled.

Classical Exponential and Pareto distributions, used for insurance payments data, also the composite Exponential-Pareto has been studied in detail in [10]. Also, the comparative studies between Exponential, Pareto and Exponential-Pareto distributions has been made in [8] and [9]. Results regarding some characteristics of shifted composite Lognormal-Pareto and Weibull-Pareto as well the truncated ones, the probability density functions, has been presented in [7]. The composite Lognormal-Pareto and Weibull-Pareto models has been studied, in the literature, and used to model insurance payments data (see [2], [1] and [5]).

1. Transformed Beta family

Many of the distributions presented in this section are specific cases of others. So, there is a family of distributions, named transformed Beta family, who are useful for modeling large claims. For example, a Burr distribution with $\gamma=1$ and α and θ arbitrary is an Pareto distribution. Through this process, our distributions can be organized into one grouping as illustrated in Figure 1. The transformed Beta family indicates two special cases of a different nature. The paralogistic and inverse paralogistic distributions are created by setting the two nonscale parameters as the burr and inverse burr distributions equal to each other rather than to a specific value.

1. Four-parameter transformed Beta distribution: $\alpha, \theta, \gamma, \tau$

$$f(x) = \frac{\Gamma(\alpha + \tau)}{\Gamma(\alpha)\Gamma(\tau)} \cdot \frac{\gamma(x/\theta)^{\gamma\tau}}{x[1 + (x/\theta)^\gamma]^{\alpha+\tau}}$$

$$F(x) = \beta(\tau, \alpha; u), \quad \text{where} \quad u = \frac{(x/\theta)^\gamma}{1 + (x/\theta)^\gamma}$$

2. Three-parameter distribution

2.1. Tree parameter generalized Pareto distribution: α, θ, τ

It is obtained from transformed Beta distribution, for $\gamma = 1$. Thus:

$$f(x) = \frac{\Gamma(\alpha + \tau)}{\Gamma(\alpha)\Gamma(\tau)} \cdot \frac{\theta^\alpha x^{\tau-1}}{(x + \theta)^{\alpha+\tau}}$$

$$F(x) = \beta(\tau, \alpha; u), \quad \text{where} \quad u = \frac{x}{x + \theta}$$

2.2. Tree-parameter Burr distribution: α, θ, γ

It is obtained from transformed Beta distribution, for $\tau = 1$. Thus:

$$f(x) = \frac{\alpha \gamma (x/\theta)^\gamma}{x [1 + (x/\theta)^\gamma]^{\alpha+1}}$$

$$F(x) = 1 - u^\alpha, \quad \text{where} \quad u = \frac{1}{1 + (x/\theta)^\gamma}$$

2.3. *Three-parameter inverse Burr distribution: θ, γ, τ*

It is obtained from transformed Beta distribution, for $\alpha = 1$. Thus:

$$f(x) = \frac{\tau \gamma (x/\theta)^{\gamma\tau}}{x [1 + (x/\theta)^\gamma]^{\tau+1}}$$

$$F(x) = u^\tau, \quad \text{where} \quad u = \frac{(x/\theta)^\gamma}{1 + (x/\theta)^\gamma}$$

3. *Two-parameter distributions*

3.1. *Two-parameter Pareto distribution: α, θ*

It is obtained from transformed Beta distribution, for $\gamma = \tau = 1$, or from generalized Pareto, for $\tau = 1$, or from Burr distribution, or $\gamma = 1$. Thus:

$$f(x) = \frac{\alpha \theta^\alpha}{(x + \theta)^{\alpha+1}}$$

$$F(x) = 1 - \left(\frac{\theta}{x + \theta} \right)^\alpha$$

3.2. *Two-parameter inverse Pareto distribution: τ, θ*

It is obtained from transformed Beta distribution, for $\gamma = \alpha = 1$, or from generalized Pareto distribution, for $\alpha = 1$, or from inverse Burr distribution, for $\gamma = 1$. Thus:

$$f(x) = \frac{\tau \theta x^{\tau-1}}{(x + \theta)^{\tau+1}}$$

$$F(x) = \left(\frac{x}{x + \theta} \right)^\tau$$

3.3. *Two-parameter Loglogistic distribution: γ, θ*

It is obtained from transformed Beta distribution, for $\tau = \alpha = 1$, or from inverse Burr distribution $\tau = 1$, or from Burr distribution for $\alpha = 1$. Thus:

$$f(x) = \frac{\gamma(x/\theta)^\gamma}{x[1 + (x/\theta)^\gamma]^2}$$

$$F(x) = u, \quad \text{where} \quad u = \frac{(x/\theta)^\gamma}{1 + (x/\theta)^\gamma}$$

3.4 Two-parameter Paralogistic distribution: α, θ

It is obtained from transformed Beta distribution, for $\gamma = \alpha, \tau = 1$ or from Burr distribution, for $\gamma = \alpha$. Thus:

$$f(x) = \frac{\alpha^2(x/\theta)^\alpha}{x[1 + (x/\theta)^\alpha]^{\alpha+1}}$$

$$F(x) = 1 - u^\alpha, \quad \text{where} \quad u = \frac{1}{1 + (x/\theta)^\alpha}$$

3.5 Two-parameter inverse Paralogistic distribution: τ, θ

It is obtained from transformed Beta distribution, for $\gamma = \tau, \alpha = 1$ or from inverse Burr distribution, for $\gamma = \tau$. Thus:

$$f(x) = \frac{\tau^2(x/\theta)^{\tau^2}}{x[1 + (x/\theta)^\tau]^{\tau+1}}$$

$$F(x) = u^\tau, \quad \text{where} \quad u = \frac{(x/\theta)^\tau}{1 + (x/\theta)^\tau}$$

In conclusion, the distributions are represented as it follows:

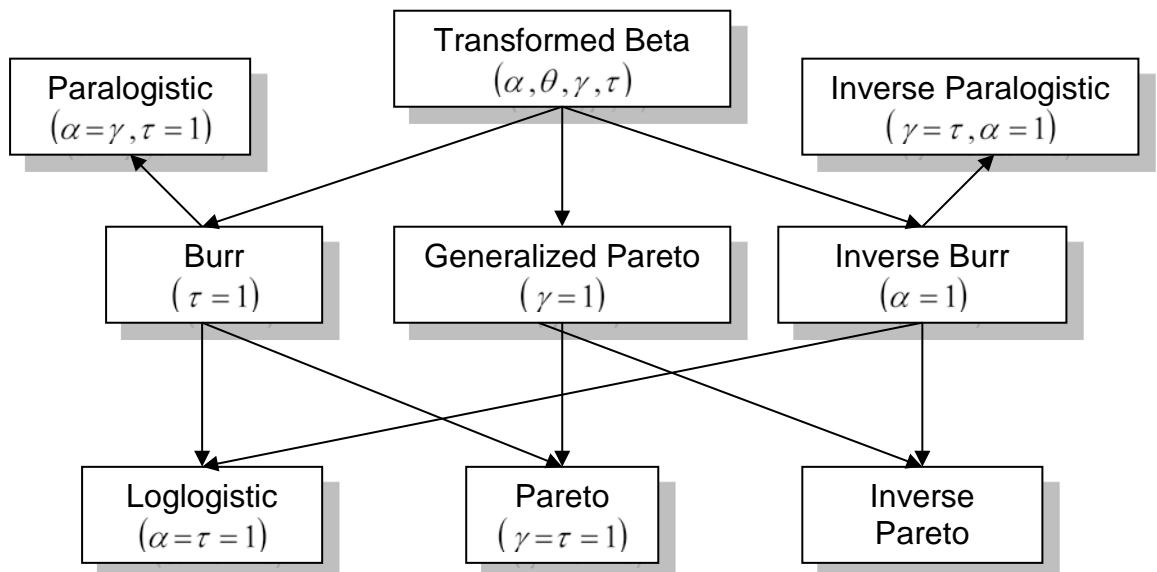


Fig. 1. Transformed Beta family

3. Tail behavior in the transformed Beta family

It is to be expected that with four parameters, the transformed Beta distribution can assume a variety of shapes which can be investigated by determining the relationships between the parameters and the tail behavior. For the right-hand tail we look at the existence of positive moments as well as the behavior of $1 - F(x)$, for $x \rightarrow \infty$. We can provide the same analysis for the left-hand tail (that is, behavior for small claims).

3.1. Right tail behavior

For the transformed Beta distribution the k -th moment exist, for positive values of k , provided $k < \alpha\gamma$. Thus, for all members of the transformed Beta family, there are only a finite number of moments. However, it is clear that only the parameters α and γ are involved in determining the behavior at the right end. To further investigate this behavior, consider the ratio $[1 - F(x)]/x^{-\alpha\gamma}$. When $x \rightarrow \infty$, both the numerator and denominator go to zero, thus we can apply L'Hôpital:

$$\begin{aligned} \lim_{x \rightarrow \infty} \frac{1 - F(x)}{x^{-\alpha\gamma}} &= \lim_{x \rightarrow \infty} \frac{-f(x)}{-\alpha\gamma x^{-\alpha\gamma-1}} \\ &= \lim_{x \rightarrow \infty} \frac{\Gamma(\alpha + \tau)\gamma x^{\gamma\tau-1}\theta^{-\gamma\tau}}{\Gamma(\alpha)\Gamma(\tau)\left[1 + \left(\frac{x}{\theta}\right)^\gamma\right]^{\alpha+\tau} \alpha\gamma x^{-\alpha\gamma-1}} = \lim_{x \rightarrow \infty} \frac{\Gamma(\alpha + \tau)}{\Gamma(\alpha)\Gamma(\tau)\theta^{\gamma\tau}\alpha} \left[\frac{\theta^\gamma x^\gamma}{\theta^\gamma + x^\gamma}\right]^{\alpha+\tau}. \end{aligned}$$

For $x \rightarrow \infty$ the term in brackets goes to θ^γ and therefore:

$$\lim_{x \rightarrow \infty} \frac{1 - F(x)}{x^{-\alpha\gamma}} = \frac{\Gamma(\alpha + \tau)\theta^{\alpha\gamma}}{\Gamma(\alpha)\Gamma(\tau)\alpha},$$

which is a constant and so the probability in the right-hand tail is approximately proportional to $x^{-\alpha\gamma}$. As a result, the behavior in the right tail is tied to the product $\alpha\gamma$. So, as the product $\alpha\gamma$ gets larger, the tail gets shorter (becomes zero faster).

Four illustrative density curves for the Burr distribution are presented in Figure 1.

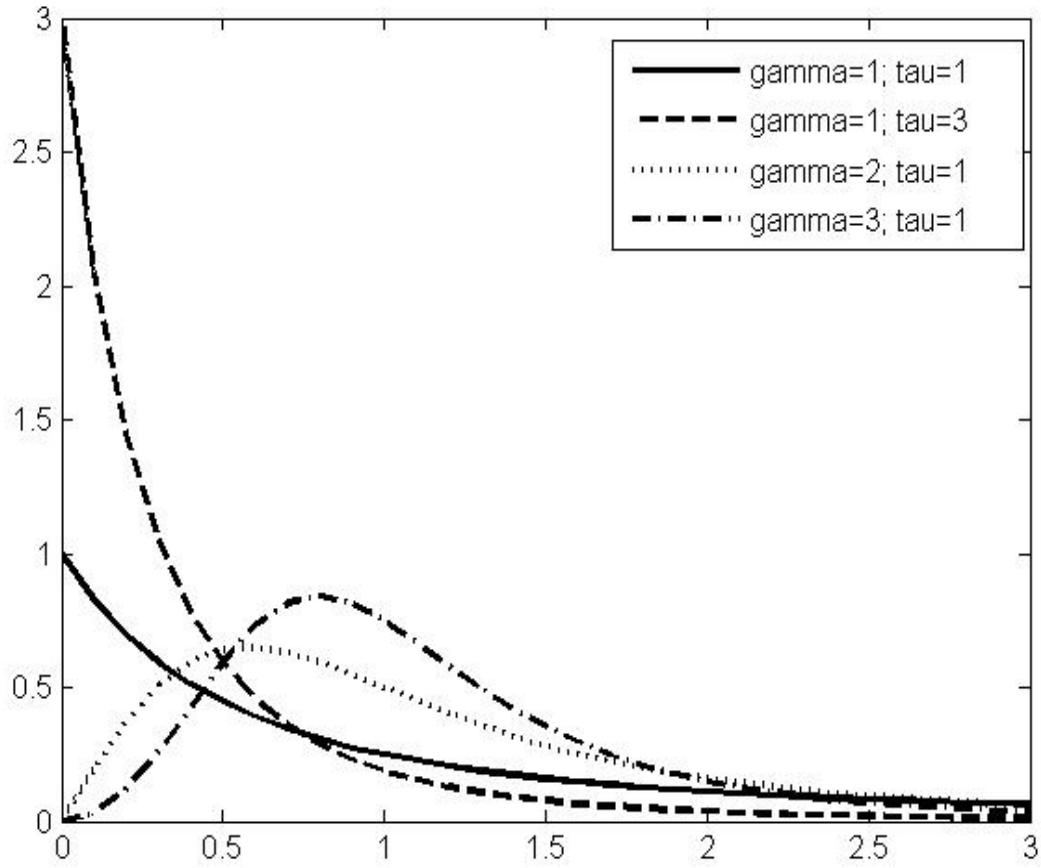


Fig.1 The Burr density curves plotted for $\theta = 1$, $\alpha = \tau$, $\gamma = \gamma$.

In Figure 1 we display few density curves for the Burr distribution. Notice that for this choice of parameters as α increases, the four densities approach zero faster.

The general case

Let ψ be a function, so that $\lim_{t \rightarrow 0} \psi(t) = 0$ and $\lim_{t \rightarrow 0} \frac{\psi(t)}{t} = \psi_0 \in \mathbf{R}$.

$$\text{Then, } \lim_{x \rightarrow \infty} \frac{1 - F(x)}{\psi(x^{-\alpha\gamma})} = \lim_{x \rightarrow \infty} \frac{1 - F(x)}{x^{-\alpha\gamma}} \cdot \frac{x^{-\alpha\gamma}}{\psi(x^{-\alpha\gamma})} = \lim_{x \rightarrow \infty} \frac{\Gamma(\alpha + \tau)\theta^{\alpha\gamma}}{\Gamma(\alpha)\Gamma(\tau)\alpha} \cdot \frac{1}{\psi_0}.$$

We can see that there are ψ functions that have the above-mentioned properties. For example, $\psi(t) = \psi_0 t$, $\psi(t) = \sin \psi_0 t$, $\psi(t) = tg \psi_0 t$.

So the probability in the right-hand tail is approximately proportional to $\psi(x^{-\alpha\gamma})$, and the product $\alpha\gamma$ determines the right-hand tail behavior.

With regard to the limiting distributions, as α goes to infinity we obtained the transformed Gamma distribution. It has all the positive moments and so, all of its members have lighter tails than members of the transformed Beta family. As α goes to infinity we obtain the inverse transformed Gamma distribution. The same limit ($\alpha\gamma$) applied to the existence of moments and so the right tail behavior is similar to that for the transformed Beta distribution. The inverse transformed Gamma distribution is obtained as τ goes to infinity and so all members of this family have heavy right tails whose behavior is governed by the product of two nonscale parameters.

3.2. Left tail behavior

The left tail behavior can be investigated by looking at the existence of negative moments. For the transformed Beta distributions more negative moments exist as the product $\gamma\tau$ gets larger, so it appears these parameters control the shape of the distribution for small loss values. With regard to probability in the left tail, $F(x) = P(X \leq x)$, the requisite limit is:

$$\begin{aligned} \lim_{x \rightarrow 0} \frac{F(x)}{x^{\gamma\tau}} &= \lim_{x \rightarrow 0} \frac{f(x)}{\gamma\tau x^{\gamma\tau-1}} \\ &= \lim_{x \rightarrow 0} \frac{\Gamma(\alpha + \tau) \gamma x^{\gamma\tau-1} \theta^{-\gamma\tau}}{\Gamma(\alpha) \Gamma(\tau) \left[1 + \left(\frac{x}{\theta} \right)^\gamma \right]^{\alpha+\tau} \gamma\tau x^{\gamma\tau-1}} \\ &= \lim_{x \rightarrow 0} \frac{\Gamma(\alpha + \tau)}{\Gamma(\alpha) \Gamma(\tau) \tau \theta^{\gamma\tau}} \left[\frac{\theta^\gamma}{x^\gamma + \theta^\gamma} \right]^{\alpha+\tau} \\ &= \frac{\Gamma(\alpha + \tau)}{\Gamma(\alpha) \Gamma(\tau) \tau \theta^{\gamma\tau}}. \end{aligned}$$

The probability in the left-hand tail is approximately proportional to $x^{\gamma\tau}$. Again, the thickness of the tail is governed by the product $\gamma\tau$, and larger values indicate a thinner tail.

Conclusions

As a result, the behavior in the right tail of density in the transformed Beta family is tied to the product $\alpha\gamma$. So, as the product $\alpha\gamma$ gets larger, the tail gets shorter (becomes zero faster). In the left hand, the thickness of the tail is governed by the product $\gamma\tau$, and larger values indicate a thinner tail. It is interesting to note that the parameter γ affects the behavior of both tails (left and right). As γ increases, both tails get lighter and lighter. So, in some way, this parameter controls the spread around the middle, while the parameters α and τ control the right and left ends, respectively. As a scale parameter, θ plays no role in setting the shape of the distribution.

References

- Ciumara R. – *An actuarial model based on composite Weibull-Pareto distribution* – 2006, Mathematical Reports Vol 8 (58), nr.4/2006

- Cooray M. and Ananda M.M.A., *Modeling actuarial data with a composite lognormal-Pareto model*. Scand. Actuar. J. 5 (2005), 321–334.
- Kaas R., Goovaerts M., Denuit M., Dhaene J. - *Modern Actuarial Risk Theory*- Kluwer Academic Publishers, Boston, 2001
- Klugmann S.A., Panjer H.N., Willmot G.E. - *Loss models. From data to decisions* – 1998, Wiley
- Preda V., Ciumara R. – *On composite models: Weibull-Pareto and Lognormal-Pareto. A comparative study* – 2006, Romanian Journal of Economic Forecasting 2
- Teodorescu S., *Metode statistice pentru estimarea repartiției daunelor din asigurări*, Editura Universității din București, 2009
- Teodorescu S., *On the truncated composite Lognormal-Pareto model*, Mathematical Reports, Academia Română, vol 12 (62) no.1, 2010
- Teodorescu S., Vernic R., *Some composite Exponential-Pareto models for actuarial prediction*, Romanian Journal of Economic Forecasting, Academia Română, vol. 12(4), 2009
- Teodorescu S., Vernic R., *A composite Exponential – Pareto distribution* – Analele Științifice ale Universității Ovidius din Constanța, Seria Matematică vol. nr.XIV, fascicol 1, 99-108, 2006
- Teodorescu S., Vernic R., *The truncated composite Exponential – Pareto distribution* – Buletinul Științific al Universității din Pitești, Seria Matematică și Informatică nr.12, pag. 1-12, 2006

ATTITUDES AND PERCEPTION IN CONSUMER'S INSURANCE DECISION

Mihaela Andreea Stroe¹
Mihaela Ilescu²

Abstract

Consumers attitudes are both an obstacle and an advantage in the decision process. Choosing to discount or ignore consumers' attitudes of a particular product or service, while developing a marketing strategy, guarantees limited success of a campaign. Differences in attitudes depend also by the gender of deciders. The different features between men and women in the perception of risk and decisional process of making an insurance. Women are more risk averse than men. Over an initial range, women require no further compensation for the introduction of ambiguity but men do. Differences appear also in which concerns risk taking, overconfidence and information processing. Perhaps the attitudes formed as the result of a positive or negative personal experience and by other psychological factors outside the common market manipulation.

Keywords: risk aversion, insurance, decisional process, information processing, perception.

J.E.L. Classification:

Introduction

This study aims to assess the degree in which formed attitudes and consumer perception influences the insurance decision and if women display a common trait of less risk-seeking behaviour than men in insurance decision-making. It is common known that the influence of society, of culture, of family and friends are not the only factors that drives a consumer in making a market decision. The subliminal factors like psychological ones and cognitive dissonance play a main role in what consumer perceive and decide in the insurance world.

Insurances are intangible products that have some special features apart from the material good.

Insurances represent a service that cannot be touched, price standardization is not possible, there is no ownership transfer and production and consumption are inseparable. The consumer is a part of the production process so the delivery system must go to the market or the consumer must come to the delivery system. Because the insurance is linked also to the value of risk is very important to analyze if consumer of insurance is risk averse or not. The risk is evaluated before insuring to charge the amount of share of an insured, consideration or premium. There are several methods of evaluation of risks. If there is expectation of more loss, higher premium may be charged. So, the probability of loss is calculated at the time of insurance.

¹ Assistant Lecturer, Economic Sciences Faculty, "Nicolae Titulescu" University, PhD. Candidate at National Institute of Economic Research, Bucharest (e-mail: stroeandreea@univnt.ro).

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² Lecturer, PhD, Economic Sciences Faculty, "Nicolae Titulescu" University, Bucharest (e-mail: mag_mihaela@yahoo.com).

The insurance serves indirectly to increase the productivity of the community by eliminating worry and increasing initiative. The uncertainty is changed into certainty by insuring property and life because the insurer promises to pay a definite sum at damage or death.

From a family and business point of view all lives possess an economic value which may at any time be snuffed out by death, and it is as reasonable to ensure against the loss of this value as it is to protect oneself against the loss of property. In the absence of insurance, the property owners could at best practice only some form of self-insurance, which may not give him absolute certainty.

Having into consideration this aspects we can say that, the ultimate level beside the real utility of the insurance product in the decision process, is played by the perception of the insurance product.

Consumers can evaluate a product along several levels. Its basic characteristics are inherent to the generic version of the product and are defined as the fundamental advantages it can offer to a customer. Generic products can be made distinct by adding value through extra features, such as quality or performance enhancements. The final level of consumer perception involves augmented properties, which offer less tangible benefits, such as customer assistance, maintenance services, training, or appealing payment options. In terms of competition with other products and companies, consumers greatly value these added benefits when making a purchasing decision, making it important for manufacturers to understand the notion of a “total package” when marketing to their customers. For example when acquiring an insurance, the consumer do not acquire only the risk protection represented by the sum of money payed in case of a disaster but also the feeling of security and the psychological confort that can be offered by this exchange through the insurance policy.

Nevertheless, is obvious that some people are more risk averse and value more the insurance protection, others like to take risk and the insurance will not appear so appealing.

Also, gender differences relating to risk behavior, the perception of insurances, the information acquisition and reporting, information and moral hazard in financial decision-making is examined in Section 2, together with the importance of differing contextual instances in explaining such differences in building the stereotypes. If some behavioral factors as gut feeling and emotion effect desion making and how the persons react to those is the subject of our debate.

The insurance purchasing and marketing activities do not always produce results that are in the best interest of individuals at risk. we will discuss such behavior with the intent of showing the difference for the insurance interest decision making and the factors that influence both men and women.

1. Knowledge stage

An attitude in marketing terms is defined as a general evaluation of a product or service formed over time (Solomon, 2008). An attitude satisfies a personal motive and at the same time, affects the shopping and buying habits of consumers. Dr. Lars Perner (2010) defines consumer attitude simply as a composite of a consumer's beliefs, feelings, and behavioral intentions toward some object within the context of marketing. A consumer can hold negative or positive beliefs or feelings toward a product or service. A behavioral intention is defined by the consumer's belief or feeling with respect to the product or service.

Perhaps the attitude formed as the result of a positive or negative personal experience. Maybe outside influences of other individuals persuaded the consumer's opinion of a product or service. Attitudes are relatively enduring (Oskamp & Schultz, 2005, p. 8). Attitudes are a

learned predisposition to proceed in favor of or opposed to a given object. In the context of marketing, an attitude is the filter to which every product and service is scrutinized.

The functional theory of attitudes, developed by Daniel Katz, offers an explanation as to the functional motives of attitudes to consumers (Solomon, 2008). Katz theorizes four possible functions of attitudes. Each function attempts to explain the source and purpose a particular attitude might have to the consumer. Understanding the purpose of a consumer's attitude is an imperative step toward changing an attitude. Unlike Katz's explanation of attitude—as it relates to social psychology, specifically the ideological or subjective side of man—consumer attitudes exist to satisfy a function (Katz, 1937).

The utilitarian function is one of the most recognized of Katz's four defined functions. The utilitarian function is based on the ethical theory of utilitarianism, whereas an individual will make decisions based entirely on the producing the greatest amount of happiness as a whole (Sidgwick, 1907). A consumer's attitude is clearly based on a utility function when the decision revolves around the amount of pain or pleasure it brings.

In insurance case, we can assume that the consumer is thinking at and balance the chances that exist that a risk occur in his/her field of activity and the consequences it brings. If the amount of pain and financial losses is bigger than the pain felt of losing the premium amount of money that it is paid for the insurance policy, this is to say that the consumer accepts the insurance and has a positive attitude in which concerns the insurance.

Changing a consumer's attitude towards a product, service or brand it can be a challenge. Three attitude change strategies include: changing affect, changing behavior, and changing beliefs (Perner, 2010). Classical conditioning is a technique used to change affect. In this situation, a marketer will sometimes pair or associate their product with a liked stimulus. The positive association creates an opportunity to change affect without necessarily altering the consumer's beliefs. Altering the price or positioning of a product typically accomplishes changing behavior. In insurance, the deductibles and the marketing strategies in the domain have conditioned clients to be more open to contract a policy of insurance that is less costly or is comprehensive and include more risk in a single insurance and this lowers the price making the consumer more inclined to subscribe to such contract.

In this section, it can be discussed the problem of ambiguity which is closely related with the risk and about risk aversion that manifest differently in the case of women and men.

Studies have shown that women are more risk averse than men. Over an initial range, men reduce their valuation of ambiguous urns more than women. After that, men and women equally value marginal changes in ambiguity. Since psychological measures are related to risk but not to ambiguity, risk aversion and ambiguity aversion are distinct traits since they depend on different variables. Schubert et al. (1999) find that women are more ambiguity averse than men in an investment context but not in an insurance context. Powell and Ansic (1997) report that women are more risk averse and ambiguity averse. Dohmen et al. (2008) find that lower cognitive ability and less openness to new experiences predict greater risk aversion.

In a review of the specific literature on gender differences in business decision-making, Johnson and Powell (1994) argue that the research findings before 1980 were instrumental in establishing a dominant view that substantial gender trait differences exist in the nature and outcomes of management decisions involving risk. These studies suggest that women are more cautious, less confident, less aggressive, easier to persuade, and have inferior leadership and problem solving abilities when making decisions under risk compared to men, reinforcing stereotypical views that women are less able managers. Johnson and Powell (1994) re-examine the early business decision-making literature and conclude that the evidence on gender differences is no longer clear cut.

Studies of insurance decision-making have also identified a lower degree of confidence amongst women in their ability to make decisions and in the out-come of these decisions (Estes and Hosseini, 1988; Stinerock et al., 1991; Zinkhan and Karande, 1991; Masters, 1989).

Women had a lower risk preference and a higher degree of anxiety in financial decisions than men, plus a stronger desire to use financial advisers.

In which concerns moral hazard the difference between genders is not important, maybe because of the psychological factors like narcissism that make the person behave more irresponsibly. Suppose an insured individual behaves in a manner, which increase the probability of a loss from what it was before insurance was purchased. Furthermore suppose that the insurer cannot determine that the policyholder has changed his behavior in this way. When there is this type of asymmetric information between buyer and seller, then one has the condition known as moral hazard. There are good reasons for the presence of moral hazard. The insured individual has less incentive to take the same amount of care as when she was uninsured, knowing that if there is an accident or disaster, she has protection. Furthermore if a person has suffered an insured loss he may try and be able to collect more than the actual loss. The insurer may not be able to detect these types of behavior. It is costly and often extremely difficult to monitor and control a person's actions and determine whether she is behaving differently after purchasing insurance. Similarly it may not be possible to determine if a person will decide to collect more on a policy than he or she deserves by making false claims without extensive auditing, which is also a costly proposition.

The risk aversion is related with risk perception and other psychological triggers that exists in the decisional process of the consumer.

Perception is another lead factor in the consumer insurance decision. A *perceptual set*, also called *perceptual expectancy* or just *set* is a predisposition to perceive things in a certain way. It is an example of how perception can be shaped by "top-down" processes such as drives and expectations. Perceptual sets occur in all the different senses. In insurance, perception is determined by culture, social development, education and informational background. That is why in poor country the perception of insurance is different by the one people have in devolped countries.

For example in Ghandia, majority of policyholders think that insurance companies are good at collecting premiums and once one get into trouble they bring you a lot of issues in order to avoid paying claims. 'insurance companies just collect your money. The perception is if one has an accident the company want to get a police report or inform that one's policy does not cover this amount.

In the developed countries, people have a financial education and they are opened to having more than one insurance policy.

But what happens about the young perception in insurance ? The perception and the attitudes of young people about the necessity of insurances it will be shown in the next survey.

2. Study case

Questionnaire about the perception of students about insurances.

The sample 100 students of the Foreign Languages Faculty, Italy. We can consider this sample as a pilot sample taken with the purpose of projecting a survey with much more variable which should insure a better representativity of the sample and minimize the errors of the survey. The contact method and the collection of data was the direct questionnying of students applying a formular and also completying data on a internet platform.

The first part of the questionnaire had the purpose to follow the registration of the classifying characteristics of the insurance agent or the consumer which had, has or will have

an insurance and obtaining a representative sample. The sample structure after the classifying were:

At the question “*What is your age ?*”, the distribution of the answers was :

Table 2. The structure of students after age

Age	Structure (%)
>20 years	41,3
< 20 years	58.7

The majority of the students had above 20 years, some of them between 25-30 years old referring to the ones that completed the questionnaire on the online platform, the rest of the students had 20 or less (around 40 %). That is why at this segment of population the more important thing is to empahse the perception about insurances and the proclivity to make or not in the future a sort of insurance because at this age students don’t have sufficient income in order to already subscribe to an insurance company. The main purpose of the questionnaire is to see the perception and the availability of the students regarding insurance market..

At the question “ *You are male/female?* ”, the distribution of answers was:

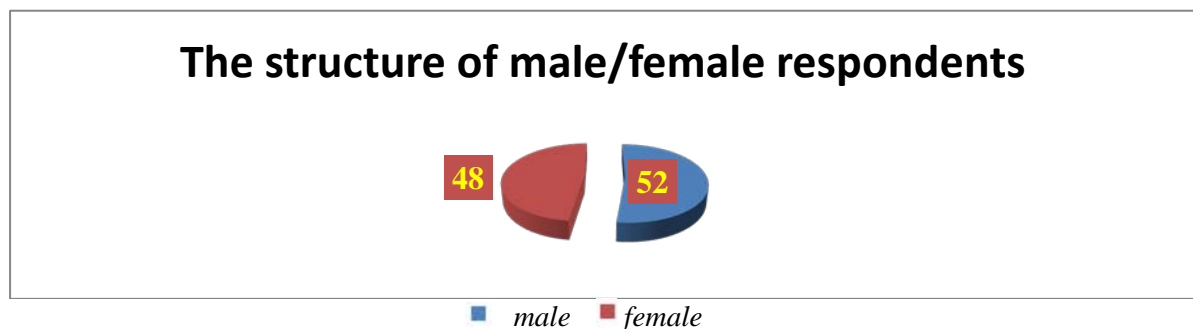


Figure 1 –The structure of male/female respondents

It can be seen that 52 % of the respondents were male that and the rest, 48% female. In fact, the type of the insurance held, as we will see in the second part of the survey, it is the insurance for social responsibility car and the gender can create some differences in which concerns the consumer preferences and risk perception.

At the question «Are you risk averse?», the distribution of answers was:

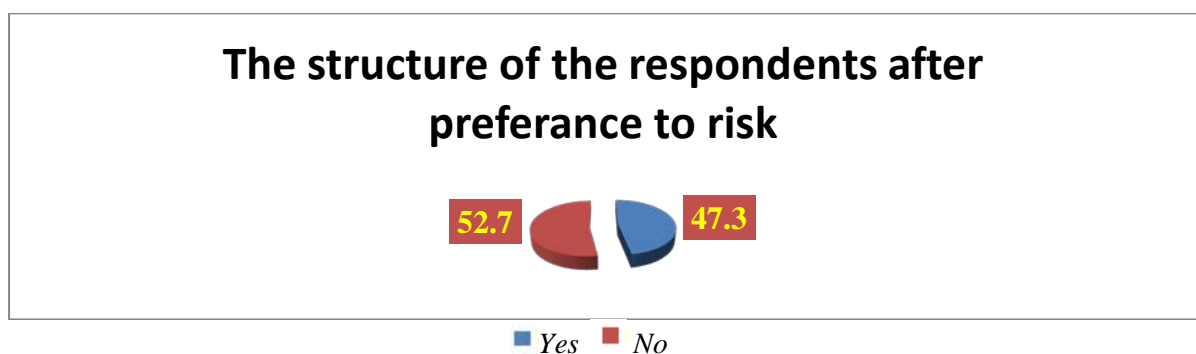


Figure 2 –The structure of the respondents after preference to risk

It can be observed that 52.7% are risk averse, which is in according to Standard Economic Model (www.wikipedia.org/wiki/Economic_model) and 47,3% prefer risky situation. The reason that are behind this option should be analyzed in order to sustain the Prospect Theory (Prospect Theory: An Analysis of Decision under Risk, Daniel Kahneman and Amos Tversky, Econometrica, 1979) and prove that psychological factors and environment referential points can influence one person perception in which concerns risky situation.

At the question «Do you have an insurance policy ? If yes what kind of ? », the distribution of answers was :

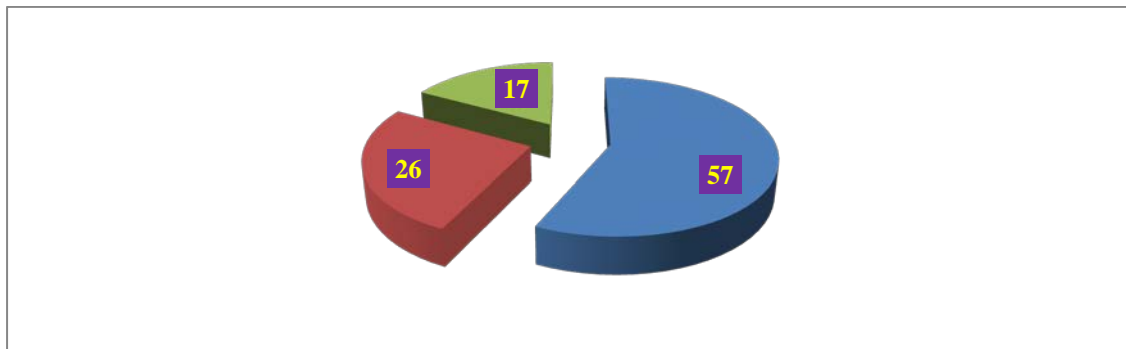
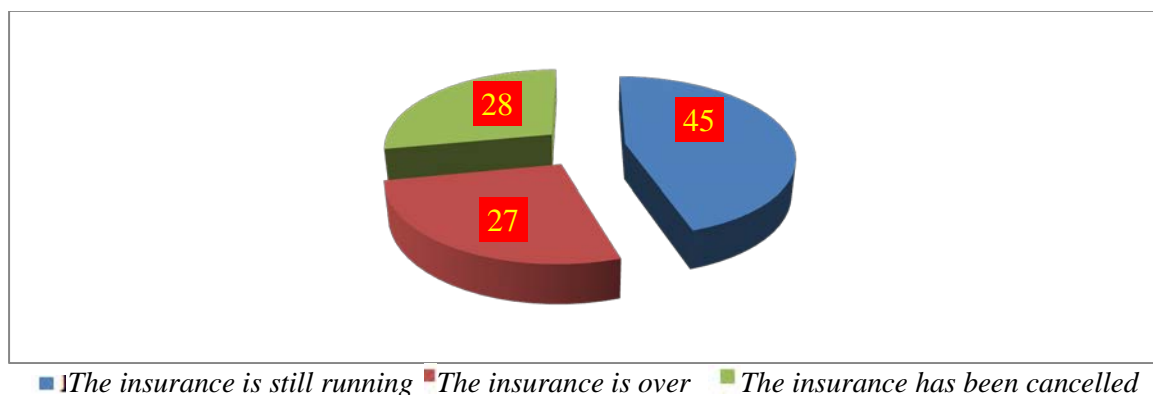


Figure 3 –Structure of the respondents after the insurance type held or future purchase

In the total of the responses, 57% of the students said that they did not have an insurance and of the ones they had an insurance they preferred RCA 26 %, insurance for car civil responsibility because at this age the only good they have is the automobile and 17% had CASCO insurance or other types. It can be mentioned that in this percentage of 17%, are included the respondents that completed the online form and the age average was between 27-30 years. In this case the other types of insurance that they had, were included life insurance, family insurance, work insurance and accident or disaster insurance.

Referring to the question « Which is the current state of your insurance ? », the distribution of answers was :



■ The insurance is still running ■ The insurance is over ■ The insurance has been cancelled

Figure 4 –The structure of the respondents in function of the current state of the policy

In figure 4 it can be seen that 45% of the ones that had insurance have a contract that is still running, 27% declare that the contract finished and 28% didn't answered motivating that for lack of money they did not subscribe to a contract.

At the question « Which are the main reasons for which you would buy an insurance ? », the distribution of answers was :

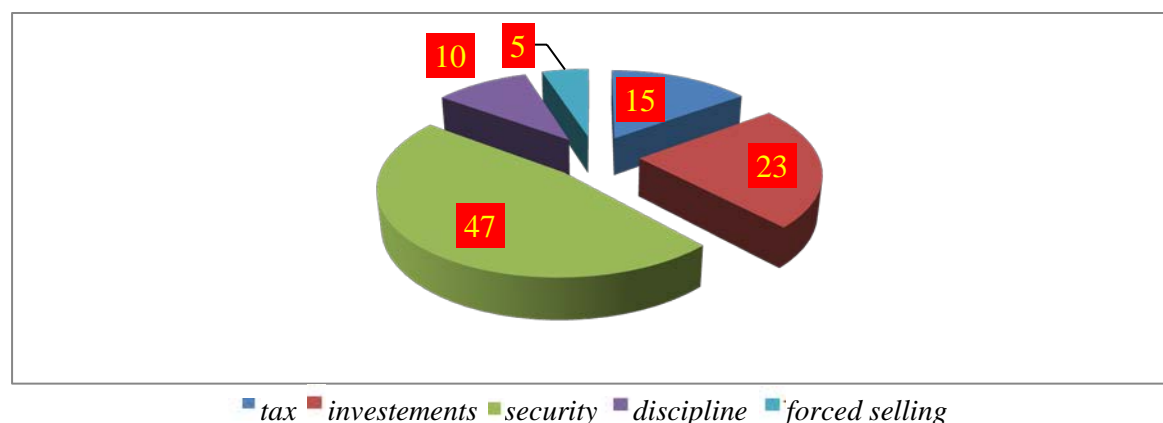


Figure 5 –The structure of answers after the main for buying an insurance

In figure 5 it can be observed that 47% of the respondents appreciate that they will buy an insurance for reasons of security, safety and trustv (emotional factors) 23% as investment in their future stability 15% for taxes, 10% for discipline, and 5% declare by forced selling because of contracting a bank credit.

At the question «What criterya you use for choosing the insurance company?», the distribution of answers was:

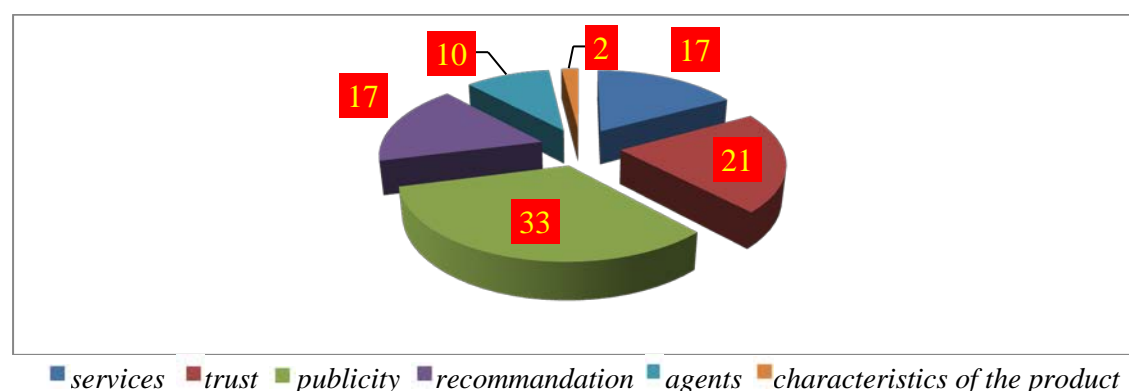


Figure 6 –The structure of the respondents after the criterya used in choosing an insurance company

In the figure 6, it can be observed that 17% of answers show that the society is chosen having into consideration the services offered and the historic of the security and trust of that society on the market, 33% by publicity, 21% due to trust and recommendations, 10% due to the selling agents, 17% due to the characteristics of the product, 2% other motifs.

At the question « If you have not an insurance, would you buy one ? Why ? . »

The majority answered that they would not buy an insurance (53%), because they do not need an insurance or they do not have money to subscribe to an insurance policy. This is

easy to see that the students does not perceive the importance of an insurance, they are not risk averse due to the lack of information or due to the age when they minimize the risk they are expose to.If they do not have the money to make an insurance is due to the fact that they do not have a fix income or the scholarship or parents' allowance is very little and the structure of their income addresses to the fundamental needs like food, clothes, buying books for education, etc.

At the question « How do you prefer to buy an insurance ? », the distribution of answers was :

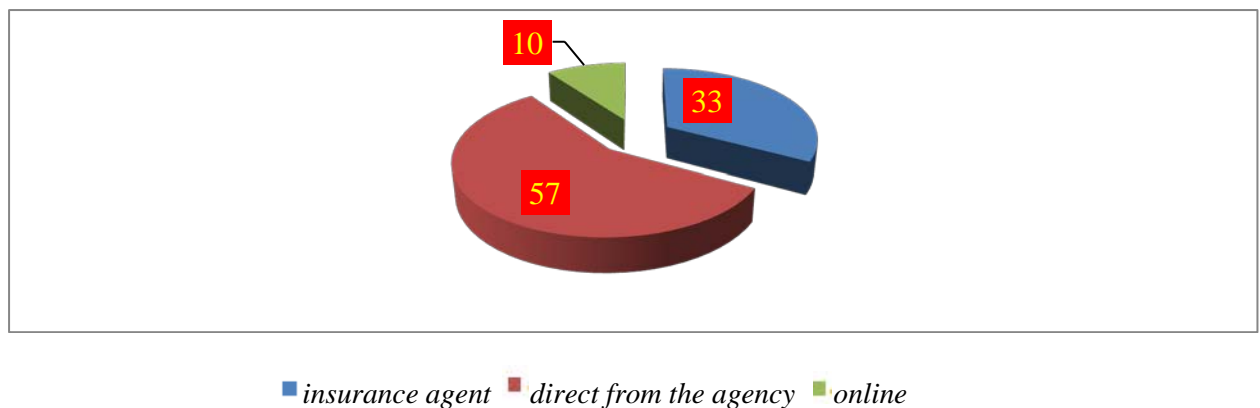


Figure 7 –The structure of respondents according to the channel of buying an insurance

The distribution of answers was : 57% declare that prefer to buy the insurance direct from the insurance society, 33 % prefer the selling agents and 10% prefer online buying.

At the question « Do you feel more protected having an insurance ? », the distribution of answers was:

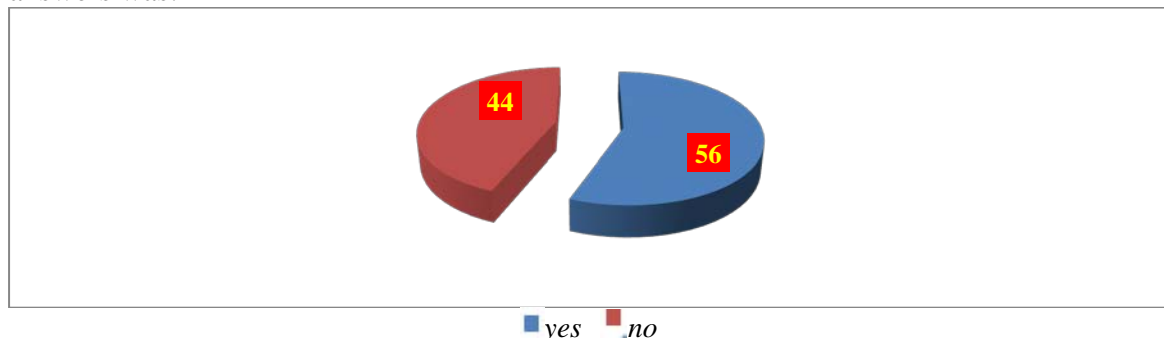


Figure 8 –The structure of respondents after the protection level perceived

In figure 8 we can see that 56% of students feel more protected having an insurance and 44% consider that this is not increasing their level of safety.This is due to the fact that in that 44% percentage the student do not have an insurance or do not have the financial education to understand why would be better to have an insurance.Due to the lack of experience, lack of money, lack of information and having in consideration that at this age they do not have many goods in their possession, young people do not feel the need to be protected or to protect the welfare of their family.As the Maslow needs pyramide show, the need for security and safety is a superior need, it is on the third level of the pyramide and this shows that people have primarily to fulfill their basic needs and accomplish a certain level of personal development in order to concentrate upon this sorts of need like security, protection.

Conclusions

The majority of students had no insurance or had an automobile insurance because of lack of money. It was observed that the male were more prone to subscribe to an compulsory car insurance or to a casco because they had automobiles. Other types of insurance, were registered to the ones that completed the questionnaire online and had between 25-33 years old, the principale insurances were house policies and life policies. In the crisis context, price has certainly become more important. It can be assumed that modern retail, which offers good prices, will be the consumers' first choice. Students perception about insurances in Italy revealed the fact that young people appreciate and find useful an insurance policy but due to the lack of money they do not have insurance policies. This is to say that majority of students would buy an insurance due to the trust and security feeling that an insurance held creates. Another reasons for making an insurance is to protect their family and future goods or if they will have the money for it. The principale insurance detain by students are the automobile insurances because this is the only welfare they have. It is to be noticed that financial reasons blend with emotional ones in order to sustain the idea that human beings are not so rational in their decision process and the affective component could play an important role in making an acquisition.

References

- "Consumer Psychology, Jansson-Boyd, Cathrine V., McGraw-Hill Professional Publishing
- "Understanding consumer attitudes", Gregory Dean in Marketing Strategy, 2010
- "Insurance consumption in Italy: a sub-regional panel analysis", Giovanni Millo University of Trieste
- "Consumer perception", USC Marshall, University of Southern California site.
- www.ehow.com

THE SOCIAL NETWORK SITES AND THE GOVERNANCE OF THE SUSTAINABLE DEVELOPMENT

Cristian Moisoiu¹

Abstract

The social network sites are becoming more and more complex communities of social dialogue, involving themselves in the governance processes. The stakeholders in different fields are getting engaged to rebuild the institutional capacity and the consensus process. The present paper tries to analyse few mechanisms that enforce online social network sites to play a role in the sustainable development governance. Is there a possibility for these virtual communities to become useful instruments of sustainable development? Do have the social networks the capacity to command and control the economic activity?

Keywords: *sustainable development, social network sites, good governance, globalisation, ICT trends.*

J.E.L. Classification: *O33, Q56.*

Introduction

The transformation process towards a sustainable economy requires significant progress in knowledge, human creativity and universal participation. It is clear now that new institutions are necessary to be designed and enforced, in order to respond to sustainable needs. A complex process of capacity building will emerge and all other economic activities must decouple from a *business as usual* approach and involve more and more in sustainable vision, action and management.

Nevertheless the human system must evolve towards a totally harmonized coexistence with ecosystems, in which the economic flows are floating on the ecosystem processes. This means that economic activities should follow the environmental changes, should not put a pressure on the ecosystem to provide the required resources, when the natural resources are hard to get. The ecosystem processes are uncontrollable, the same as the seasons. The climate change implies a transformational process of the economy as well, due to the fact that many of the common economic activities have to adapt to the new ecosystem processes. The human system is operating for the moment on an automatic pilot, showing the lead to required resources, trying to reach the maximum productivity and value added, without considering the dynamics of the environment and the planet. The pressure generated by the exploitation of the natural resources, the extensive agriculture and land use, could provoke, in the conditions of climate change, uncertain effects on the ecosystem. For instance, if none would expect changes in the precipitation amounts in an area that didn't suffer any water shortages during the recorded statistics, the continuous exploitation of hydropower or other extensive use of waters, could lead to an increasing water risk for that area.

A sustainable development process should be governed in a perfect correlation between the human economic activities and the ecosystem processes. Otherwise, the nature's

¹ Mid-level researcher within the Institute for World Economy Institute, Romanian Academy, Bucharest, e-mail: moicris@yahoo.com

resilience could be badly affected or even worse the negative phenomena, like flooding, landslide, earth quakes or bushfires could intensify, which irremediably would affect the human system. For a sustainable governance to happen, the sustainable development requires an extended democracy. The sustainable economy governance is characterized by several key principles, which are different of those described by the actual governance system.

This paper tries to reveal the importance of the social network sites (SNS) in the light of the recent developments. It is not an empirical study on the impact of the social web on the sustainable transformational process, as there is little scientific evidence on that sense. Instead, the paper tries to identify new mechanisms of how such a process can be conducted through social networks and how a consensus may be attained.

This article might have a contribution in redefining the social choice mechanisms (SCM) of human systems in relation to ecosystems and bringing a new dimension, of the online social networks, as the most cohesive delocalized society. This opens up a large theoretical discussion whether the online based community can generate the preconditions to apply the Coase theorem, with implicit efficiency (R. Coase, 1971).

There are of course a number of questions and barriers for these mechanisms to be enforced, but rather this is a question in itself whether it is feasible and desirable that social networks gained such extends, are they a threat or an opportunity of institutional enforcement for liberal democracies?

What are the social networks and how are they used by people?

How it is accepted and promoted in social networks the sustainable development concept?

Are online social networks changing the institutional approach whereby societies make their decisions on sustainable development?

1. Governance principles of a sustainable economy

In a way of speaking, as a basic condition, the sustainable development to happen it needs to be sustained. The public support of the idea of sustainability, as we are aware of (Brundtland Commission, 1987), has risen due to many economic and social developments worldwide and due to negative and unwilling experiences with the environment. More recently, the market failures and the inefficient use of public finance have led to exacerbating imbalances in social and economic indicators, worsening of public finance in many of the democratic states, which eventually induced the economic crisis. The response to the economic crisis, which is totally accompanied by the financial crisis, has to be found only in sustainable solutions. More and more, people are becoming aware of the fact that financial bailouts eventually reflect in their own pocket, that no one can solve global crisis, by inducing temporary anaesthesia, instead of attacking the very causes of the economic fluctuations, which are derived from the unsustainable way of doing business and consumption.

It is clear now that the economic processes in a globalized world cannot afford to continue on an unsustainable basis, despite the up-valued wellbeing created by now. The reverse is reflected by several unacceptable trade-offs, like: natural resources depletion, poverty and social inequalities, climate change, large scale unemployment, natural disasters and financial defaults. All these aspects are definitely trespassing “the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs.”

The transformational process towards a sustainable economy has emerged merely due to technological progress and social cohesion rather than a political decision to move things forward, nor as a market consequence. From that starting point, many governments and the market have sensed the pulse and tried to take leadership in the process. The European Union

engaged itself in establishing targets for reducing greenhouse gas emissions and creating a coherent agenda for a transformational process towards a low-carbon economy. Huge developments have taken place all over the world, as the sustainable development is foreseen as the most important topic of the XX-th century. In that sense, many governments and leaders envisaged that positioning themselves on the market in a favourable course would bring them the winner award in this global contest. Instead of seeing the process as a global contest, it should be argued that the sustainable process requires a different governance approach as the ones we were accommodated with.

The main challenge of the sustainable development governance is to coordinate sector policies at different levels, in order to balance economic, social and environmental goals, which are in conflict (Nita, 2012). This type of governance requires important interventions, coordinated policies and cooperation between stakeholders, at global, national or local level. The leadership needs to be accepted globally or at least in the democratic world as rising from the bottom line of the population and not as a push forward from any type of government or corporation board. And this is due to the fact that sustainability consists of a behavioral change at the individual level, related to any aspect of the lifestyle, health, education and prosperity. (Furtado, 2000)

The basic principles on which a sustainable economy must rely on are the following (Brian Milani, 2005):

- **Self-organizing and self-regulation:** the role of the state evolves from supervision and often leadership to coordination, which means decentralization of management and institutions. New institutions are needed in order to undertake command and control of economic processes. Self-organizing, self-design and self-regulation are based on smart networks, which coordinates themselves. These are bottom-up hierarchies and in comparison with actual hierarchies, the bottom levels are the most relevant.
- **Decentralization:** individuals are more and more getting involved in decision making processes, the public opinions are accepted and the local forces are enabled. The crowd is not a crowd anymore, it becomes a comprehensive executive board;
- **Diversity:** the health and stability of every human system seem to depend on diversity of products, species and regions. This applies to all levels of organization, from human body to social system and ecosystem;
- **The economic flows are designed and controlled in a perfect coordination with ecosystem flows,** the economy follows the sun, the energy regeneration, the hydrologic cycle, the vegetation and the local by-products. Adaptation to climate change should not be a day to day challenge of the government and people, the governance has to take the natural flows as the way to live with;
- **The participative democracy:** in order to generate flexicurity and resilience, the sustainable economy requires a high level of participation. The direct involvement of communities in decision making, in institution building, command and control requires a high degree of transparency of information and a perfect reliability of communication technologies.
- **Human creativity:** in order to substitute natural resources with services, technology and knowledge, the innovative capacity of human beings must be valued and capitalized. The quality of creativity stands in altruistic attitudes for giving something real and valuable to society. Thus, the social values, esthetical and spiritual features become essential for the economic efficiency by itself.
- **Strategic spatial design and building:** land design and landscapes lead to important gains in effectiveness. New integrated designs are required, to conceive an elegant

combination of natural ambient and a sustainable use of space. The conservation of energy and space efficiency have a major impact over the economy.

2. What are the social network sites?

In the past 20 years, there were three developments in communication technology that gave reasons to design an information society. These three ICT developments underlie the explosion of the *social web*: (Willard, 2009).

- Mobile Communications – extending Internet access through a new generation of mobile phones and handheld computers;
- Social Media – enabling individuals to easily upload their own content (text, photos, video) and to find (and discuss) the content generated by others;
- Online Social Networking – enabling people to maintain and to extend their personal and professional networks, as well as to facilitate the flow of information, comments and opinions through these networks.

From the recent developments, which were produced even faster than the other three already mentioned, the OER (open education resources) and the rise of big data configure the spectrum of a new image of the world.

- Open Education Resources – a global classroom, where people learn and share knowledge, keep the pace with current trends and improve skills.
- Big Data tools – using great volumes of information to understand how the world looks like, having the global picture of things, values and preferences without needing to look back of the reasons why.

These five technologies are extending the possibilities to linking people, ideas and institutions together in new ways. They have enabled society to begin turning its knowledge into something good—for themselves and for their communities (Shirky, 2008). Individuals who weren't involved in the public debates until now are gaining access to platforms enabling them to challenge the status quo (Godin, 2009) and to imagine what non-hierarchical participative government might act like (Us Now). Sharing proficient knowledge to anyone, of which only a selective cohort could have benefited up until now, is leading to an unprecedented openness of mind and clearness. Higher education can no longer be a contextual self-accomplishment of an individual taking a prominent route of cumulative factors, but a possibility of each person to comprehend, to improve and to share knowledge. Considering the big data revolution, statistical analyses will move to a higher level, researchers and policy makers will no longer look for the causes of the events, they will understand what is simply going on only by having put together massive quantities of information that the Internet is offering. Whilst statistics operate with the past, relevant information is bringing us to the present. Only by sharing preferences and options, each node of social community is defining how the world looks like, having the almost complete image of societal DNA.

The social networks are a new form of “social contagion” (Christakis, 2008), which determines powerful mechanisms for rapidly transforming and shifting social norms. *A social network is a social structure made of nodes, individuals or organizations that are tied by one or more specific types of interdependency, such as values, visions, ideas, financial exchange, friendship, kinship, dislike, conflict or trade* (Willard, 2009). In the past 20 years, through the spectacular development of the communication technology, the social networks have grown on a web-based platform. The social network sites (SNSs) are “*web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system*” (Boyd & Ellison, 2007).

E-skills UK (2009) have determined the rise of social computing among few other globally emerging trends in ICT that will particularly influence the global governance. The social computing, mainly represented by online social networks, now has a branch of business oriented platform, which is entitled Web 2.0. , which shifts customer-company relationships on the web to peer-to-peer social networks. Unlike web storefronts, these channels are not controlled by companies; but by communities of interest. This is already an important step the social networks took towards a governance platform. The involvement of stakeholders in different businesses, specialists in various domains and industries could generate the level of participation and decision making processes necessary to define a governance process.

The social network sites are now seen as a part of Web 2.0 that aimed to enhance creativity, communications, information sharing and functionality of the Web. (Wikipedia, Web 2.0)

The first social network site was SixDegrees.com, launched in 1997. The users could send messages and post bulletin board items to people in their first, second and third degrees, and see their connection to any other user on the site. Online social networking began to develop as a component of business Internet strategy around March 2005 when Yahoo launched Yahoo! 360°. (Willard, 2009)

Now, the most accessed SNS reunite millions of users worldwide and the organization shift from communities of interests to people you might know. Facebook has countered more than 1 billion users worldwide. Facebook, Twitter, MySpace or Cyworld are the most common and used social networks. Many of the users access the sites daily. Facebook surpassed Google and Yahoo with users spending 12.7% of their time at the website. Smartphone users spent 87% of the time on mobile apps for SNS and only 13% of the time on the web. (Nielsen Media Research, 2013)

Which are the main characteristics of social networks that can enforce a social choice mechanism?

- 1) The unlimited number of participants – a social network has the capacity and the conditions to become universal. It is user friendly, it is free and it is fun. For the moment, it is being limited by the penetration rate of the Internet, but on short to medium time this will not be an impediment anymore;
- 2) Self-organized and self-controlled: except the international norms of security and communication, there is no other form of management that imposes rules over participants. The main source of financing is advertising. But advertising doesn't involve a huge logistic capacity and it doesn't replace the purpose the SNS was created, for people to freely interact. There are some social network sites that require subscription fees form premium services, but this is not a large practice. The expected revenues in 2012 in advertising in social networking worldwide reached \$8.8 billion, an increase of 46% YOY. (socialnetworkingwatch.com, 2012)
- 3) The bottom-up hierarchy: there is not command and control as in the classic meaning. Command and control comes from bargaining and the leadership comes from the bottom level of individuals;
- 4) Participative democracy is guaranteed by the number of participants having equal rights and equal options to communicate, to promote ideas, to deny or to argue. The leadership is self-generated through bargaining and dissemination of information;
- 5) Information transparency: in democratic states, the web platforms make impossible the prohibition of information. More than this, the dissemination of information widely and unrestricted is one of the basic principles of networking;
- 6) The cost of participation is null. There is no fee for registration, site access, information or users account, except occasional fees for some premium services (as is the case for LinkedIn).

The institutional function of command and control can be gradually decentralized to a more cohesive and participative community of dialogue. The prospect of participative democracy which implies a direct and unrestrictive access of individuals to a decision making process can be easily identified with a social network.

The importance of the bottom level of participants and the originally bottom-up design of online networks create the premises of a wide institutional building that might lead a transformational process towards sustainable development. As it was stated above, the basic principles that define a sustainable economy are more synergetic and navel related to communities rather than other centralized forms of governance.

The most intrinsic value of a social network is the individual himself, having the status quo, the culture and the creativity to determine what is socially best for his own.

There are more and more examples of social networks that have the capacity to change social norms, regulations and even governments. The social networking can generate the fastest mechanism of self-organizing the world has ever met.

The recent unrests in the Arab World (2010), the *Arabian spring*, the *occupy movement* in the US, the riots in Spain, Portugal, Greece, Bulgaria and Turkey (2010 – 2013) have shown up the incommensurable power the social networks have gained during the past seven years. Since the US Presidential election, when the actual President Obama obviously gained support using the social network sites and platforms to spread his message, we actually face an increasing social movement on all around the world through all media support, but mainly through social networks on the Internet.

The increased civil unrest in Egypt and Tunisia was due to complaints and manifests of anger against regimes on social networks. In a *New York Times* (2011) article by Kareem Fahim and Mona El-Naggar, titled “*Broad Protests across Egypt Focus Fury on Mubarak*”, the authors demonstrate the importance Facebook played in the organization of the protests. Fahim and El-Naggar argue, “*More than 90,000 people signed up on a Facebook page for the Tuesday, January 25, 2011 protests; framed by the organizers as a stand against torture, poverty, corruption and unemployment.*” In many of these countries, the government has completely or partially cut off Internet access during protests, especially since protesters have been using sites such as Twitter and Facebook to organize and gather support. When the Internet access was released, the phenomenon was impossible to be controlled.

Another effect of the social networking is the transparency of information. More often lately, the information provided through other channels, like television or newspapers is suspected by the public opinion as being manipulated, distorted in its content or substance by different stakeholders that exert control over the sources of information. The self-organizing function of SNS determines a diffusion of information from each node to every user and the information is filtered from different perspectives, reducing the possibility of distortion on a certain direction.

The recent *Wikileaks* phenomenon, despite its risk and security dimension, can be assumed as a transfer of power from the security and intelligence institutions around the world to communities, in the sense that the information is a containment of power and who controls information gains power. Through big data tools, although limited for the moment by hardware processing capacity, each node can become the holder of the intrinsic value of information. Although the implications and risks are multiple, the social networking created the platform for information transparency.

3. Social networking and the sustainable development

What is of particular interest in the case of online social networking is the fact that the participant voluntarily agrees to engage in certain behaviour, he becomes a citizen in a virtual community, no matter of his truly commitment or social responsibility in his living

community. The argument of this allegation is that the antisocial behaviour is cut off in this manner. One cannot become violent or aggressively impose his own opinion as he is imminently excluded from the virtual community. The participation and commitment are also a free choice. Instead, one gets support if his arguments are reasonable, as long as the basic principles of networking are observed. We can assume that the social networking is the most democratic community of dialogue.

The reasons of this fact are indeed the large participation of individuals, having equal powers and chances. They have the right to join the community and to leave whenever they want. They can easily interact to each other and bargain with insignificant cost of transactions. As already mentioned, these are important conditions for sustainable development governance. There is scientific evidence about the chain reactions among people on particular trends to follow. Same as the applauses, the social contagion on the Internet increases either if a lot of people in the wider world is describing a trend or if some closer friends are doing so (BBC World, 2013).

There are already specific SNS that promote or support sustainable development.

- stand-alone mechanisms, as cheaper and easiest platforms to promote sustainable ideas, niche products and services and to generate sustainable communities.

The most well-known social networks treat the sustainable development as stand-alone. These networks don't explicitly discuss sustainable development, but the issues around the members organize stand at the core of sustainability.

Examples of such networks are: <http://www.takingitglobal.org> , <http://www.change.org>

- specific issues and develop targeted strategies, like:
 - Corporate Social Responsibility, <http://www.justmeans.com/>, in which individuals and companies discuss the environmental responsibility,
 - Sustainable consumption:
<http://www.sustainlane.com>, <http://www.people4earth.net/>
 - Climate change:
<http://makemesustainable.com/>, <http://www.edenbee.com/>
- „think globally act locally”

Many sustainable development online communities have embraced the notion of „think globally act locally”. These communities have embraced sustainability concepts and ideas and try to develop understandings of the challenges facing a region, a resource and to give solutions.

The support of information the social networks share is enormous, but it is almost impossible to measure the impact, because of the decentralized nature of social networks and their rapid growth.

The SNS appear to be one of the trends in ICT that have huge impact in governance and society. The benefits of this fact are that this trend is pushing forward democracy and a more transparent and connected governance.

The mechanisms of governance that social networks can use in order to influence global governance are:

- The use of online social networks to influence political view, to enhance civic education, to support political campaigns that are oriented towards sustainability;
- To use the SNS as an instrument to increase transparency of information, as it is the case of Wikileaks, but not necessarily and the big data tools. The transparency of governance is more important for individuals to take sustainable behaviour even without any subsidies or incentives;
- To support groups and organizations that promote sustainable regulations and incentives;

- To promote and legitimate individuals that have the leadership ability and have the capacity to assume leadership on sustainable development issues;
- To deliver and to induce action among people. Whether they are proper example or not, the recent developments of protests and unrests showed the SNS have the capacity to engage people. People act only when they engage in relationships and gain trust in each other. SNS are the emerging trusting platforms, because people rely on the values they voluntarily agreed to join, when developing profiles on SNS;
- Through SNS, the business environment can be attracted to share knowledge that can be used by communities to be part of sustainable development and to act in that sense.

The actions people might take to get involved in social networks would raise the potential of social networks in the governance process. This would include professionals that work for the interest of the online community, employees, especially in the public sector, to establish and enhance policies and regulations for the sustainable agenda, organisations, associations and networks to create their own out of the box network.

All the activists must ensure they get more effective and sense-making action. People have to be more aware of the impact of open source and social networking around the world and have to increase commitment to make good decisions for their lives. The sustainable institutions must be supported so that the networking power to increase.

Conclusions

In the past 20 years, there were several developments in communication technology that gave reasons to design an information society: mobile communications, social media, online social networks, open education resources and big data tools.

One of the most significant trends in ICT that will have a great influence on the global governance is the online social networking. The way the SNS are engaging people, disseminating information and creating attitudes demonstrated the power and the growth of this social contagion phenomenon over the past seven years.

This paper tried to identify new mechanisms of social choice that can be conducted through social networks and how a consensus can be attained related to issues of sustainable development.

Giving the particularities of sustainable development governance, the social network sites can be a valuable instrument that ensures participative democracy, transparency of information and governance, political pressure to enforce new regulations, support to leadership and a large channel to transform behaviour from ideas into actions.

The most intrinsic value of a social network is the individual himself, bringing his culture and his creativity to determine what is socially best for his own. Despite the commitment in his real community, with which very often the individual is not on the same frequency or despite the values the social and economic context determine to the individual, with the SNS profile, the unbiased individual can embrace the values he really identifies with. From this to the next step of critical mass, the distance becomes less relevant for any entity to have the possibility to stop.

There are more and more examples of social networks that have the capacity to change social norms, regulations and even governments. The social networking can generate the fastest mechanism of self-organizing the world has ever met.

The knowledge of professionals and organizations in matters of sustainable development can be shared to community and the community may use the knowledge in order to fulfil a sustainable agenda.

Sustainable development SNS already exist and the most of them are organized based on the principle of *think globally act locally*. There is a prominence of *out of the box* reason which addresses the niche products, regions or topics.

Although there is a real impact of the social networking over sustainable awareness among people, it is impossible to measure any financial or social impact, giving the rate of growth and the decentralized feature of the phenomenon.

There is instead a lot to do in order to use the whole social networking capacity to disseminate civic education and to try to avoid the information dispersion through small networks, as there is a risk for out-of-dating the sustainable development agenda. The process has already begun, having open education resources and big data tools as the main leading factors to ensure good governance.

References

- **Bustin, Brian**, (2011, Jan 24), *Protests in Tunisia and Egypt Organized Through Social Networks*, retrieved from Suite101.com
- **Christakis, N. A.** (2008, February 25). *Social Networks are Like the Eye*. (J. Brockman, Ed.) February 11, 2009, from Edge: <http://www.edge.org/documents/archive/edge238.html>;
- **E Skills UK**, *Technology for Growth IT & Telecoms Insights 2010*, e-skills UK, 2009, London from <http://www.e-skills.com/>
- **Godin, S.** (2009, January 21), *Spark: Whoppers, Ethical Marketing, and Leadership 2.0*. (N. Young, Interviewer) CBC.
- **Godwin, B.**, (2008, November 19), *Social Networks and Government*. January 24, 2009, from webcontent.gov
- **Kolstad, Charles**, (2000), *Environmental Economics*, Oxford University Press, New York,
- **Lunden, Ingrid** (2013, July 25), *Social Media Revenues To Reach \$16.9B In 2012*, Social Networking Watch, retrieved from <http://www.socialnetworkingwatch.com/2012/07/social-media-revenues-to-reach-169b-in-2012.html>
- **Milani, Brian**, (2005), *What is Green Economics?*, GreenEconomics.net
- **Morelle, Rebecca** (2013, July 19), *Clapping reveals applause is a 'social contagion'*, BBC UK, retrieved from <http://www.bbc.co.uk/news/science-environment-22957099>
- **Niță, Viorel** (2012), *Influența ecoeficienței asupra competitivității economiei românești*, Institutul Național de Cercetări Economice, București
- **Shirky, C.** (2008, April 26). *Gin, Television, and Social Surplus*. Retrieved January 24, 2009, from Here Comes Everybody Blog: <http://www.shirky.com/herecomeseverybody/2008/04/looking-for-the-mouse.html>,
- **Simms, Andrew, Boyle, David**, (2010), *The New Economics*, Earthscan, London.
- **Singh Grewal, D.** (2008), *Network Power: The Social Dynamics of Globalization*. New Haven, CT: Yale University Press.
- **Willard, Terri**, (2009, March), *Social Networking and Governance for Sustainable Development*, International Institute for Sustainable Development (IISD), Manitoba

SPECIAL ISSUES

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CORPORATE FINANCIAL DISTRESS AND BANKRUPTCY: A COMPARATIVE ANALYSIS IN FRANCE, ITALY AND SPAIN

Alessandra Amendola¹

Marialuisa Restaino²

Luca Sensini³

Abstract

The paper presents a competing-risks approach for investigating the determinants of corporate financial distress. In particular a comparative analysis of three European markets - France, Italy and Spain – is performed in order to find out the similarities and the differences in the determinants of distress.

By using the AMADEUS dataset, two possible causes of exit from the market are considered: bankruptcy and liquidation. For identifying the variables that influence the risk of leaving the market, a competing-risks model for each country is estimated and is compared with a pooled model including all the three countries. In addition, the performance of the competing-risks approach is evaluated versus the single-risk model, in which all states are considered without any distinctions.

The reached results show that the competing risks approach leads to a saving in the number of selected variables that becomes more significant when the model is estimated for each country separately. Moreover, the selected variables for each country enable to identify similarities between the different exit routes across the markets. Some of the differences between Spain and the other two countries may be related to the dissimilar definition of the distress states.

Keywords: Competing-risks model, default risk; financial ratios; hazard model.

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Introduction

Business failure has been widely studied since the seminal papers of Beaver (1966) and Altman (1968). A large amount of the literature is devoted to analyze the firms' survival and to investigate the determinants of the exit decision, without considering possible distinctions among different status (Ohlson, 1980; Zmijewsky, 1984; Lennox, 1999; Shumway, 2001, among others) and without estimating the dynamical evolution (Sexton *et al.*, 2003; Balcaen and Ooghe, 2004; Chava and Jarrow, 2004; Hillegeist *et al.*, 2004; Dakovic *et al.*, 2010; Amendola *et al.*, 2011a).

To overcome these limitations, some authors applied advanced versions of the logistic regression model (e.g. the mixed logit, multinomial error component logit and nested logit model) (Jones and Hensher, 2004, 2007; Hensher, Jones and Greene, 2007; Dakovic *et al.*, 2010) and the competing-risks models (Bhattacharjee *et al.*, 2002; Dickerson *et al.*, 2003; Headd, 2003; Rommer, 2004, 2005; Chancharat *et al.*, 2010; Amendola *et al.*, 2011b).

Therefore, in order to examine the effect of explanatory variables across the diverse states of financial distress, a multi-state approach can be used. Theoretical evidence for considering multi-exits was provided by Schary (1991) which analyzed acquisition and bankruptcy as alternative routes, while Lau (1987) had previously proposed a five state

¹ Department of Economics and Statistics, University of Salerno, Italy, email: alamendola@unisa.it

² Department of Economics and Statistics, University of Salerno, Italy, email: mlrestaino@unisa.it

³ Department of Management Research, University of Salerno, Italy, email: lsensini@unisa.it

prediction model for estimating the probability that a firm enters each of the considered states. The increase in information on different types of exit and the development of statistical methods and computational techniques have caused a renewed interest in analysing how financial factors affect firm survival and the different causes of entry and exit of firms from the market.

Our interest is to investigate the causes of business failure of three European markets - France, Italy and Spain - in order to study the determinants of the probability of alternative exit routes and find out whether there are connections among the predictors of distress in the different countries.

A similar problem has been focused by some previous studies that compare the determinants of failure in several countries. For example, Hunter and Isachenkova (2000) explain the differences in the predictors of failure in Russian and UK firms. Their main results are that liquidity and gearing are not effective for failure in Russian firms, while size, profitability and turnover are good predictors. For the UK firms, it seems that profitability, gearing and liquidity are all important for predicting failure. Bhattacharjee *et al.* (2004) analysed UK and US firms by means of competing risks model, in order to identify the variables influencing the bankruptcy and the acquisition. They found out that adverse macroeconomic conditions increase the bankruptcy hazard while decreasing the acquisition hazard. The difference is related to the diverse bankruptcy definition in the two countries. Ooghe and Balcaen (2002) focus on whether a failure prediction model can be transferred across countries. They used a dataset of Belgian company accounts to build a failure prediction models potentially appropriate for different countries.

To the best of our knowledge, only one paper (Rommer, 2005) analyzes the business failure reasons in the three European markets considered here. Our contributions differ from Rommer (2005) in two main issues. Firstly we considered a larger data set including a huge number of variables and an extended sample period. Secondly, we focus our analyses on a two-way competing-risks model based on the two main exit routes (bankruptcy and liquidation).

In order to compare the effects of micro-economic indicators and firm-specific variables on the different states, we estimate a competing-risks model for each country. This model, unlike the traditional logistic framework, enables to incorporate the time to event as dependent variable in determining the probability of a firm being in a distressed status. Moreover, it allows taking into account whether and when the exit occurs, monitoring the evolution of the risk of each exits type over time. Furthermore, for sake of comparison, we also estimate a *pooled-country model* in which all countries are pooled together and a *pooled-state model* in which all financial distress states are considered at the same time. The significant variables and their sign are compared across the three country models in order to determine the similarities and the differences in the variables that influence the financial distress.

The paper is structured as follows. Section 2 gives the notion of business failure and illustrates the data. Section 3 briefly reports the methodology used in the analysis. Section 4 describes the reached results while the last session gives some concluding remarks.

1. The notion of business failure and the data base

Business failure has been defined in many different ways and it is not easy to agree on a widely accepted definition (Karels and Prakash, 1987; Crutzen and van Caillie, 2007). A failure state has been analyzed from different perspectives depending not only on the context and the characteristics of the firms but also on the interest of researchers (Dimitras, Zanakis and Zopounidis, 1996). In many studies, business failure is defined as a series of different situations that lead to the closing down of the firm due to relevant financial problems (Morris,

1997). However, this definition only concentrates on the financial disease without taking into account other difficulties that can affect the firms' health in the early stages of the failure process (Argenti, 1976).

Given that the empirical literature distinguishes between *economic* and *juridical* business failure (Ooghe and Van Wymeersch, 1986; Weitzel and Jonsson, 1989), the present analysis refers to the economic concept, focusing on those companies that have experienced permanent financial disease, including companies that have voluntarily chosen liquidation for whatever reason. Therefore, our sample is composed of those companies that belong to a specific sector of activity and had entered the economic procedure of bankruptcy in three European countries (France, Italy and Spain) in the period 2004-2010. In particular, we considered a firm as exiting in period t when it was the last year the firm was in business or active. This study focuses on these countries since they are inspired by the French Commercial Code (La Porta *et al.*, 1998; Rommer, 2005).

The data used in this paper have been extracted from the Amadeus database, a pan-European database, provided by Bureau Van Dijk (BVD). Since our main interest is in investigating the determinants of firms that end up in financial distress in the three markets and in comparing them in terms of different forms of exit and country-effects, we focus on three mutually exclusive states of exit from the market: *bankruptcy*, *dissolved* and *liquidation*.

The bankrupt status includes those firms that have been legally declared as being unable to meet financial obligations to creditors and are under court supervision. The dissolved status includes the company that no longer exists as a legal entity, but the reason for this is not specified. This means that the company is dead, has no more activity or is no longer included in the companies register. The last state includes those companies that no longer exist because they have ceased their activities and are in the process of liquidation. The reference group is provided by active firms.

The distribution of our population consists of 874 companies that went bankrupt, 311 that had entered voluntary liquidation, and 548 that were dissolved. There are 27,292 companies in the active state. The distribution of firms by state and by countries is displayed in Table 2.1.

Looking at the Table 2.1, it can be noted that there are no firms that go bankrupt in Spain and there are no firms that are dissolved in France and Italy. This situation may be related to the different corporate failure laws (García-Posada and Mora-Sanguinetti, 2012). For this reason we decide to join the bankruptcy and the dissolved state for the rest of the analysis.

Table 2.1: Financial distress

	France	Italy	Spain
Active	13,102	12,292	1898
Bankruptcy	264	610	0
Dissolved	0	0	548
In liquidation	37	273	1

The predictors' database for the period of interest (2004 - 2010) is elaborated starting from the financial statements of each firm included in the sample, for a total of 197,181 balance sheets. In particular, we compute $nv = 72$ indicators selected as potential predictors among the most relevant in highlighting current and prospective conditions of financial distress (Table 2.2) (Dimitras *et al.*, 1996; Altman, 2000; Altman and Hochkiss, 2006).

The selected predictors reflect the main aspects of the firms' structure such as liquidity, operating structure, profitability, turnover and size and capitalization, as shown in

Table 2.2. Moreover, some firm-specific variables, such as national legal status, firm size, firm age, publicly quotation, are also considered. These covariates are transformed into dichotomous variables.

A preliminary analysis is made on the database of predictors to analyze the impact of missing data and investigate the bivariate linear relations among them. Those covariates with a high percentage of missing and with a significative correlation coefficient are excluded from the analysis. It is consider as significant those correlation coefficients greater or equal to $|0.80|$ point out that correlation below that value are not harmful for an appropriate variable selection. Then we test them at a significance level 5% and we reject the null hypothesis that there is no correlation.

Table 2.2: Financial predictors

	nv
Liquidity	17
Operating structure	13
Profitability	16
Turnover	15
Size and Capitalization	11

2. The methodology

The methodology used in this paper in order to compare the determinants of business failure in the three European countries considered is the competing-risks model, one of the most popular settings of the multi-state models (Andersen *et al.*, 1993 and 2002). This model can be considered as an extension of the mortality model for survival analysis and is based on one transient state (state alive) and a certain number of absorbing states that are the death from different causes. All possible transitions are from the state alive. In this paper, we consider two possible causes of exit from the market: bankruptcy and liquidation, and we estimate the probability of transition from state active to the two states.

Let T be the observed time of exiting the market and let D be the cause of failure. The possible causes are labelled from 1 to K .

The main quantity in competing-risks model is the *cause-specific hazard function*, that is the probability of failing due to a given cause k , after one has reached the time point t :

$$\lambda_k(t) = \lim_{\Delta t \rightarrow 0} \frac{P[T \leq t + \Delta t, D = k | T \geq t]}{\Delta t}, \quad k = 1, \dots, K$$

Since the cause-specific hazard function may be depend on a set of covariates, the Cox Proportional Hazard model for each cause of exit can be considered:

$$\lambda_k(t | X_k) = \lambda_{k,0}(t) \exp(\beta_k^T X_k(t))$$

where $\lambda_{k,0}(t)$ is the baseline cause-specific hazard of cause k which does not need to be explicitly specified, X_k is the vector of covariates to k -type cause at time t , and β_k is the vector of covariates coefficients to be estimated by optimizing the partial likelihood for each cause:

$$L_k(\beta_k) = \prod_{i=1}^{n_k} \frac{\exp(\beta_k^T X_{ik}(t))}{\sum_{l=R(t_{ik})} \beta_k^T X_{lk}(t)}$$

where n_k is the number of firm in specific hazard k , and $R(t_{ik}) = \{l | t_{lk} \geq t_{ik}\}$ is the set of firms at risk at time t_{ik} .

3. The empirical results

This section provides the empirical results obtained from the estimated competing-risks model for each country and for the pooled data set. The effect of strategic factors on the likelihood of exiting the market for different reasons in the three European countries are investigated and the determinants of various exit routes are compared.

The variables considered as the initial set of explanatory variables in the model, in order to assess their effect on the hazard rate of each exit route for each country, are synthetized in Table 2.2. The most relevant variables for each state and each market are selected by stepwise procedure. Then, the significance of the estimated coefficients is checked and the variables that are not significant at least at 10% level are eliminated. This significance level is chosen in order to compare the determinants of exit routes selected in the paper with the results of a few papers in the literature (Chancharat et al, 2010; Rommer, 2004 and 2005).

In addition to the competing-risks model, a single-risk model is estimated where all states of financial distress are pooled together, for all countries.

The number of variables selected and their sign are synthesized in Table 4.1, while the sign of the estimated coefficients for the competing-risks and single-risk models for each country are shown in Tables 4.2, 4.3 and 4.4.

The results show that in the single-risk model (i.e. for predicting the business failure) and in pooled-country model (in which we consider all countries together), 33 variables are selected as potential predictors. Instead, in the competing-risks model, in which the exit routes are estimated separately, a less number of variables are chosen (Table 4.1).

When the single-risk and the competing-risks models are estimated for each country separately, the results show that there is a saving in the number of selected covariates in France and in Spain (Table 4.1).

Now, looking at the sign of covariates, the results show some remarkable differences supporting the need to use not only the competing-risks model over the pooled one, but also the model for each country over a pooled-country model. Moreover, the variables are different in the determinants of the three exit routes and in their sign, not only between the competing-risks and single-risk models, but also between the states for the three countries.

In order to interpret efficiently the results, it is important to state that a positive sign of estimated coefficients means that the failure risk is high for firms with higher values of that variable, while if the sign is negative, the failure risk is lower for higher values of the variable. For further investigation, the hazard ratios, obtained by computing the exponential of coefficients are also checked, giving a measure of the covariates effect on the hazard (the results are available upon requests from the authors).

Table 4.1: Number of variables selected

	Single-risk model				Bankruptcy/Dissolved				Liquidation			
	Poole d- count ry	Fran ce	Ital y	Spa in	Poole d- count ry	Fran ce	Ital y	Spa in	Poole d- count ry	Fran ce	Ital y	Spa in
Firm-specific	4	0	6	4	5	1	5	4	4	1	4	0

variables												
Liquidity ratios	6	5	6	7	6	6	7	4	2	1	2	0
Operating structure ratios	5	3	5	4	3	2	1	4	3	1	3	0
Profitability ratios	5	5	8	3	4	4	8	3	3	1	6	0
Size and capitalization ratios	6	2	3	3	4	2	4	3	4	0	3	2
Turnover ratios	7	2	5	6	6	2	5	6	4	2	6	0
Total	33	17	33	27	28	17	30	24	20	6	24	2

The results for each exit route and for each country are illustrated in order to compare the determinants among the states and the countries.

Looking at the results of the single-risk model (in which all exit routes are pooled together, without distinguishing between them) for the pooled-country model, it can be noted that the joint-stock companies have a greater probability of failure, while the limited partnership and consortium have a lower probability of exit the market. At the same time, the old firms (more than 23 years) have a positive coefficient and their hazard rate decreases.

Then, high values of IND03, IND30, IND46, IND15, IND41, IND47, IND64, IND72, IND10, IND13, IND38, IND50, IND62, IND19, IND20, IND21, IND56, IND59 correspond to increase the hazard rate and the probability of failure, while the coefficients of the IND04, IND06, IND27, IND33, IND47, IND53, IND54, IND61, IND11, IND37, IND70 are negative and consequently the probability of failure is lower.

Unlike the results of the pooled-country model, the joint-stock companies have a lower probability of being bankrupted and dissolved in Italy and Spain. The old firms have a lower hazard rate. As concerns the size of firms, the medium firms in Italy have a higher risk of failure, while for the very large companies the hazard rate is lower. In Spain, the situation is lightly different. In fact the large and very large firms have a higher probability of being dissolved. The difference between Italy and Spain is related to the fact that the definition of the two failure states (bankruptcy and dissolved) is divergent. Moreover, there are some financial ratios in common between the three countries, even though the sign of coefficients is different. For example, IND06, IND24 has a negative coefficient for Italy and France, while it is positive for Spain. The difference of sign is again related to the nature of the states included in the model.

The results of the competing risks framework for the pooled-country model showed that the joint-stock companies, limited companies, limited partnership, limited cooperative societies have a higher risk of being bankrupted. Then for the limited partnership the probability of liquidation is lower; while for consortium and limited cooperative societies the risk of liquidation is higher. As concerns the financial ratios, high values of IND03, IND30, IND15, IND49, IND64, IND72, IND13, IND38, IND20, IND21, IND56, IND69 correspond to high risk of being bankrupt. Moreover, some covariates, such as IND54, IND41, IND71, IND72, IND08, IND20, IND21, have positive coefficients, related to a higher risk of being liquidated. Then, IND04, IND06, IND27, IND33, IND47, IND53, IND54, IND11, IND37, IND70 have negative effect of the bankruptcy, and IND06, IND13, IND54, IND61, IND10, IND11, IND13, IND19, IND58 effect negatively the risk of liquidation.

By checking the results of the competing risks model for each country, it is observed that in Italy more variables are needed for predicting bankruptcy and liquidation than in France and in Spain. One possible reason is related to the period considered in the paper, which included the period 2007-2010 characterized by the global financial crisis. It seems that the effects of the financial crisis have a deeper impact in Italy than in France and Spain.

Table 4.2: The sign of covariates for the pooled model

Code	Variable	Area	Pooled-Country	France	Italy	Spain
SPA	Joint-stock company - Legal Form	Firm-Specific	+		-	-
SAS	Limited Partnership - Legal Form	Firm-Specific	-		+	
Consortium	Consortium - Legal Form	Firm-Specific	-		-	
Old	Old - Age	Firm-Specific	-		-	-
Medium	Medium - Size	Firm-Specific			+	
VeryLarge	Very Large - Size	Firm-Specific			-	+
Large	Large - Size	Firm-Specific				+
IND01	Current assets/Fixed assets	Liquidity			+	
IND03	Cash & cash equivalent/Current liabilities	Liquidity	+			+
IND04	(Current assets - Stock)/Current liabilities	Liquidity	-			
IND06	Working capital/Total assets	Liquidity	-	-	-	+
IND07	Net current assets/Total assets	Liquidity			+	
IND24	Cash flow	Liquidity		-	-	+
IND27	Cash flow/Shareolders funds	Liquidity	-			-
IND30	Current liabilities/Total assets	Liquidity	+	+	+	+
IND31	Current liabilities/(Current liabilities + Non-Current liabilities)	Liquidity		-		-
IND33	Cash & cash equivalent/Total assets	Liquidity	-		-	+
IND35	Cash & cash equivalent/Sales	Liquidity		-		
IND46	Financial Expenses/(Current liabilities + Non-Current liabilities)	Operating structure	+		+	+
IND47	Financial Expenses/Sales	Operating structure	-		-	-
IND53	EBIT/Operating revenue	Operating structure	-	+	+	-
IND54	Sales	Operating structure	-	-	+	-
IND61	EBIT/Financial Expenses	Operating structure	-	-	-	
IND15	Profit (Loss) for Period/Shareolders funds	Profitability	+	+	+	
IND17	Profit (Loss) for Period/Sales	Profitability			+	-
IND29	Profit (Loss) for Period/(Current liabilities + Non-Current liabilities)	Profitability			+	
IND39	EBITDA/Sales	Profitability		-	-	
IND41	EBIT/Fixed Assets	Profitability	+	+		+
IND49	EBIT/Total assets	Profitability	+		+	
IND64	EBIT	Profitability	+		+	
IND71	Standard deviation ROE	Profitability		-	-	
IND72	Standard deviation ROA	Profitability	+	+	+	+
IND10	Shareolders funds/(Current liabilities + Non-Current liabilities)	Size and capitalization	+	+	-	

IND11	Shareolders funds/Capital	Size and capitalization	-		-	-
IND13	(Long Term Debt + Loans)/Total assets	Size and capitalization	+		-	
IND38	Current assets/Current liabilities	Size and capitalization	+			
IND50	Current assets/Total assets	Size and capitalization	+	+		-
IND62	Total assets	Size and capitalization	+			+
IND19	Sales/Current assets	Turnover	+		-	
IND20	Debtors/Sales	Turnover	+	+	+	+
IND21	Sales/Shareolders funds	Turnover	+		+	+
IND36	(Current assets - Stock)/Sales	Turnover			+	-
IND37	Working capital/Sales	Turnover	-			-
IND56	Cash & cash equivalent/Depreciation	Turnover	+	-	+	+
IND69	(Debtors/Operating revenue)*360	Turnover	+			
IND70	(Creditors/Operating revenue)*360	Turnover	-			-

Table 4.3: The sign of covariates for the bankruptcy state

Code	Variable	Area	Pooled-country	France	Italy	Spain
SPA	Joint-stock company - Legal Form	Firm-Specific	+			-
SAS	Limited Partnership - Legal Form	Firm-Specific	+		+	
Consortium	Consortium - Legal Form	Firm-Specific			-	
Old	Old - Age	Firm-Specific	-		-	-
Medium	Medium - Size	Firm-Specific		+	+	
VeryLarge	Very Large - Size	Firm-Specific			-	+
Large	Large - Size	Firm-Specific				+
SRL	Limited Company - Legal Form	Firm-Specific	+			
SCARL	Limited Cooperative Society- Legal Form	Firm-Specific	+			
IND03	Cash & cash equivalent/Current liabilities	Liquidity	+		-	+
IND04	(Current assets - Stock)/Current liabilities	Liquidity	-		+	
IND06	Working capital/Total assets	Liquidity	-	-	-	
IND07	Net current assets/Total assets	Liquidity			+	
IND24	Cash flow	Liquidity		-	-	+
IND27	Cash flow/Shareolders funds	Liquidity	-			-
IND30	Current liabilities/Total assets	Liquidity	+	+	+	
IND31	Current liabilities/(Current liabilities + Non-Current liabilities)	Liquidity		-		
IND33	Cash & cash equivalent/Total assets	Liquidity	-			
IND34	(Current assets - Stock)/Total assets	Liquidity		-	-	-
IND35	Cash & cash equivalent/Sales	Liquidity		-		
IND46	Financial Expenses/(Current liabilities + Non-Current liabilities)	Operating structure				+
IND47	Financial Expenses/Sales	Operating	-			-

IND53	EBIT/Operating revenue	structure Operating structure	-	+	-	
IND54	Sales	structure Operating structure	-		-	
IND61	EBIT/Financial Expenses	structure Operating structure		-	-	
IND15	Profit (Loss) for Period/Shareolders funds	Profitability	+	+	+	
IND17	Profit (Loss) for Period/Sales	Profitability				-
IND29	Profit (Loss) for Period/(Current liabilities + Non-Current liabilities)	Profitability			+	
IND39	EBITDA/Sales	Profitability		-	-	
IND41	EBIT/Fixed Assets	Profitability			+	+
IND49	EBIT/Total assets	Profitability	+		+	
IND64	EBIT	Profitability	+		+	
IND71	Standard deviation ROE	Profitability		-	-	
IND72	Standard deviation ROA	Profitability	+	+	+	+
IND08	Shareolders funds/Fixed assets	Size and capitalization			-	
IND10	Shareolders funds/(Current liabilities + Non-Current liabilities)	Size and capitalization	+			
IND11	Shareolders funds/Capital	Size and capitalization	-		-	-
IND13	(Long Term Debt + Loans)/Total assets	Size and capitalization	+		-	
IND38	Current assets/Current liabilities	Size and capitalization	+			-
IND50	Current assets/Total assets	Size and capitalization		+	+	
IND62	Total assets	Size and capitalization		-		+
IND19	Sales/Current assets	Turnover			-	
IND20	Debtors/Sales	Turnover	+	+	+	+
IND21	Sales/Shareolders funds	Turnover	+		+	+
IND36	(Current assets - Stock)/Sales	Turnover			+	-
IND37	Working capital/Sales	Turnover	-		-	-
IND56	Cash & cash equivalent/Depreciation	Turnover	+	-		+
IND69	(Debtors/Operating revenue)*360	Turnover	+			
IND70	(Creditors/Operating revenue)*360	Turnover	-			-

Table 4.4: The sign of covariates for the liquidation state

Code	Variables	Area	Pooled - countr y	Franc e	Ital y	Spai n
SAS	Limited Partnership - Legal Form	Firm-Specific	-		+	
Consortium	Consortium - Legal Form	Firm-Specific	+		+	
Medium	Medium - Size	Firm-Specific	+		+	

SRL	Limited Company - Legal Form	Firm-Specific		-	
SCARL	Limited cooperative societies - Legal Form	Firm-Specific	+		+
IND06	Working capital/Total assets	Liquidity	-	-	-
IND33	Cash & cash equivalent/Total assets	Liquidity	-		-
IND46	Financial liabilities + Expenses/(Current liabilities + Non-Current liabilities)	Operating structure			+
IND53	EBIT/Operating revenue	Operating structure	+		+
IND54	Sales	Operating structure	-	-	
IND61	EBIT/Financial Expenses	Operating structure	-		-
IND17	Profit (Loss) for Period/Sales	Profitability			+
IND29	Profit (Loss) for Period/(Current liabilities + Non-Current liabilities)	Profitability			+
IND39	EBITDA/Sales	Profitability			-
IND41	EBIT/Fixed Assets	Profitability	+		+
IND71	Standard deviation ROE	Profitability	+		+
IND72	Standard deviation ROA	Profitability	+	+	+
IND08	Shareolders funds/Fixed assets	Size and capitalization	+		-
IND10	Shareolders funds/(Current liabilities + Non-Current liabilities)	Size and capitalization	-		-
IND11	Shareolders funds/Capital	Size and capitalization	-		-
IND13	(Long Term Debt + Loans)/Total assets	Size and capitalization	-		-
IND62	Total assets	Size and capitalization			-
IND18	Sales/Fixed assets	Turnover		+	
IND19	Sales/Current assets	Turnover	-		-
IND20	Debtors/Sales	Turnover	+		
IND21	Sales/Shareolders funds	Turnover	+		+
IND36	(Current assets - Stock)/Sales	Turnover			+
IND56	Cash & cash equivalent/Depreciation	Turnover			+
IND58	Non-Current liabilities/Sales	Turnover	-		-
IND70	(Creditors/Operating revenue)*360	Turnover		-	+

Conclusion

Competing-risks models for corporate failure in three European markets – France, Italy and Spain - have been estimated based on micro-economic indicators and firm-specific variables. The determinants of financial distress have been investigated highlighting the similarities and dissimilarities across countries. In particular a competing-risks approach has

been used to estimate the risk of exit the market for two main reasons: bankruptcy and liquidation.

The reached results show that there are some differences and some similarities in financial ratios for predicting the financial distress in the three countries considered in the paper. In particular, it seems that in Italy a greater number of variables are needed to estimate the probability of failure, while in France and Spain the number of covariates is less. Moreover, the results show how there is a saving in the number of business failure determinants when a model for each country is estimated and/or a model for each exit route is considered.

References

- [1] Altman, E.I. (1968), "Financial Ratios. Discriminant Analysis and the Prediction of Corporate Bankruptcy", *The Journal of Finance*, Vol. 23 No. 4, pp. 589-609.
- [2] Altman, E.I. (2000), "Predicting financial distress of companies: revisiting the Z-score and ZTM model", *New York University, Working Paper*, <http://pages.stern.nyu.edu/~ealtman/PredFnclDistr.pdf>.
- [3] Altman, E.I. and Hotchkiss, E. (2006), *Corporate financial distress and bankruptcy: predict and avoid bankruptcy, analyze and invest in distressed debt*, John Wiley and Sons, New York.
- [4] Amendola A., Restaino M., Sensini L. (2011a), "Dynamic Statistical Models for Bankruptcy Prediction of Italian Firms", in *4th Annual EuroMed Conference of the Euromed Academy of Business*, Crete, Greece, 20-21 October 2011, Euromed Press, Pp. 97-109.
- [5] Amendola A., Restaino M., Sensini L. (2011b), *Competing risks analysis of the determinants of business exit*, ISFORGES Istituto Superiore per la Formazione e la Ricerca Giuridica Economica e Sociale.
- [6] Andersen P.K., Borgan Ø., Gill R.D. and Keiding N. (1993), *Statistical Models based on Counting Processes*, Springer, Berlin.
- [7] Andersen P.K., Abildstrøm S.Z. and Rosthøj S. (2002), "Competing Risks as a Multi-State Model", *Statistical Methods in Medical Research*, Vol. 11, pp. 203-215.
- [8] Argenti J. (1976), *Corporate Collapse: the causes and symptoms*, Holsted Press, McGraw-Hill, London.
- [9] Balcaen, S., Ooghe, H. (2004), "Alternative methodologies in studies on business failure: do they produce better results than the classic statistical methods?", *Vlerick Leuven Gent Working Paper*, Series 2004/16.
- [10] Beaver, W.H. (1966), "Financial Ratios as Predictors of Failure", *Journal of Accounting Research*, Supplement.
- [11] Bhattacharjee A., Higson C., Holly S. and Kattuman P. (2002), "Macro economic stability and business exit: determinants of failures and acquisitions of large UK firms", *Cambridge Working papers in Economics*, bo.0206, Department of Applied Economics, University of Cambridge.
- [12] Bhattacharjee A., Higson C., Holly S. and Kattuman P. (2004), "Business failure in UK and US quoted firms: impact of macroeconomic instability and the role of legal institutions", *Cambridge Working Papers in Economics*, no. 0420.
- [13] Chancharat, N., Tian, G., Davy, P., McCrae, M. and Lodh, S. (2010), "Multiple State of Financially Distressed Companies: Tests using a Competing-Risks Model", *Australian Accounting Business and Finance Journal*, Vol. 4 No. 4, pp. 27-44.
- [14] Chava, S. and Jarrow, R.A. (2004), "Bankruptcy Prediction with Industry Effects", *Review of Finance*, Vol. 8 No. 4, pp. 537-569.
- [15] Crutzen, N., and Van Caillie, D. (2007), "Business failure prevention: a state of the art", *Cahier de recherche, Working Papers HEC Ecole de Gestion de l'Université de Liege*.
- [16] Dakovic, R., Czado, C. and Berg, D. (2010), "Bankruptcy Prediction in Norway: A Comparison Study", *Applied Economics Letter*, Vol. 17, pp. 1739-1746.
- [17] Dickerson A.P., Gibson H.D. and Tsakalotos E. (2003): "Is attack the best form of defence? A competing risks analysis of acquisition activity in the UK", *Cambridge Journal of Economics*, Vol. 27, pp. 337-357.
- [18] Dimitras, A., Zanakis, S. and Zopoudinis, C. (1996), "A survey of business failures with an emphasis on failure prediction methods and industrial applications", *European Journal of Operational Research*, Vol. 90 No. 3, pp. 487-513.

- [19] Garcìa-Posada, M. and Mora-Sanguinetti, J.S. (2012), "Why do Spanish firms rarely use the bankruptcy system? The role of the mortgage institution", *Documentos de Trabajo* n.1234, Banco De Espana.
- [20] Headd B. (2003), "Redefining business success: distinguishing between closure and failure", *Small Business Economics*, Vol. 21, pp. 51-61.
- [21] Hensher D.A., Jones S. and Greene W.H. (2007), "An error component logit analysis of corporate bankruptcy and insolvency risk in Australia", *Abacus*, Vol. 43, pp. 241-264.
- [22] Hillegeist, S., Keating, E., Cram, D. and Lunsedt, K.G. (2004), "Assessing the Probability of Bankruptcy", *Review of Accounting Studies*, Vol. 9 No. 1, pp. 5-34.
- [23] Hunter J. and Isachenkova N. (2000), "Failure risk: a comparative study of UK and Russian firms", *Discussion paper* 00-1, Department of Economics and Finance Brunel University.
- [24] Karels G. and Prakash A. (1987), "Multivariate normality and forecasting of business bankruptcy", *Journal of Business Finance and Accounting*, Vol. 14 No. 4, pp. 573-593.
- [25] Jones S. and Hensher D.A. (2004): "Predicting firm financial distress: A mixed logit model", *The Accounting Review*, Vol. 79, pp. 1011-1038.
- [26] Jones, S. and Hensher, D.A. (2007), "Modelling corporate failure: a multinomial nested logit analysis for unordered outcomes", *The British Accounting Review*, Vol. 39, pp. 89-107.
- [27] La Porta E., Lopez-De-Silanes F., Shleifer A. and Vishny R. (1998), "Law and Finance", *The Journal of Political Economy*, Vol. 106 No. 6, pp. 113-115.
- [28] Lau A.H.L. (1987), "A five-state financial distress prediction model", *Journal of Accounting Research*, Vol. 25, pp. 127-138.
- [29] Lennox, C. (1999), "Identifying failing companies: a re-evaluation of the logit, probit and DA approaches", *Journal of Economics and Business*, Vol. 51, pp. 347-364.
- [30] Ohlson, J.A. (1980), "Financial ratios and the probabilistic prediction of bankruptcy", *Journal of Accounting Research*, Vol. 51, pp. 347-364.
- [31] Ooghe H. and Balcaen S. (2002), "Are failure prediction models transferable from one country to another? An empirical study using Belgian financial statements", *Vlerick Leuven Gent Management School Working Paper Series* 2002/5.
- [32] Rommer A.D. (2004), "Firms in financial distress: an exploratory analysis", *Working paper* no.17, Danmarks Nationalbank and Centre for Applied Microeconometrics (CAM), Institute of Economics, University of Copenhagen, Copenhagen, pp. 1-68.
- [33] Rommer A.D. (2005), "A comparative analysis of the determinants of financial distress in French, Italian and Spanish firms", *Working paper* no.24, Danmarks Nationalbank and Centre for Applied Microeconometrics (CAM), Institute of Economics, University of Copenhagen, Copenhagen, pp. 1-76.
- [34] Schary M. (1991), "The probability of exit", *RAND Journal of Economics*, Vol. 22, pp. 339-353.
- [35] Sexton, R., Sriram, R. and Etheridge, H. (2003), "Improving decision effectiveness of artificial neural networks: a modified genetic algorithm approach", *Decision Sciences*, Vol. 34, pp. 421-442.
- [36] Shumway, T. (2001), "Forecasting bankruptcy more accurately: A simple hazard model", *Journal of Business*, Vol. 74, pp. 101-124.
- [37] Weitzel W. and Jonsson E. (1989), "Decline in Organizations: A literature Integration and Extension", *Administrative Science Quarterly*, Vol. 34, pp. 91-109.
- [38] Zmijewski, M.E. (1984), "Methodological Issues Related to the Estimation of Financial Distress Prediction Models", *Journal of Accounting Research*, Vol. 22, pp. 59-82.

THE OEM-OBM DEBATE: FACTORS INFLUENCING CHINESE FIRMS' BRANDING DECISIONS IN THEIR INTERNATIONALISATION PROCESS

Ian Wilson¹

Abstract

A key international marketing decision for many Chinese (and firms from other emerging markets) is whether to internationalise their own brands - labelled by the Chinese as OBM (Original or Own Brand Manufacturing) - or to be international players by acting as contract manufacturers (labelled by the Chinese as OEM (Original Equipment Manufacturing) for foreign brand owners (FBOs). The paper discusses some of the extant research on the advantages and disadvantages of each business model and then focuses on primary research conducted amongst 8 Chinese firms in electronics and textiles and the OEM-OBM decisions they face. In so doing, it discusses some of the factors influencing such decisions and proposes a framework for reviewing them as firm and environmental circumstances change.

Keywords: OEM, OBM, internationalisation, brand, China.

Introduction

The emergence of Chinese brands into international markets is a topic of importance for both the Chinese and their potential Western competitors. For the Chinese, it is a question of acquiring competitive strengths, exploiting market opportunities and it is also a question of national pride. For Westerners, there is the likelihood of more competition from some strong players and, in some situations, the likelihood that erstwhile collaborators will become future competitors. As yet, few Chinese brands have established themselves as major players on a global basis but firms such as Haier, Galanz and others have become significant forces in some product sectors and market segments in some country markets. A key international marketing decision for many Chinese (and firms from other emerging markets) is whether to internationalise their own brands or to be international players by acting as contract manufacturers for foreign brand owners (FBOs). This paper focuses on the development of Chinese firms in electronics and textiles and the decisions they face in international markets, particularly whether to pursue an OEM or OBM strategy and discusses some of the factors influencing such decisions.

Moving from OEM to OBM is a critical decision facing a number of Emerging countries at this time. In 2002 the China Brand Strategy Promotion Commission was established to help advance top Chinese national brands. The reasons are clear. According to Business Week 2003 (Fan, 2006), the world's top 100 "consumer and retail goods brands which rely on overseas production" achieved sales of US\$3,500 billion while the top 100 OEMs in the Asia Pacific region, which supply those companies, achieved a sales turnover of only US\$84 billion. Further, on average, the gross margin on OEM products was 19% while on OBM goods it was 27% (China Daily, 2008). At individual firm level, it is estimated that 60% of the price of an iPhone 4 is for Apple's design and engineering, marketing costs and

¹ Business School, Staffordshire University, England, e-mail: i.a.wilson@staffs.ac.uk

profit while 31% is for components and only 1% for soldering, assembly and packaging by the Chinese OEM.

While evidence for the precise figures may not be perfect, the general picture is clear and movement from OEM towards OBM has been apparent for some time in some (but relatively few) cases. For example, the Hong Kong Trade Development Council reported in 2003 that many firms planned to develop ODM (Original Design Manufacturer) business., This was driven by the desire to shift the basis of competition from price to design, to respond to customer needs and as a preparatory step to building brand names (HKTDC, 2003). Gereffi and Memedovic (2003) report that The Republic of Korea is the most advanced among East Asian NIEs in developing OBM production and brands.

1. Literature review

The literature review examines the advantages of an OEM branding strategy in facilitating the export of Chinese made products. It then addresses the wider issues which impinge on the OEM-OBM debate and some of the pathways available to firms which wish to develop from an initial OEM base. It then examines some of the dangers of not shifting strategy and, subsequently, the problems associated with shifting.

Although it may not be seen as a branding decision by the firms themselves, the choice of an OEM business model is a decision not to brand products and which will also largely determine its initial foreign market entry mode strategy (Wilson, 2006). In the first instance, this is likely to be through passive exporting (Clarke and Wilson, 2009) i.e. FBOs seeking OEM suppliers may contract these to manufacture products for them.

A firm with an unknown brand name, perhaps based in a country with negative country of origin cues, will find it difficult to market to foreign countries. OEM branding is one strategy which by-passes these hurdles. It reduces the costs of marketing dramatically and endorses the product with the customer's brand name. Very importantly, the product is sold through the customer's already established marketing channels. There may be further advantages for the contract manufacturer if the customer provides assistance with technology or perhaps insists on quality controls which improve the manufacturer's quality standards. Large volume orders with programmed delivery schedules may also result in the manufacturer being able to hone their processes so as to further reduce costs and become even more competitive.

Relationships built will increase the manufacturer's learning about its customer and their markets. This may encourage the OEM to then engage in active exporting. Ultimately all this learning, together with the credibility and references resulting from having already sold in the market should make it easier for the contract manufacturer to later supply the market on an OBM basis should it wish to.

Hobday et al (1998) also discuss the contribution made by OEM business as a mechanism for Taiwanese and Korean firms to overcome entry barriers into foreign markets and force continuous improvements in contract manufacturer quality. Goldstein et al (2006) and Yang (2006) also emphasise the benefits of the OEM system in having to conform to the QA systems of the GPN (global production network) flagship firms.

Van Grunsven and Smakman (2005) studied the 'pathways' taken during the 1980s and 1990s by firms in the Singapore garment industry. They identified 7 development trajectories amongst the 57 firms analysed and found that OEM strategies inevitably resulted in internationalization as foreign buyers seek sourcing opportunities. However, whilst a few OEM firms had added the production and marketing of their own brands, OEM supply remained the basis of their business. Some of the OEM firms had added additional services, effectively moving towards an ODM situation. Amongst the limitations in moving from OEM to OBM, they identified the difficulty for large firms in returning to short runs and the

‘credibility gap’ between design, marketing and retail on one hand and manufacturing on the other.

However, Hobday et al (1998) report that many firms wish to break out of their OEM role and transform from latecomers to leaders. Yeung (2007) describes three corporate strategies of leading Asian firms. Firstly, some firms have moved from being subcontractors to become ‘strategic partners’ of the lead firms in global production networks (GPNs). Secondly, some firms have chosen to develop expertise in niche sectors such as specialized components. Thirdly, some firms have chosen to make the ‘quantum leap’ to become GBOs (global brand owners).

Child and Rodrigues (2005) classify Chinese internationalization routes as partnerships (either through OEM arrangements or J-Vs); acquisition of foreign brands, technology and market position; and organic international expansion, as illustrated by Haier. Additional to the advantages noted earlier of the OEM route, they refer to the opportunity to preserve their independence, benefit from scale economies and achieve a reputation for manufacturing excellence which may (as in the case of Galanz) confer sufficient bargaining power that they can badge their products as ‘made by Galanz’ whilst also branded by the GBO.

In contrast to the advantages of OEM, Lee and Kim (2004) suggest that, because they did not shift from an OEM to an OBM strategy, Korean toy producers have all but disappeared. From 700 OEMs a few years ago, only OBM Aurora and two ODMs remain. They could not compete with Chinese OEM producers. A second risk is that low margin business coupled with a possible reliance on the customer for product improvement means the manufacturer will lose the ability to create and maintain a product edge and become dependent on low price for winning orders.

The academic literature seems to give less coverage to the challenges posed by moving from OEM to OBM. The costs of switching from OEM to OBM must not be underestimated. For example, the possible additional costs – both monetary and time - of building a brand overseas, compared to contract manufacturing on an active or passive exporting basis, are likely to include R&D, product development, name search and registration, international market selection, market entry mode selection and implementation, marketing channel selection and management, marketing communications and marketing planning. On top of this, a number of other factors are necessary for success. Wreden (2005) claims that many Asian firms switching from OEM to OBM need to develop an understanding of branding and to see it as an investment rather than just a cost. He suggests that they tend to equate branding with advertising rather than the “ability to develop emotional and experiential ...relationships with customers”.

The options facing a firm which wants an OBM strategy are whether to follow a single or multi-brand strategy and whether to retain an OEM strategy as well. TCL, for example, has several brands whilst Haier has its one corporate brand. The arguments for each strategy have been extensively documented. One key advantage of multiple brands is that it allows more market segments to be targeted and therefore potentially greater sales. Retaining an OEM strategy also means more opportunity provided that the OEM and OBM options target different segments.

However, the OEM plus OBM option raises the danger of the firm’s business model being “stuck in the middle” in a Porterian sense (Porter, 1988) if the same SBU (strategic business unit) is engaged in both types of activity. This is because OEM requires an emphasis on low costs while OBM requires additional expenditures usually necessary to create differentiation. The managerial skills and employee attitudes are also necessarily different. The Taiwanese laptop computer firm Acer resolved the conflict by deciding to focus on R&D and marketing and outsource its manufacturing to other OEM firms (Yang, 2006). A different approach was taken by Asus by allocating its OEM business to a wholly owned subsidiary.

Nevertheless, other Taiwanese firms such as Arima, Clevo, Elite and Twinhead continue to house OBM and OEM business in the same organization (Yang, 2006).

2. Methodology

The area within China selected as the sample frame has been referred to (Yang and Hsia, 2007) as the Greater Suzhou Area (GSA) and is a relatively new industrial cluster within the Yangtse River Delta. It includes the cities of Suzhou and Kunshan, Suzhou itself being under one hour from Shanghai by fast train. The area has been a major recipient of cross border investment from the Taiwanese IT industry, seeking primarily a lower cost base but also opportunities to sell in the mainland Chinese market. Five firms were interviewed in the electronics industry, including makers of computer products and other consumer durables, of which four were Taiwanese owned. The other three firms were in the textile industry, one of which was Singaporean owned.

The industries selected are characterised by the Chinese OEM – Western OBM model. The selection of the specific firms was driven by convenience. They were all identified as being of sufficient size and experience to be able to comment on the research issues. The number of employees in the GSA sample varied from 200 to around 100,000. An obvious limitation of the research is the limited sample size and the consequent omission of very large and very small firms. Responses from large OEMs are likely to differ significantly from small OEMs. For example, some OEMs are now so large and so expert in quality mass manufacturing and technology development (for example, Foxconn and Quanta) that they are probably in a very powerful position relative to brand owners. Nevertheless, the prime purpose of the research is to raise and conceptualise the relevant issues, not to quantify them. The interviewees were either the Chief Executive, the Chief Financial Officer or Product Marketing Managers. They were chosen on the basis of their knowledge of the research issues. A translator was present at all times but six of the interviews were held in English directly with the respondent and two relied on the translator. The discussions were held in the company premises and lasted between one and three hours.

The respondents were provided with a limited briefing in advance but it was emphasised that the purpose of this was not to direct the conversation but to allow any form of preparation which they might consider relevant. Indeed, the respondents were encouraged to take the discussion in directions which were most pertinent to them. In this sense, the research was largely inductive with the hope that it might lead to some generalisations for theory development (Pressey and Mathews, 2003). This approach leaned towards Glaser's perspective that the researcher should start with no pre-suppositions (Easterby-Smith et al, 2002).

3. Primary Research Findings

Firm 1 started selling Chinese brand clothes in the early 1990s making rapid progress and building its first factory in early 2000s and expanding capacity greatly in 2005. Recently it obtained approval to produce for a number of famous Western brands so that currently, some 40% of sales are for export of these via the GBOs. Of the 60% sold in China, 95% are Western brands but, again, they are sold through to GBOs and through their marketing operations in China. 5% of sales are Firm 1's own brand which it would like to sell in foreign markets. Firm 1 has its own design centre in China which includes European staff and designs for both European and Chinese markets. The problem is a limited knowledge of the European market and the marketing channels. Management also believes that the firm is not yet big enough but anticipates it will be in the future.

Firm 1's management has the energy and resources to further develop its own brand portfolio. The motivation to do so is partly that OEM offers limited profit and development

opportunities but also for the personal esteem which comes from ownership of a successful brand. Firm 1 is also interested in acquiring Western brand names either under license or by acquisition of production assets. One idea is to export semi-finished products to be finished abroad and then imported back into China in order to exploit the price premium associated with a Western country of origin (COO).

Firm 2 is a major supplier to two GBOs of clothing products for sale in Greater China only. Firm 2 is free to sell to other customers abroad and is currently talking to a third GBO which identified them because of their industry reputation. However, the existing GBOs do not want Firm 2 to manufacture for Chinese brand owners for the Chinese market. One of the GBOs is worried about industry legislation in China and so is encouraging Firm 2 to open a new factory outside China. Additional drivers are lower costs and bias against products 'made in China'.

Firm 2 said that their only focus is on manufacturing and that they were happy with the margins made. Moreover Firm 2 believed that the GBOs are re-assigning more margin to the manufacturers as they seek to enhance their brand image via quality and greater attention to supply chain corporate social responsibility issues. Firm 2's plan to remain as an OEM does not preclude it from building a B2B brand within the OEM business and it has been rewarded for quality by one of the GBOs allowing it to attach a 'made by Firm 2' label to garments produced.

Firm 3's parent company is in Singapore and manufacturing only is undertaken in China. Sales from Chinese production are 80% to the USA and 15% to Europe. It does have a design function in Singapore but most business is still according to the GBOs designs. Although it sells to around 10 GBOs, it is a strategic partner to one.

Firm 3 would like to do OBM for the Chinese market. Firstly because of a belief it would give them more control over their business, secondly because a lack of knowledge of Western markets and tastes and concern about customer reaction there to 'made in China'. However, management thinks OBM would be problematic because of the likely reaction by GBOs and the prevalence of counterfeiting, making it unprofitable to invest in brand building.

Firm 4 provides a variety of OEM products and services ranging from assembly only to manufacture of complete products with or without design or procurement and has no plans to change. The reasons are that, firstly, they specialise in manufacture and have key competences in product knowledge, manufacturing processes and cost down; secondly, as an OBM they would have to bear the market risk e.g. unsold inventory; thirdly, OBM would bring them into conflict with their current clients. However, in terms of new growth directions, Firm 4 is now considering an own brand consumer electronic product which will not compete directly with existing GBO customers for that product. This might be achieved by customisation for specific final customers or marketing to different geographical territories. In either instance, Firm 4 would consult with its GBO customers first.

Firm 4's business strategy involves choosing a product category in which to compete and then select customers, which would normally be GBOs. For example, Firm 4 would not select cell phones or lap top computers because there is no margin in OEM. Secondly, the customer would be selected on the basis of market standing (share), growth expectations, and management competences, particularly financial skills. Using this approach means that international market selection is based on targeting individual customers rather than countries.

Firm 5 is a Taiwanese company which has done OEM business for many years and moved to China for lower costs. TV sets are produced only for a Taiwanese – North American JV and branded on an ODM basis. Computer screens (which they regard as

complete products) are sold to many GBOs. 100% of production is exported and they seek new customers and new countries. They also wish to grow via NPD.

If Firm 5 had sufficient funds, they would consider OBM but currently have decided to focus on OEM. OBM would take 3-5 years to achieve brand awareness and cost too much in advertising and after sales service. They also doubted whether they would have the design expertise to meet consumer tastes. Management felt a further requirement for OBM would be the need to embrace CSR practices. Interestingly Firm 5 prefers to sell to manufacturers rather than distributors because of a belief that the latter can help Firm 5 improve its image. However, Firm 5 will sell to distributors if those distributors have their own brand.

Firm 6 manufactures a range of products including vacuum cleaners, central vacuuming, kettles, bikes, electric bikes (developed for China and now exported to Italy), humidifiers, fryers. 99% of vacuums are exported, of which 66% to Europe, 20% to USA and the rest to another 65 countries.

Firm 6 was originally state owned but was privatised and began its new life with exports on an OEM basis being initiated by a French importing distributor some 14 years ago. Most customers (around 200) today are distributors but more and more supermarkets are buying direct including leading retailers in the US, France and the UK. Firm 6 also exports to some GBOs. Since 1997, Firm 6 has undertaken R&D and, from 2002, has increasingly worked with customers on joint design. Working with confidentiality clauses, this helps both parties in that Firm 6 upgrades its technology and foreign partners get exclusive products. This type of project business now accounts for over 50% of sales.

In the Chinese market (which accounts for only 1% of sales) they sell under their own brand. Firm 6 would like to do OBM in export markets as well but believes that the costs would be too high, particularly establishing a selling network, developing relationships with retailers and advertising. Management also believes that Chinese brand names are not popular. Despite current design capability, R&D is still the biggest hurdle. Firm 6 needs to develop new product concepts in order to give people a reason to change from the brands they know.

After an estimated 10 years Firm 6 may have enough money, design capability, people and after service to be able to build their own brand and Firm 6 will probably focus on export OBM unless OBM performance in China has improved by then.

Firm 7 began with OBM in Taiwan but because Taiwan is small they accepted OEM orders. Later, under pressure from OEM customers, Firm 7 separated OEM and OBM businesses in terms of manufacturing plants and business decisions. This arrangement is advantageous with OEM generating volume and bargaining power with suppliers while OBM generates higher profit margins. However, within Firm 7, some believe that OEM customers are not completely satisfied and a full split may take place later.

Firm 7 makes for GBOs, sometimes undertaking R&D and sometimes not. In terms of product categories, Firm 7 makes OBM notebooks, cell phones, big screen TVs and computer motherboards. Recently, they launched an own branded laptop designed for global markets beginning with the USA, followed by China and Japan.

All OBM products are made in China while plants in North and Central America just produce for OEM. Firm 7 has sales companies abroad e.g. in Russia and India which only sell OBM products. Sister companies seek OEM business in these countries.

Firm 8 started as OEM with a gross margin of 3-4% but after 20 years switched to OBM and achieve a gross margin of 10%. Now they need to raise volume to increase profits. 30% of current sales are made in China, 40% in Europe and 10% in South America. Their plan is to sell to more and more countries. For Firm 8, OEM is really just assembly. Firm 8's objective is to rival the industry majors and it sees R&D as the mechanism.

In summary, the primary research generally confirmed the existing literature in terms of the difficulties faced in shifting from OEM to OBM and within this, the specific problems of building brands internationally. Additionally, however, it did highlight a broader range of issues affecting this decision which are summarised in the next section where research conclusions are made in two areas. These are, firstly, the present status of the firms in terms of OEM-OBM and intended future pathways; secondly, the factors which influence the OEM-OBM decision.

4. Conclusions and discussion

Whilst there are no absolutely clear dividing lines, the firms in the research could be broadly grouped as follows. One firm is already OBM only having been established specifically for this purpose. Three are currently largely doing OEM business and plan that this will continue to be the predominant focus. The reasons are that they have developed their core competences in manufacture and in the provision of associated services. However, even one of these firms has recently introduced a new product under its own brand name. Four firms are predominantly doing OEM business but would like to make a positive move into OBM as well. OBM is seen as offering a number of financial and, interestingly, psychological benefits for the brand owner.

The advantages of the OEM model in terms of facilitation of foreign market entry, volume sales achieved with limited expenditure and, often, assistance with technology and quality enhancement are clear. But so are the risks of OEM and, conversely, the benefits of OBM and there does seem to be a natural progression towards OBM. Nevertheless, the OEM-OBM choice for any particular firm seems to be influenced by a number of factors. These are discussed below and summarised in the decision model in Figure 1, adapted from Wilson (2005, p.15).

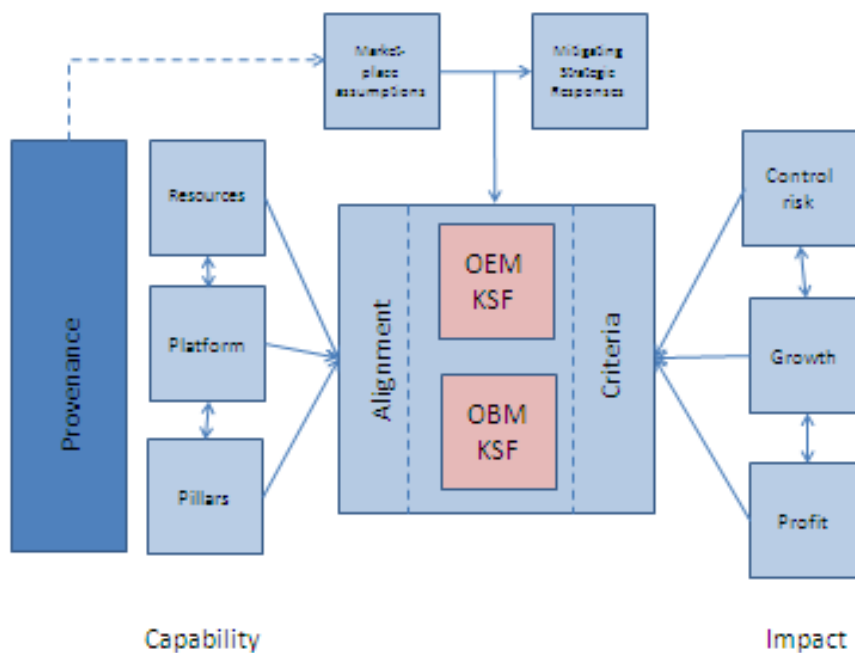


Figure 1. Factors influencing the OEM-OBM decision

Provenance in this context refers to the origins and early experiences and values of the firm. Thus, Firm 2 was founded on OEM and sees its success as evidence for its ability to build a differentiated and profitable B2B brand within the competitive market for outsourced sports clothing. Platform here is largely a combination of vision and mission which help define the future domain, direction and ambitions of the firm. Thus the personality and values of the founder of Firm 1 have strongly influenced its growth ambitions and the prestige perceived to emanate from consumer brand ownership. Firm 4, by contrast and notwithstanding a planned limited foray into OBM, has publicly articulated its mission “to be one of Asia’s top OEM service providers”. Pillars are the underpinning distinguishing capabilities and competences within the firm which lead to its competitive advantage and/or superior customer value. Firm 4, for example, focuses on advanced process engineering amongst its pillars which also allow it to provide its customers with feasibility studies of proposed new designs. People in Wilson’s original model are replaced with overall Resources. Cost is a major issue in moving from OEM to OBM and inhibited Firm 5 but Firm 7 possessed sufficient resources to overcome this constraint.

According to Leinward and Mainardi (2010), who refer to the concept as the “coherence premium”, successful performance requires a firm to align its “internal capabilities with the right external market position”. In the case of the OEM-OBM decision, this means matching the above internal firm factors with the key success factors required of the two alternative business models. For OBM these would include product innovation, brand building skills and market, customer and channel expertise. For OEM, they would include lean operations, for example.

However, the research also suggested that, in addition to this core alignment process, several firms were concerned about the influence of a variety of other factors. These have been labelled “market-place assumptions” and sometimes result from a firm’s prior experiences. For example, Firm 3 was discouraged from OBM because it feared conflict with current customers, because it assumed its lack of understanding of Western culture would prevent it from designing suitable products and because it assumed that any successful brand it managed to build would suffer from counterfeits.

Equally, firms have a certain amount of choice about alternative strategic responses which may moderate, mitigate or eliminate the impact of these assumptions. As examples, the fear of conflict with existing FBO customers assumed to result from moving from OEM to OBM can possibly be avoided by using “RCSTP” strategies which refer to marketing to different geographical Regions, selecting different product Categories, and using different Segmentation, Targeting and Positioning strategies. Firm 4’s foray into OBM, for example, will be based on choosing geographical territories and product categories in which its current customers do not compete. Firm 1 has engaged European staff to bring Western cultural understanding into its design capability while Firm 6 has engaged in joint NPD research in its attempt to bridge this assumed gap. As a final example, Firm 1 has considered the licensing or acquisition of foreign brand names as a strategy for coping with the assumed negative attitudes towards Chinese brands.

Having considered the above influences, perhaps the ultimate criteria for choosing between OEM and OBM will be the short and longer term impacts on growth, cash flow-profit and control-risk. Different firms see the two options in a different light. Thus Firms 1 and 5 see growth coming from building consumer brands while Firms 2 and 7 see much opportunity within the OEM market. Likewise, for some firms, OBM offers more control over their destiny through a reduction in the risk of price-based customer defection while others see more control arising from the careful management of OEM business without the risk of brand building failure, greater stockholding and debtor expenses. In terms of

shareholder returns, some firms see OBM as offering higher profits through better margins while others see OEM as providing improved cash flow with the opportunity for improved or, at least, adequate margins.

While in the short and medium term, the reality is that a capabilities-driven strategy provides coherence, in the longer term, firm internal factors such as resources and competences change, as does the external competitive and collaborative and environmental context, such that the OEM-OBM decision or the OEMplusOBM decision will need to be continuously monitored and perhaps revised.

References

- China Daily (2008), "Producers should move from OEM to OBM", Available at:
- www.chinadaily.com.cn/chinagate/doc/2004-06/08/content_337548.html (Accessed April 12 2010)
- Child, J. and Rodrigues, S.B. (2005), "The Internationalization of Chinese Firms: A Case for Theoretical Extension", *Management and Organization Review*, vol. 1, no.3, pp.381-410
- Clarke, G. and Wilson, I. (2009), *International Marketing*, McGraw-Hill, London, England
- Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002), *Management Research: An Introduction*, Sage, London, England
- Fan, Y. (2006), "The globalisation of Chinese brands", *Marketing Intelligence and Planning*, vol. 24, no.4, pp.365-379
- Gereffi, G. and Memedovic (2003), "The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries", United Nations Industrial Development Organization
- Goldstein, A., Bonaglia, F. and Mathews, J. (2006), "Accelerated Internationalization by Emerging Multinationals: The Case of White Goods", Working Paper, OECD Development Centre, Paris, January 16 2006, Available at: www.oecd.org/dataoecd/59/8/36317032.pdf (Accessed 18 February 2010)
- HKTDC (2003), Hong Kong Trade Development Council website, Available at <http://www.hktcdc.com> (Accessed 21 March 2010)
- Hobday, M., Cawson, A. and Ran Kim, S. (1998), "The Pacific Asian Electronics Industries: Technology Governance and Implications for Europe", Working Paper No.24, Sussex European Institute, Available at: <http://www.sussex.ac.uk/sei/documents/wp24.pdf> (Accessed March 10 2010)
- Lee, K. and Kim, M. (2004), "The Rise of China and the Korean Firms: Looking for New Divisions of Labour", Korea and the World Economy III Conference, July 3-4 2004, Seoul, Available at: <https://faculty.washington.edu/karyiu/confer/seoul04/papers/lee-kim.pdf> (Accessed February 10 2010)
- Leinwand, P. and Mainardi, C. (2010), "The Coherence Premium", *Harvard Business Review*, June
- Porter, M.E. (1988), "Michael Porter on Competitive Strategy", Harvard Business School Video Series
- Pressey, A.D. and Mathews, B.P. (2003), "Jumped, pushed or forgotten? Approaches to dissolution", *Journal of Management*, vol. 19, no.1/2 pp.131-155
- Van Grunsven, L. and Smakman, F. (2005), "Industrial restructuring and early industry pathways in the Asian first-generation NICs: the Singapore garment industry", *Environment and Planning A*, vol.37, no.4 pp.657-680
- Wreden, N. (2005), "From OEM to OBM: crossing the chasm",
- Available at: www.fusionbrand.com/pdf/from_oem_to_obm_crossing_the_chasm.pdf
- Wilson, I. (2005), "The Bentley Brand", *Marketing Review*, vol.5, no.3
- Wilson, I. (2006), "International Marketing Content, Process, Issues and Emphases", International Marketing SIG Conference, Staffordshire University, November 29 2006 Available at <http://www.academyofmarketing.org/academypdfs/AM%20IM%20SIG%20workshop%20proceedings%20291106.doc> (Accessed February 3 2010)
- Yang, Y. (2006), "The Taiwanese Notebook Computer Production Network in China: Implication for Upgrading of the Chinese Electronics Industry", Personal Computing Industry Center, University of California Irvine, USA, February 2006, Available at: <http://pcic.merage.uci.edu/papers/2006/TaiwaneseNotebook.pdf> (Accessed April 29 2010)
- Yang, Y-R, and Hsia, C-J, (2007), "Spatial clustering and organizational dynamics of transborder production networks: a case study of Taiwanese information technology companies in the Greater Suzhou Area", *China, Environment and Planning A*, vol. 39, pp.1346-1363
- Yeung, H. W-C. (2007), "From Followers to Market Leaders: Asian Electronics Firms in the Global Economy", *Asia Pacific Viewpoint*, Vol.48, no.1, pp.1-25

BEYOND THE LIMITS OF CRISIS

Eduard Ionescu¹
Carmen Costea²

Abstract

The recurrence of economic crises serves to illustrate the limits of neoclassical economics and the contemporary established models. The study of complex systems, evolutionary economics and interdisciplinary research offers the possibility of new developments. The concept of emergence represents an insightful argument against the well-planned and ordered nature of the social sciences universe. Complex systems research represents the viable alternative for sustainable growth in the following decades.

Keywords: *systemic crisis, sound development, societal innovation.*

Introduction

The previous economic downturns have placed significant strains both on the real economy and the economic theory. Policymakers have been struggling to rise to the challenge, but as Stiglitz (2003) points out, in the process of shock therapy, the markets have received “too much shock and too little therapy”. Several text books analyze the crisis from different perspectives. Tantalizing insights on the economic crises are shared by Donnella et al. (1972) as a vision of the entire world in their book regarding the limits to growth. They described Planet Earth’s obvious limits and the need for growth through complex development models. Separately, the Club of Rome Report demonstrated that ignoring such approaches may bring the society and the environment into overshoot and on the edge of a total collapse. Nowadays academics and researchers have the strength and positive attitude to talk about the untold reasons of such crises development. The new philosophy has taken root, stating that what stands before us and what lies in front of us pales in comparison to what resides within us (Emerson, 1993). A majority of the 16 individuals identified by Bezemer (2009) and Fullbrook (2010) as having anticipated the Global Financial Crisis followed non-mainstream approaches to economics, with most of them identifying as Post-Keynesian (Dean Baker, Wynne Godley, Michael Hudson, Steve Keen, Ann Pettifor) or Austrian (Kurt Richelbacher, Peter Schiff). The theoretical foundations of these authors therefore differ substantially from those of more mainstream neoclassical economists.³ In this paper we will restrict our attention to the Post-Keynesian subset, which we will hereinafter refer to as the Bezemer-Fullbrook Group.⁴

¹ USH Bucharest, ioneleduard@yahoo.co.uk

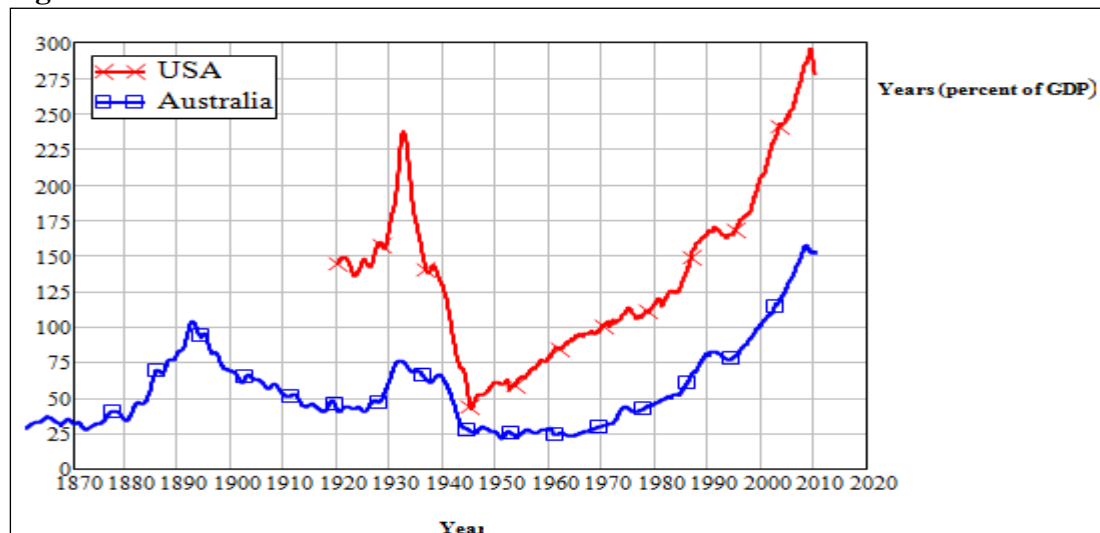
² USH Bucharest, cecotea@yahoo.com

³ Bezemer’s list included four economists who could be regarded as close to the neoclassical mainstream, though all are to some degree mavericks: Nouriel Roubini, Robert Shiller and Jakob Madsen (together with his then student Jens Sørensen). The finalists for the Revere Award added two more maverick Neoclassical economists—Paul Krugman and Joseph Stiglitz. Fred Harrison applies Georgist economics. George Soros’s non-equilibrium approach of reflexivity cannot be classified in any of these more conventionally recognized schools of thought. Eric Janszen’s approach blends both Austrian and Post Keynesian economics, while expressing allegiance to neither.

⁴ However, though there are in turn significant theoretical differences between Post Keynesian and Austrian economists, the shared focus on the role of credit in a disequilibrium environment generates substantial empirical overlaps in their analysis.

These authors made frequent references to the ratio of private debt to GDP, and the ratio of asset prices to commodity prices—both indicators of financial fragility that were emphasized by Minsky (1982) in his financial instability hypothesis, which is a common thread in the credit-oriented analysis of the Bezemer-Fullbrook Group.

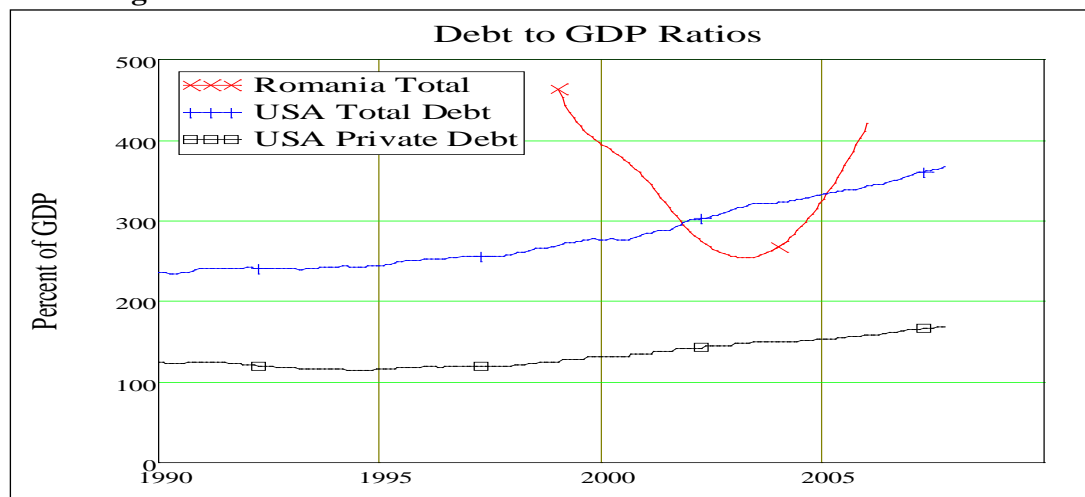
Figure 1. Debt to GDP ratio for Australia and the US



Since these indicators are not commonly considered in mainstream economic analysis, key data are shown below to make the differences from Ben Bernanke analysis of the Great Depression.

By observing figure 1 and 2 one can notice the fact that a similar pattern starts to emerge in developing economies such as Romania.

Figure 2. Debt to GDP ratio for Romania and the US



Contemporary research can benefit from numerous developments. The availability of techniques such as computer modelling or simulation techniques as well as the understanding of specific elements as dynamics, feedbacks, behaviours and network structures, permits researchers to implement a great policy shift. This phenomenon is comparable to the moment when big government structures first became fashionable in the twentieth century.

The evolution process represents an intricate interaction between organisms, the environment and life itself in a constant stride for improvement. Transposed from biology to

the field of economics and social sciences, the evolutionary process takes a societal approach and represents the dynamics of populations, behaviours or market activities based on external stimuli and repeated interactions (Vasile, Costea and Viciu, 2012). Individuals can be seen as the cells of a large super-organism which experiences evolutionary pressures. Once a critical mass has been reached in behaviours or activities, the world undergoes a stage of spontaneous evolution (Lipton, 2010).

Successful policy development requires several different perspectives. This fact was illustrated in the context of policymaking in security and infrastructure. Generating the right analysis is an essential element, asking the right question is an important starting point and getting support across the spectrum for a new research approach is the key. The right analysis has to address the right question. An example of this statement resides in the question: 'Is this railway worth paying for?' This is a good question and it searches for the entity that will pay for it and why. This is followed by additional questions regarding the payment between passengers or property developers and the taxpayer role in getting welfare benefit.

The fundamental questions have remained without an absolute answer. This is, in fact the challenge for scientists and analysts when providing models to decision makers. As models cannot incorporate everything, decisions are to be taken with regard to their simplification. Outcomes are inherently uncertain. They need to show the appropriate range of outcomes with specific degrees of robustness. Once policy makers get answers to such pragmatic questions, their work will definitely be inspired by academic thinking, and stride for the general wellbeing of society.

How can the direction be found in a clockwork or uncertain universe?

The manner in which we regard social systems is basically rewritten in the latter years by the emergence of complex systems. Stuart Kauffman (2010) adequately describes this in his work 'Reinventing the Sacred' where he contrasted the Laplace view of a clockwork universe with one of an inherently creative and uncertain universe.

A fundamental difference between the clockwork universe and the one dictated by uncertainty is the concept of emergence. In a simplified definition this represents the property of elements to combine and generate new elements which have distinctive characteristics than those which were initially introduced. This places emphasis on complex systems research since simplified static models are no longer considered accurate and efficient in describing social phenomena. Indeed, the notion that past representations and models have begun to show signs of ineffectiveness, is already present in numerous fields of activity. In economics, the neoclassical approaches have repeatedly been placed under the critical lens.

In his assessment of mainstream economic thinking, Keen (2001) underlines the intrinsic flaws of the current establishment and proposes evolutionary and complex systems research as a possible alternative. As Witt (2008) argues, the evolutionary economics approach represents a clear shift from the concept of equilibrium and optimal solution, which are so entrenched in neoclassical thinking.

A critical approach is required in any development process, as growth is expected to take place following creative destruction processes (Aghion and Howitt, 1990). Stable endogenous growth can only be achieved on solid ground. The solid basis of any model is represented by valid and flawless theory. As numerous holes have begun to appear in neoclassical thinking when it comes to the impossibility of profit maximization, macroeconomic utility and rational behaviour, the existent scenarios have begun to seem out of touch with market activities.

The road towards a new economy starts at the realization that the current theory is not suited for future development. Furthermore, increased interest and attention should be given to branches of research that deal with:

The rational exploitation of natural resources;
 The economic challenges which will be ushered in by climate change;
 The limits to introducing and maintaining green growth;
 The limits and basis of wealth creation in a global environment;
 Avoiding “uneconomic growth” (Daly and Bergh, 2002).

Conclusions

Important changes have to be incorporated in the path to future development. The current economic models are flawed in their interpretation of the social environment and continue to be prone to crises and inefficiency. New economic thinking requires an integration of both human beings presence and influence together with other elements such as the rational allocation and utilization of resources, the limits of current models, the challenges of climate change and the risk of uneconomic growth. The first step in this new direction is represented by developing and disseminating a greater awareness and understanding of the phenomenon.

References

- Aghion, P. and Howitt, P. (1990) A model of Growth Through Creative Destruction, *NBER Working Paper* No. 3223, Published in *Econometrica*, Vol. 60, no. 2 (1992): 323-352;
- Bezemer, D.J. (2009) “No One Saw This Coming”: Understanding Financial Crisis through Accounting Models, *Munich Personal RePEc Archive*, available online at http://mpa.ub.uni-muenchen.de/15892/1/No_one_saw_this_coming.pdf
- Costea, C and Keen S. (2010) Romania in a post-credit crunch world? *Romanian Journal of Economic Forecasting* vol 6 nr.1. pp 16/35 http://www.ipe.ro/rjef/rjef1_09/rjef1_09_2.pdf
- Daly, H.E. and Bergh, J.C. (2002) Steady-state economics: avoiding uneconomic growth, *Handbook of environmental and resource economics*, 635-642.
- Donella H. M., Dennis L. M., Jørgen R., William W. B. (1972) *The limits to growth: the 30-year update* (Chelsea Green Publishing, republished in 2004: London).
- Emerson R.W. (1993) *Self-Reliance and other Essays*, (Dover Publications: New York).
- Fullbrook, E. (2010) *Keen, Roubini and Baker win Revere Award for economics*, in Fullbrook, E. (Ed.), *Real World Economics Review Blog*. Real World Economics Review, New York.
- Kauffman, S.A. (2010) *Reinventing the Sacred*, (Perseus Books Group Publishing: New York).
- Keen S. (2001) *Debunking economics: The Naked Emperor of the Social Sciences* (Pluto Press: Australia).
- Lipton, B. (2010) *Evolutie Spontana (Spontaneous Evolution)* (For You Publishing: Bucharest);
- Minsky, H.P. (1982) *Inflation, recession and economic policy* (Brighton, Sussex: Wheat sheaf Books);
- Stiglitz, J. (2003) *What I Learned at the World Economic Crisis*, as a chapter in Driscoll, W.S. and Clark J. (2003) *Globalization and the Poor: Exploitation or Equalizer?* (The International Debate Education Association: New York);
- Vasile, A., Costea, C.E., Viciu, T.G. (2012) An Evolutionary Game Theory Approach to Market Competition and Cooperation, *Advances in Complex Systems*, Vol.15, Issue supp.01.
- Witt, U. (2008) What is specific about evolutionary economics, *Journal of Evolutionary Economics*, Vol.18, No. 5: 547-575.

BOOK REVIEW

JOSEPH STIGLITZ'S PRICE OF INEQUALITY SEEMS TOO HIGH FOR FUTURE GENERATIONS

(Joseph Stiglitz: *The Price of Inequality*, Publica, Bucharest, 2013)

Petre Prisecaru *

1. Stiglitz's main considerations on social inequality in USA

Among the well-known Nobel prize laureates Joseph Stiglitz is maybe the most critical one of American capitalist system and in his last book "*The Price of Inequality: How Today's Divided Society Endangers Our Future*" he highlights all the flaws in the system which came out strongly along with the recent financial crisis.

It is obvious that in the last six years, from USA to Middle East and even further, people protesting in the street had the view that both economic and political system had largely failed. Young people from many countries were tired and furious on elderly leaders, on their demagoguery and incompetence, who saw only their own interests and didn't care about high unemployment, social prosperity, true democracy and human rights. In USA "Occupy Wall Street" movement reflected the social injustice: many people lost their jobs, incomes and houses while very few, like bankers, had accumulated considerable wealth. It was Joseph Stiglitz who inspired the slogan of this movement: "*We are the 99%*" when he revealed the enormous increase of social inequality in US in favor of a tiny minority (1%).

Stiglitz discerns three reasons of dissatisfaction all over the world: a) the markets do not work properly, they are neither effective nor stable; b) political system has not corrected the market failures; c) economic and political systems are fundamentally unjust. The social inequality is the cause and consequence of the failure recorded by political system that leads to the instability of economic system which contributes to the increase of social inequality, it is a vicious circle which must be broken by proper policies. The financial crisis made evident the markets instability and the lack of markets efficiency, but the most terrible market failure is the high unemployment. Even before the crisis, during the period of economic growth, the incomes of middle class have been reduced due to inflation effects. For three decades labor productivity increased faster than the wages of most employees, the result is a small increase of income and the loss of many jobs. A very small minority, around 1% of population, made up of corporation and financial institution managers, became very rich and very influential upon political parties and economic policies, being the main artisans of the crisis and not assuming any responsibility. In fact bankers acted not legally and behaved immorally within their own corporations, where organizational culture favored such a behaviour.

After three decades of economic development and the worst financial crisis since the Great Depression from 1929-1933, the middle class is heavily affected by the high inequality

*Ph.D., Senior researcher economist in the Institute for World Economy, Romanian Academy; petreprisecaru@yahoo.com.

of incomes. Small groups of population (0.1% or 1%) have become very rich while a large majority of population was confronted with income reductions. For example the 1% group from the top of pyramid took advantage of over 65% from the increase of total national income in 2002-2007 period. The poor and the middle people had a large part of personal wealth invested in their own houses and the strong decrease of house prices coupled with high mortgages badly hit these categories of population. At the same time corporation managers were able to preserve their huge annual wages which in 2010 were 243 times higher than the wages of their representative employees.

After a relatively short period of visible reduction of inequality (1950-1970) market forces and government policies have led to an increase of social inequality in US while in other countries, like Brazil, there has been a reverse trend favored by public policies. If rewarding of work is not based on individual performances but on other factors, then it may undermine the economic growth and efficiency. Stiglitz refers to the *trickle-down economics*, a puerile theory meant to justify the enrichment of the top group. Stiglitz rightly questions the effect of spreading from top to bottom and does not find compelling evidence. If social inequality continuously deepens, the middle class becomes thinner and thinner. In the last three decades the wages of the 90% group increased only by 15% while the wages of the 1% group increased by 150% and those of the 0.1% group by 300%. While the stock prices quickly recovered after the crisis not the same thing happened with house prices, that's why the 1% group was 225 richer than the representative American citizen in 2010. After 1979 the 1% group benefited from 7/8 of income growth brought by capital while the 95% group got only 3% of income growth. Middle class was also eroded by deindustrialization process by which many good jobs were lost and also by a process called polarization of labor force due to proliferation of jobs for those with higher education.

Stiglitz notes that a four member family cannot actually live with an income less than 20,000 \$ per year but due to the financial crisis many jobs have been lost, many incomes have decreased, the value of houses collapsed, government income and social assistance were severely affected, middle class was largely destroyed. A small increase of unemployment is quite normal for a short recession but at the end of 2011 the real deficit of jobs was over 15 million and only 38% of unemployed people received social benefits. If someone has lost his job he may lose health insurance and also his house. Most employees have been included in pension systems based on defined benefits where the individual insured person has his own responsibility in managing retirement accounts, which led to increased financial risks and investment losses. Due to high mortgage levels, to the decrease of incomes and house prices, many people are not able to pay rates on loans. When the housing bubble has been broken almost 6,500 billion \$ have been lost by reducing housing market value, so the net value of households lessened considerably, especially for important minorities, like Afro-American and Hispanic ones.

Living standards of most people in USA have declined due to medical care uncertainty, increase of working hours both for men and women, personal insecurity and high crime level (2.3 million people in prisons), boomerang generation (young people forced to live with their parents), high rate of unemployment. Proportion of the poor has been on an upward trend after the crisis and attained 15.1% in 2010, but poverty indicator is linked not only to the income level but also to public programs for unemployed people and for social assistance, hardly hit by the crisis. One of six Americans is a poor one, and one of four children lives under standards, but there are enough resources to eliminate the poverty. Equal Opportunities slogan has become a myth in USA. Why? Because there is a strong link between parental and school education on one side and further economic and social position of children on the other side. A good education needs a lot of money and increasing social inequality diminishes the (future) equal opportunities and threatens the development/progress

of USA in the coming decades. On the issue of success chances for poor children, Stiglitz makes comparisons with the EU countries and almost all are unfavorable to USA. The level of elementary and high school education is not a satisfactory one in USA, and although here we may find the best universities in the world, only 9% of the students belong to the bottom half of the population while 74% originate in the upper quarter. As it is difficult for those born in poverty condition to escape from it the economists call this "Poverty Trap". Most Americans still believe in the American Dream (Equal Opportunities) and this motivates them to work hard, but sooner or later they will realize that economic game is made on their skin.

The 1% top segment, made up especially of corporate managers, had and still has very high wages, irrespective of their real merits, some of them (bankers) had received huge bonuses although their corporations had reached the verge of bankruptcy and many employees were laid off. It is a clear case of market failure, because high manager wages not based on true economic performance and rewarding any breakdown are affecting labor productivity and commitment and also the confidence in private companies.

While in USA income inequality has constantly and significantly increased in the last 30 years, in other developed countries it has remained almost unchanged or even decreased. An important indicator elaborated by United Nations Development Program, the standard indicator of human development, adjusted with inequality, showed that USA was on the 23th place in the world. A Scandinavian country with high taxes on income- Sweden- was able to provide good education and health care for all citizens and to record a higher economic growth than USA in 2000-2010 period. High taxes have financed high public expenses and investments in education, technological progress and infrastructure which supported a relative high rate of economic growth. Gini Coefficient, a standard indicator for inequality, is low (under 0.3) for Sweden, Norway, Germany and high (above 0.5) for African and Latino-American countries, and quite high for USA (0.47 in 2009 as against 0.4 in 1980). Stiglitz urges us to look beyond official statistics, inequality is even more striking or worse than statistics show us.

USA were a model for European and other countries, but now high and growing social inequality cannot be hidden by some macroeconomic indicators, like GDP/capita. The hard situation of the bottom category and middle class contradicts the myths propagated by American political right, which promoted the deregulation of economy, market dominance and non-intervention of the state. Stiglitz combats with solid arguments the inconclusive riposte of political right in four domains and concludes: inequality is high during lifetime, one cannot deny the relative deprivation of poor people, the true inequality is even higher than show the official statistics and income inequality indicators, inequality should be debated and many very rich people do not deserve their wealth because it was largely made on the backs of the poor and middle class.

Market forces have their contribution to the degree of inequality, but government policies strongly affect these forces. During the recent recession salaries have decreased significantly while the profits of many companies have sensitively increased, which is not a normal situation. In ancient and medieval times the conception of divine right was used to justify the privileges of the rich but starting with XIX-th century it was used the famous theory of marginal productivity to justify the income inequality. Stiglitz sees the state as an active factor which settles and applies the game rules, sets the taxes and other social contributions, shares public financial resources and alters the income distribution, supports the education and human resource formation. As a suggestive example of rent hunting is the setting of corporate managers salaries by themselves based not on their true merits but on their own desires. For many rich people it is not the genuine creation of wealth their source of

enrichment but the transfer of wealth from other people, as is the case with monopolistic prices.

Stiglitz questions the role of invisible hand of market (Adam Smith famous theory) in creating welfare for all, after the financial crisis the bankers won a lot of money but the rest of society lost a lot more. If the markets are not able to bring efficient results then we face market failures, like imperfect competition, negative or positive externalities, information asymmetries, lack of risk markets. The state must correct market failures, but in USA it accepted the financial deregulation and implicit the intensification of these failures, which finally led to the financial crisis. For whom the markets are working, for the general welfare or for the individual welfare of some financial managers? When there is a fair competition environment the prices and profits are decreasing and the economy becomes more efficient, but when corporations have a monopoly power and bypass the official regulations, then high risks occur and also spectacular failures. The lack of market transparency induced the proliferation of very risky financial derivatives, which brought high profits but distorted the efficient allocation of financial resources and thus they were detrimental to real market role.

In the financial sector the hunters of economic rent took advantage of information asymmetries and last resort state support. Some groups of population, especially the poor ones, proved an easy prey to abusing lending practices which the government had to ban but it did not due to massive lobby activities and consistent contributions to election campaigns. The new slogan: *"the only thing that matters is if you lose or win"* replaced the old one: *"you win or lose, it only matters how you play"*. There are many actors involved in income distribution, besides progressive or regressive tax systems, like the power of labor unions, effectiveness of corporate governance, administration of monetary policy. Stiglitz believes that instead of having a mutual balance between market forces and political forces, instead of curbing market excesses by the government, we have their complicity in increasing disparities of income and wealth.

Hunting of economic rents takes many forms: government transfers and subsidies, laws permitting less competition, lax enforcement of competition legislation, jurisprudence favorable to corporations. An easy access to natural resources in the resource-rich countries is notorious for hunting of economic rent, the benefits brought by the exploitation of natural resources usually return to few politicians and corporations that grabbed them at prices far below real market prices. Public procurements made at very high prices represent another form of economic rent hunting, the same is true for front or hidden public subsidies. The government did not effectively counteract the hunting of economic rent by applying the legislation in competition field, against abusive lending, in corporate governance. Many brilliant people have not become very rich, instead many rich people have exploited market power and other market imperfections. Many billionaires have seized state assets at an insignificant price (not only in Russia), while corporate managers have set their salaries at levels that defy any common sense rule, very often they were helped by very skilful lawyers and juriconsults in manipulating and interpreting of legislation.

As concerns the monopolistic rents sometimes it is the state that offers such a unique market position, protected by registered patents, or permitting a crushing supremacy of one or several companies (Microsoft is a good example). Stiglitz finds three factors that have contributed to the increased monopolization of markets: imposing ideas of the neoliberal Chicago School on unconditional freedom of the market, seen as having competitive nature; new dynamic sectors with network externalities; new and insidious ways of blocking competitors market access (like Microsoft, not a great innovator, did several times). The high degree of concentration in a market, like in banking sector, has led to tacit agreements, as it is the case with reference interest (LIBOR). Good competition laws must be enforced properly, but politicians do not often have the interest to make it. Stiglitz points to the regulators

capture, people from regulatory agencies come from private sector or are heavily influenced by it (so-called cognitive capture).

Many times the state was very generous with public money, in overstated public procurements (Medicare), in supporting banks and insurance companies with taxpayers money, in offering a lot of funds to the banks with very low interest (by Federal Reserve), in charging modest royalties to the exploitation of natural resources, in imposing high custom duties for imports, in granting huge subsidies to different sectors and subsectors of the economy.

For Stiglitz, who is not a declared follower of neo-institutionalist doctrine, it is obvious that markets are strongly influenced by laws, regulations and institutions, all having distributive outcomes. Societal norms and social institutions shape also the market forces. Stiglitz focuses on the labor demand and supply and their influence on salaries. In USA deindustrialization process associated with a steady increase of labor productivity caused the loss of millions of jobs well paid and requiring a good professional qualification, which were partially replaced by less qualified jobs and jobs requiring university education. But labor mobility is not so high due to the high costs of good education and geographical relocation. State may adopt laws affecting income distribution in the field of labor unions, corporate governance, competition, bankruptcy and public sectors wages.

Globalization of trade and globalization of capital markets have their part of contribution to the increase of social inequality. There is a fierce competition to attract foreign capital based on low salaries and low taxes. Free movement of capital and financial deregulation brought many new jobs but increased the systemic risks considerably and induced a rapid propagation of any local/limited crisis into the world economy. Even the IMF has recognized the dangers that excessive and unrestrained financial integration raises to all countries. Financial crises usually provoke many losses, lead to a high unemployment and to the decrease of wages, to austerity policies, to privatization of state assets at very ridiculous low prices. Among the big winners of the crises one may encounter those most guilty of them, like famous bank Goldman Sachs.

Importing cheap consumer goods from China and other Eastern Asian countries may lead to less jobs and lower salaries in USA. Opening financial and goods market may lead to a higher degree of volatility of these markets inducing many companies to avoid efficient risky activities. Although the globalization process contributes to economic growth, measured by GDP, not all categories of the population are the winners. The technological progress, mainly the automation and robotics of production, together with free movement of goods, have greatly reduced the good jobs of middle class in US and EU, unfortunately the destruction rate of jobs surpassed that of the creation of new jobs, at least in the last 6 years. Some few countries from Asia, like China, have fully benefited from globalization, but most countries have not. The true main winners of globalization were the transnational corporations which made huge profits due to very cheap labor and natural resources.

What does flexibility of labor market mean? Weak labor unions, lower real wages, more and more part time jobs, a lower growth of hour wage in relation to productivity gain, decrease of wages share in GDP as against profits share? If the labor unions are very weak and public supervision is somewhat lax then corporate managers may capture huge incomes at the expense of their employees and shareholders. Stiglitz noticed the cynicism of one official of Obama's Administration who claimed that it was imperative the bonuses of AIG managers to be paid while in the auto industry the workers had to accept a significant wage reduction. The corporate managers are very cynical too when they offer themselves huge and unworthy rewards while reducing the staff and cutting the employee salaries.

Stiglitz insists upon the negative discrimination against large social and ethnic groups such women, Afro-Americans, Hispanics etc, who are less paid and find much harder a new

job, especially if they do not have university education, these disadvantaged groups have been an easy prey for the banks before and after the crisis.

Instead of correcting market forces American Administrations have reduced the tax level applied to the rich people, the marginal rate of income tax decreased from 70% during Carter Administration to 35% during George W. Bush Administration, the most controversial aspect being the sharp decline in tax on capital gains, which reached 15% (from 35%). While financial speculators and investors are symbolically taxed, those who work very hard for a decent living pay very high taxes. In USA the first 90% of population pyramid collects less than 10% of total capital gains. For the 400 richest Americans salaries represent only 8.8% of total income while the capital gains represent 57%, dividends and interests 16%. They paid an average income tax of 16.6% in 2007 compared to an average tax of 20.4% for ordinary taxpayers. Higher taxes on properties and inherited wealth may represent an useful instrument to alleviate the social inequality and to avoid turning US into a country of inherited oligarchy. The share of profit tax in the total federal incomes has decreased from 30% in 1954 to less than 9% in 2010 due to legislation changes and special provisions. The taxes levied by member states of federation are not progressive ones and most incomes are brought by tax on sales (a sort of VAT without deduction in US) paid mainly by the poor and middle class.

One may see a segregation in metropolitan areas between homeowners and tenants that depreciates the civic quality of local communities. The unemployment rate is much higher among ungraduated people as long as you have graduated an university you may get some good job opportunities, but enough companies may ask you to work some time without being paid or with a token payment, only if you come from a rich family you may afford not to be paid for a while.

Very rich people have enough financial resources to influence government policies and official institutions for preserving the inequality instead of promoting social cohesion through a fair distribution of income. Merits assumed by many enriched businessmen are also those of past generations and other actors/domains. Wage incentives were used by corporate managers only to their own interest regardless of their own contribution and performance. Stiglitz thinks that social inequality has grown too much to be ignored and tolerated, and among determinant factors mentioned before we could also include greed, lack of scruples, and absence of empathy. Are these values characteristics to capitalist society or old imperfections of human race?

Stiglitz blames high and growing social inequality because it affects the efficient and normal movement of the economy, which is neither stable nor viable on long term. Rich people oppose to higher taxes needed for financing education, health care, research and technology, infrastructure. The unequal distribution of income in favor of rich people, that usually spend less on consumption, negatively affects consumer demand of the poor and middle class, the housing bubble has temporarily hidden that aspect. In USA the deficit of aggregate demand can be attributed to the inequality extremes, as the 1% category earns 20% of national income, if it would lose 5% in favor of other categories then the aggregate demand would increase by 1% and GDP by 1.5-2%, while the unemployment rate would decrease from 8.3% to 6.3%. The 1% group has tried to restrict state spendings and made lobby for tax reduction meant to encourage private consumption, but this did not work and the burden of counteracting weak demand fell on Fed, that slashed interest rates creating the conditions for speculative bubbles which usually bring after them an economic recession. At the same time companies paid too many dividends to shareholders and made too little investment due to reduced liquidity reserves.

Stiglitz blames Alan Greenspan and other Fed leaders for promoting the ideology of social inequality and efficient markets which led to the high tech bubble and then to the

housing bubble, the first one brought some technological progress, the second one brought a real disaster for millions of householders, banks and economy. Another very harmful factor was the deregulation process supported by corporations and rich people. Abrogation of Glass-Steagall Law (1933) in 1999 led to the proliferation of overrated financial speculations and dangerous innovations which increased the systemic risks and induced a lot of damages for banking debtors/clients. Financial sector brought a certain contribution to GDP growth rate and a consistent one to the wealth increase of people working in the financial activities, but these cannot compensate the huge damages/losses caused by the financial crisis and then by the economic instability. A vicious circle arises: the social inequality leads to economic instability, on its turn the instability leads to more inequality. Even IMF, which applied evil policies for the poor people from developing countries, was forced to recognize the positive role of low inequality and sustained growth, the importance of employment and fairness for economic prosperity and stability and also for political stability and peace.

Private sector is the engine of economic growth, however it depends on good performance of public sector. The state supplies the physical and organizational infrastructure of economy, which usually needs transport infrastructure, education, fundamental research and other conditions for proper functioning. That is why investments in public goods are so important for the whole economy, for its productivity level and for its steady growth. For several decades USA have not invested enough in public goods and the insufficient allocations for education and research made in the last two decades will have negative effects upon economic situation in the future. The rich people do not care about investments in public goods, they have enough money for their needs, so they do not want a powerful state involved in income distribution and in public goods investments. For a good education children need a strong financial support provided either by their parents or by the state, but the quality of public education (70% of all colleges) is quite low, moreover the quite burdensome programs of student loans failed to ensure the high quality of education.

Hunting of economic rents implies a large resource waste, a lot of money (3.2 billion \$ in 2011) is allocated for lobby activities. There are 3100 lobbyists for health care sector and 2100 for energy and natural resource sectors, they do not perform any productive or social useful activity but are only bargaining influence for the companies paying them. Hunting of economic rents distorts the allocation of human resources, many talented young people have turned to financial sector where they made a lot of innovations useful only for the profit level. There are sectors, like health care and telecommunications, where there is a limited competition and high prices, high marketing budgets and high profits, but all these badly affect employment and real investments in other sectors. Are USA spending too much for health care (see the amplitude of Medicare program) or are the profits of drug companies too high? When competition is very restricted we do not have economic efficiency and there is a large resource waste. The price system does not reflect the resource scarcity, the impact of economic activities on environment, the sustainability of economic growth.

Stiglitz was the chief of the Council of Economic Advisers during Clinton Administration and that time he proposed the introduction of a new national account, called *Green GDP*, for measuring the depletion of natural resources and degradation of environment, but mining industry made an effective lobby in the Congress against this project. When the environment regulations are influenced by the strong lobby made by oil and mining industries, the living standard of population is negatively affected by the high pollution produced by these. Governance of the 1% group is ensured by lawyers for their own benefit, out of 44 American Presidents 26 were lawyers and more than 1/3 of the members of the House of Representatives are lawyers. The legislative system may be interpreted in many ways by an army of lawyers who charges fantastic fees but this process produces a massive waste of time and a great distortion of resources, having also a negative influence on

macroeconomic indicators. Instead of having an ex-post legal accountability system it is necessary an ex-ante system, for preventing any possibility of persons injury.

The 1% group, which practically represents a sort of modern oligarchy, strongly distorts the economy and foreign policy, using a lot of taxpayer money to save the banks from bankruptcy or to start wars in resource rich countries. Spending more money for arms race and wars means spending less money for social programs and tax benefits assigned to the poor and middle class.

Stiglitz refers to the theory of wage efficiency, elaborated by Alfred Marshall more than 100 years ago, which shows the impact of motivation and salary level of employees on labor productivity. If many people, especially in the middle class, are facing great difficulties and concerns labor productivity will be negatively affected. In Stiglitz' opinion stress and anxiety may prejudice getting new skills and knowledge and the employees should be treated and motivated fairly by the managers. Stiglitz mentions also the old communist slogan: *they feign to pay us, we feign to work for them.* A clear conclusion results: the wage level depends on labor productivity and when this increases the wage should be raised. Many Americans are working hardly for a better living, for their families, for getting more wealth, but too much work harms private life. It is also obvious there is a tendency toward excessive consumerism in USA driven by aggressive advertising and sales campaigns. The high inequality of wealth and income badly affects the opportunities of many young people, because their future largely depends on the public education quality and their parents wealth and income. Stiglitz believes that the systems of financial stimulants existing for managers and employees do not focus on quality but on quantity. These stimulants have led bankers to take excessive risks and to adopt deceptive and non-transparent accounting practices without any accountability. The bankers fiercely opposed to any accounting reform, especially targeting the incentive remuneration by share purchasing options. Deficiencies of corporate governance were quite obvious as they offered good opportunities to the managers to impose enrichment wage systems without any condition related to individual or company's performance.

Stiglitz deems that economists have underestimated the importance of individual competitiveness and overestimated the selfishness of individuals, another deficiency is represented by so-called rational individualism within economic behavior, but this approach focusing on individual and profit has led to more inequality and was quite counterproductive. Cutting the taxes significantly, on incomes and profits, starting with Reagan Administration under the influence of the ideas of the most well-known supply sider Robert Mundell, have led to high budget deficits and also to enriching the rich. A progressive taxation is meant to foster the degree of correctness and productivity, to regain confidence in the system, to eliminate the preferential provisions of tax code that favors wealthy people and corporations.

In USA social inequality was determined and amplified by political action, in a true democracy it would prevail not the will of the 1% group (so called elites) but that of the average citizen represented by the principle one man one vote (and not one dollar one vote). *A legitimate question arises: are true elites those that promote only their own interests and not the public interests?* Federal Government did almost nothing to punish the banks and other corporations that have broken the law. Usually people vote not because they are forced by law (in few countries voting is compulsory) but because they have civic consciousness. People may be influenced or stimulated to vote by political propaganda and faith in the democratic system, but they may be discouraged or disappointed by the system. Stiglitz emphasizes the importance of social capital, concept related to good governance. In USA the institutions (public and private) are facing a huge erosion of trust on behalf on most citizens. The banking and financial sector has lost all citizens trust due to many frauds, tax evasion and frequent abuses (see the credit cards), it is obvious that banks, like Goldman Sachs, do

not give a damn on investors trust. It seems to Stiglitz that during the recent crisis big corporations did not give a damn too on employees team spirit, their loyalty, human capital. This stupid attitude badly affects social capital and cohesion. Real democracy requires trust and social contract, also understanding the responsibilities and rights of individuals.

For most US citizens equity matters, and perceptions of injustice influence the employees behavior. A survey conducted in December 2011 showed that 61% of Americans think the economic system favors the rich. Stiglitz believes that people must be well and correctly informed by an active and diversified mass media, unfortunately the media companies belonging to the 1% group have a clear domination on media market. In USA one can vote only people that have an identity card (driving license) and are registered on electoral lists. Poor people and those who are not well informed are practically discouraged to vote. A quarter of citizens (more than 50 million) eligible for voting is not registered as voters in USA. In 2010 US Supreme Court decided that companies may spent whatever they want for financing election campaigns. But money support given to a political candidate who would endorse a favorable law project means corruption, which undermines the trust in American democracy. For middle class voting is an essential aspect of democracy because the existence of a fair and equitable rule of law (state) is vital for economy and society. Political system serves only the interests of the rich, hence the distrust of most citizens in it. The fact that citizens are suspicious and disappointed by politicians is reflected in low voter turnout, youth participation being even lower. Stiglitz agrees a compulsory voting, like in Australia, in order to better reflect the general wishes of society and for having politicians with full legitimacy and representativeness. He wants a legislative reform for financing the election campaigns to which corporations and media trust are fiercely opposing. Strict regulations targeting banks required by the majority of voters were diluted by US Congress, that appealed to compromises favorable to large corporations.

Globalization of financial markets is managed in favor of big corporations and the 1% group. IMF is an effective instrument for representing the interests of international creditors. Financial corporations resort to the support of well known three rating agencies (all American) and exert political pressures on other countries. They have also used the World Trade Organization for liberalizing financial markets and for imposing weak regulatory regimes in developing countries. USA have used bilateral trade agreements and NAFTA to support/promote the interests of American corporations in other countries. Blackmail was sometimes used by corporations to protect their privileged positions in the economy and to preserve a distorted competition environment, undermining the principle of progressive taxation in favor of *fiscal competition*. The American capitalist model is no longer an attractive one and has lost much of its good influence in the world. At the same time it has increased the importance of global governance (see G20 role) for promoting the interests of all countries, not just those of USA. In the past America has promoted brilliant values or ideas about equality, human rights, democracy, free market but what kind of values can be offered now to other countries when social inequality in your own country became so pronounced and when only the corporations interests matter?

How can 99% of population be manipulated or influenced by the 1% group as having common interests? Long time economic science has resolutely assumed that people have well defined preferences and rational expectations, which is not true. Corporations are using psychological and economic means for strongly influencing the people preferences and beliefs. As a result many naive and credulous people underestimate the effects of social inequality and the government capability to reduce them, they do not well perceive the huge increase of inequality in the last decade and all these mistaken perceptions have an important influence on political process and on public policy decisions. Nowadays the 1% group detains more knowledge on the methods of influencing the preferences and beliefs of many people.

The modern behavior economics rendered evident how *the framing* (context) influences people preferences, how the individuals process information tallying with their own pre-existent opinions, how the advertising (marketing) activity is molding people perceptions.

Keynes, the father of macroeconomics, is mentioned by Stiglitz for highlighting the great influence of economists and political philosophers' ideas on ordinary people. George Soros called subjective influence on the functioning of the economic system as *reflexivity* and he took full advantage of this phenomenon. Stiglitz thinks that financial deregulation is a major cause of the recent crisis, while Republicans blame the government policies for the market failures. Appealing to equity, efficiency, justice in the public discourse of the rich and government officials shows much hypocrisy and justifying the large salary inequality is ridiculous, because it does not take into account the negative effects upon economic stability, labor productivity and political democracy. Now there is a fierce theoretical confrontation between political right and political left, between neoliberals and neo-keynesians, on the market strengths and state's role in the economy. In the last three decades, the ideas of libertarians, advocates of minimalist state, had prevailed and the result was the strong increase of social inequality, but in 2008 it was the state which had to save the rich bankers from extinction using taxpayer money. The failure of communist system in which state had a dominant role in the economy gave libertarians a handle for claiming the supremacy of market forces, but Stiglitz rightly believes that there should be a balance between the market role, state role and civil society role. In East Asia it has been imposed the idea of developer state by orchestrating the economic development with the help of market mechanisms, which was able to achieve a high economic growth and a substantial poverty reduction.

In the battle of ideas, for the formation and manipulation of public beliefs, there have been used economists, experts, politicians as important actors and education, mass media, tricky campaigns as means of influence. For instance any large state program, like Medicare, may be blamed as a kind of socialism, although healthcare providers are private ones.

Americans believe in the power of incentives on the markets, therefore corporate managers have set huge bonuses for them transformed in loyalty ones when their performance was a very poor one. Credit cards companies have imposed the rule of no overcharge for merchants, although they charge very high fees from them. In commodities markets and stock exchanges prices should reflect the supply/demand balance and true value of traded assets, they would have a revealing role, being fully efficient as they are revealing all the information needed. Large volume of transactions, computerized algorithmic trading, extreme volatility of prices, inside trading show how little informative markets have become and how little you can rely on the information supplied by traders and brokers.

Stiglitz pleads for tax on inheritance, for banks restructuring and recapitalization involving shareholders and creditors, and not taxpayers money, for not rewarding generously the inefficiency of managers, for restructuring the mortgages by reducing the principal value, debt conversion, allowance of the losses in the bank balance sheet and keeping the houses by indebted owners. Moral hazard was invoked for not exempting house owners from their debts, but not for the banks. Cynicism peak was attained by bankers allegations against house owners, whom they blamed as reckless and speculators, when in reality their own greed overcame any reasonable limit.

For Stiglitz the great ideological battle is deploying nowadays between the advocates of free markets and those of state important role, this confrontation concerns all areas of public policy. Right-wing politics wants rules of the game only favorable to the wealthy people but market failures can be counteracted only through public(government)policies, if one ignores this matter then income inequality and its negative consequences are also ignored. Despite of some breakdowns, the state was able to promote technological progress

on a large scale, in USA the average social profitability of state research/development activities exceeded by over 50% that of private sector activities. For instance Internet was created by state but many products and applications were developed by private companies like Google, the first browser was also created by state and improved by private sector. If you compare the market failures with state failures you may easily see which ones are the most harmful for the economy. In countries like China and Scandinavian states one may notice the important role played by the state in economic growth, in increasing the living standard, in redistribution of income. This blatantly contradicts the idea of minimal state promoted by right wing politics, that strives to reduce the state powers, to privatize all state assets and activities, to oppose to any public regulations.

After the Great Depression from 1929-1933 state managed to regulate the financial sector with the result of four decades of financial stability and rapid economic growth but the deregulation process associated with less supervision, which started with Reagan Administration, led to instability, moral hazard, fraud and less competition. If private medical insurance companies are less efficient than state Medicare program, if private life insurance companies are less efficient than social insurance state program, if private contractors charge twice the amount paid to state employees for the same services how can you argue the supremacy of private sector over public sector? Is always privatization of state assets the best economic solution? Even in USA and other developed countries there are enough examples of privatization failures whereas in transition and developing countries we may see many such examples. If George W. Bush would have been able to privatize public social insurance system, today the elders would have lost most of their pension savings. In California, the disastrous liberalization of electricity market allowed a shameless manipulation of supply and prices by Enron and the enrichment of its managers (very good friends with the Bush Administration).

Stiglitz knows very well what huge subsidies the corporations have received in the last decades, all culminating with the immense financial aid given to the banks, AIG and auto producers in 2008. But these subsidies and aids have contributed to high budget deficits and to an enormous public debt. Stiglitz is not an IMF fan: on the contrary, on previous occasions he strongly criticized IMF structural adjustment policies imposed to transition and developing countries, promotion of the interests of global finance, use of discredited economic doctrines. IMF has backed the liberalization of capital markets that would help the speeding up of economic growth, in reality it was seen that it brought only more financial and economic instability. In the past Stiglitz had some disputes with IMF on financial governance, as he was sustaining the idea of some control mechanisms of capital circulation, but after the crisis IMF has nuanced its position, accepting Stiglitz ideas and also the restructuring of sovereign debts.

Stiglitz is disappointed with the standard method of measuring economic performance (that is GDP/capita) which is not able to accurately evaluate the importance and contribution of health care and education sectors. GDP indicator does not take into account the sustainability, the unequal distribution of income, other aspects of growth, here's why Stiglitz thinks new and improved macroeconomic indicators are needed and may be assigned under the guidance of G 20, OECD, United Nations etc.

Stiglitz enters the field of neo-institutionalist school when he addresses the relationship between property rights/externalities and distribution problem, finding that concepts like freedom and justice cannot be separated. Rules and regulations are developed to protect the liberty of some people of others abuse, but if the economic power is unevenly distributed, the rich people may use the political power to preserve social inequality and to promote a specific and favorable legislation for their own benefit and not for the public interest.

During real estate boom some member states of the federation, like Georgia, tried to impose a legislation for protecting consumers from banks abusive practices and frauds, but they were hampered by rating agencies, like Standard and Poor's. Even if a regulation agency for consumer protection was created under Dodd-Frank Act, financial institutions blocked the appointment of Elisabeth Warren- an unfriendly person- as president. They were also able to influence US Congress to change in favor of creditors (banks) the personal bankruptcy law in 2005. In USA banks set usurious interests rates and commissions jointed with credit delusive practices which brought to the verge of ruin many households and in despair tens of millions of people. In the last 25 years the financial support offered to universities by the states was replaced by the perverse system of student credits, guaranteed by the state. Although 80% of the students do not graduate and the education quality is quite poor or futile most students become indebted to banks for all life. But private universities make a profit of 30 billion \$ per year, of which 90% come from revenues based on federal programs of student credits and federal state aid.

Micro-credits for poor people, most of them peasants, promoted by Grameen Bank (India) and BRAC (Bangladesh), have transformed millions of human existences but later failed almost everywhere due to greedy bankers.

What happened in USA with mortgages is meaningless, as the banks have not even kept accurate evidence of book debts and debtors, MERS being a faulty and tricky system. Although the banks repeatedly lied in the courts on debts evidence they have not been accused of frauds in foreclosure of mortgages. Around 8 million of people were affected by repo and many lost their houses. Homeowners had to demonstrate in court that they did not owe money to banks and not vice versa. But in American justice system innocent people are protected and there is the requirement to bring clear evidence in supporting the allegations. Many people lost their houses without being heard by a judge, in USA laws are favoring corruption and corporations while in some transition countries, like Russia, laws do not matter at all, and the state was captured by mafia groups, including oligarchs, interlopers, tax dodgers, property sharks. Even some general attorneys, like Martha Coakley (Massachusetts), tried in vain to reach an agreement with banks which were accused of bad faith and frauds. *Too big to fail does not mean too big to obey the law*. Financial sector took care that rule of law always works in its favor and against ordinary American.

In USA access to justice system is a very expensive one which favors large corporations and wealthy people. There is also an expensive and unfair system of intellectual property rights which the lawyers and corporations get the best out of it. Armies of lawyers are engaged in lengthy and extremely costly lawsuits brought by corporations against other companies or against the state, this means extracting high economic rents and also a huge waste of resources. US Securities and Exchange Commission filed many actions against Citibank and other banks for frauds, but usually compromises were made through the payment of high fines. This happens because the state does not have enough financial resources for lasting suits, so that banks are the only winner and the losers are all those who trusted them. Some banks and corporations are old offenders and they should be severely punished, but very often guilty managers have already left the company. Here we have the evidence of inadequate corporate legislation that protects those truly responsible for violating the law: general managers and boards.

After the crisis the obsession of austerity programs haunted in USA and EU, in the summer of 2011 the Republicans blocked the adoption of budget rejecting the increase of debt ceiling and asking for a substantial reduction in budget deficit, either by cutting spending or by raising taxes. But the true difficulties were related to high unemployment, growing inequality and the difference between potential output and really achieved output of economy. Ten years ago USA recorded significant budget surpluses (2% of GDP) which

caused serious concerns to Alan Greenspan, Fed's president, on the management of monetary policy. Soon surpluses turned into deficits due to tax cuts, immense war spending for Iraq and Afghanistan and other useless and inflated military expenses, newly introduced benefit of Medicare Program to compensate some medicines, economic decline caused by Great Recession (in 2012 the achieved GDP was almost 900 billion \$ under real potential).

If all these factors are eliminated USA may resume economic growth and it will be ensured the full employment of labor. Lower taxes on capital gains have fueled the two speculative booms (bubbles) and lower taxes on dividends did not encourage the productive investments. Stiglitz wants a hefty fee on all types of rent that would reduce inequality and rent hunting, which are distorting the economy and society. He also wants taxes on all activities with negative externalities, such as energy, resource extraction and mining, chemical industry, financial speculations etc., like tax on pollution, tax on financial transactions. The royalties paid for natural resources must be increased significantly, hidden subsidies must be forbidden, tax exceptions and special provisions should be removed. Stiglitz suggests a 10% increase of income tax paid by the rich people that would generate extra budgetary revenues equivalent to 2% of GDP. In the next 10 years trillions of dollars would be collected from all such taxes, fees and duties. But the 1% top group does not want the introduction of new taxes and the increase of other taxes because it would lose a significant part of huge revenues in favor of poor people and middle class.

The political right (Republicans) promotes a strange combination of supply side measures and demand side measures, they want deficit contraction, tax decrease, drastic reduction of public expenditures, a major restriction of state role. As the political right wants to protect the military spending one should be drastically reduced the spending for education, research and infrastructure but this would badly affect the future of economic growth. Now the state might borrow very cheap a lot of funds to invest in strategic areas, as education, public investments having a high level of profitability. But the *deficit fetishism* gained more ground in the political arena, including the center of political spectrum, with the support of rating agencies and international organizations.

To stimulate the economy Stiglitz proposes a strategy based on the long tradition principle of balanced budget multiplier: a simultaneous increase of taxes and spendings given that current deficit remains unchanged. It highly depends on what kind of taxes is increased and where spending is directed, but the economic growth will lead to a raising of taxes amount and implicitly to more revenues. Funds should be allocated with priority to programs with a high multiplier value. Stiglitz strongly believes in a progressive tax system which would reduce the social inequality and stimulate the economy. *Economic principle of propagation the positive effects from the bottom to up may work, even when the propagation from the top to bottom does not take place.*

Sovereign debt crisis from Southern Europe, Greece being the worst example, or Eurozone crisis led to imposing of harsh austerity programs meant to cut the deficits and public debts. But one cannot compare Greece situation with that of USA, which may print a lot of dollars, may sell government bonds to many countries, especially to China, paying very low interests. While Fed is a major buyer of government bonds European Central Bank is not a significant buyer of Greece bonds. While USA have a strong economy and their own monetary policy, Greece has a weak economy and no monetary policy. The single currency-euro- has eliminated two adjusting mechanisms: exchange rate and interest rate and has not put anything instead. The best economic situation in Europe may be seen in two countries that did not adopt the single currency: Sweden (a member of EU) and Norway (not a member of EU) but where the state is strongly involved in economic policies and in social assistance.

A program for cutting the deficit, like that proposed by Bowles Simpson Commission, focused on the reduction of income tax for the rich people and on profit tax for the

corporations, three fourth of deficit reduction coming from diminishing government spending. Stiglitz, a former supply sider, finds out that supply side policy applied by Republican Administrations (inspired by Robert Mundell ideas), centered on tax reduction, failed to trigger a higher economic growth. If the tax deductions allowed to middle class (for mortgages interest, for health insurance) are removed then people will have a real tax increase. Fiscal credit given to poor people and middle class would stimulate personal investments and savings, also real estate market. Cutting budget deficit is an easy task if the price is paid by rich people and corporations and not by ordinary people. For Stiglitz it is not the supply side that matters but the demand side, the big corporations have enough liquidities for investments but there is a weak demand for their products and services. It would have to find the optimum way of stimulating demand by increasing the incomes of the poor and middle class.

Monetary and fiscal policies must support the full employment of labor, excessive military spending and exaggerated corporate assistance do not create jobs but just waste valuable resources (financial and human). Probably one should end the myth that corporations are the engine of economic growth in favor of a greater role for SME, which are providing anyway the most jobs and have a high dynamic and flexibility and which do not face a lack of liquidity but a shortage of demand for their products and services.

The political right wants the privatization of public social insurances (pensions) and public health insurances, which are confronted with some small deficits and requiring some adjustments, but these public services have established a kind of security for the elderly and sick people. Private pension and health funds under the great risks of capital market represent something similar to roulette playing, any crisis may bankrupt them. If Wall Street could get its hands on public pension fund of 2500 billion \$ it would collect at least 25 billion \$ per year. The reform of Medicare system by capping or reducing the spending was repeatedly asked by Republicans and led to a new budget deadlock in October 2013. While the political right wants a pronounced and rapid cutting in social spending, Stiglitz thinks it will take time and gradual steps to reform the two systems in order to avoid an immediate effect on the current deficit.

Another example of insolent cynicism is the reproach brought by the rich to the poor and unemployed people for not willing to find a job at a time when there not enough job opportunities in USA. It is not true that United States have the most flexible labor market, its performance was worse than that of other countries where there is a greater protection of labor (Sweden, Germany) and where salaries were not cut affecting total demand and economic growth. More public investments are needed for sustaining economic recovery and the decrease of public debts on long term. Does austerity policy lead to regaining of investors and consumers trust? Austerity measures create unemployment and GDP contraction (see the case of Greece, Portugal, Spain, Ireland). In the past only some small countries with important export activities have recovered after an austerity period and there is enough evidence that austerity has led to economic recessions and depressions in many countries. Government spending programs, like New Deal, have contributed to economic recovery, although sometimes their importance has been greatly overestimated.

Economic stimulation package of Obama Administration (800 billion \$) had limited effects because the government underestimated the duration and magnitude of the crisis, relied too much on the recovery of real estate sector, downplayed the importance of structural transformations (deindustrialization), neglected the effects of high income inequality on consumption and savings, overestimated the role and dynamics of private sector.

Based on Keynes contributions Stiglitz resolutely believes in multiplier effect of public spending in times of high unemployment and economic decline, provided they move toward high-yield investments that facilitate the restructuring of the economy (a supply side

measure). Public investments are very profitable, they also increase the gains brought by private investments (crowding-in effect), on medium term the deficit is lower and consumer confidence returns. A structural reform of economy, driven by public investments, is needed by shifting resources towards new dynamic sectors. In European countries where austerity programs are implemented the stress is put on accelerating structural reforms, which affect several domains and policies (privatization), having positive effects on supply side on medium term. Stiglitz is worried about weak consumer demand due to decreasing incomes and in EU nothing is done to stimulate the demand, the engine of economic growth.

There is an inverse relationship between inflation and unemployment, and inflation targeting policies have favored the holders of financial assets. Central Bank- Fed- had trusted in risk management performed by banks, they have won a lot, the rest of society lost enormously. Macroeconomic policy has contributed together with Fed's monetary policy to the increase of social inequality, e.g. too high unemployment led to wage dropping and lower incomes of employees, affecting the level of consumer demand. Stiglitz is concerned about an economic recovery in US without jobs increase. He thinks that two myths have crumbled in the context of last recession: a) inflation targeting brings economic prosperity b) a central independent bank ensures the economic stability. A high inflation may produce some efficiency losses but the waste of resources in the context of under-utilization of economic potential may produce very large losses.

High unemployment caused by the crisis pushes down the wages, and their recovery tendency attracts banker reaction on combating inflation by increasing the interest rates and tightening the credit conditions. Between 1980 and 2005 labor productivity increased 6 times faster than the wage rise, and due to inflation in 2011 the real minimum wage was 15% lower than in 1980. Automatic stabilizers, like spending for social assistance, usually mitigate a recession shock while the so-called salary flexibility leads to the decrease of aggregate demand and exposes the economy to a major shock.

Stiglitz blames Fed for using excessively and often ineffectively the interest rate and ignoring other levers, noting that very low interest rates are reliable for fueling the speculative bubbles, for the tendency of saving more money by some categories (the elders) and for inflating the stock prices. Fed offered a lot of funds to the big banks during the crisis without any conditions and with a modest interest (under 1%) which could be used for profitable investments, but unfortunately this policy did not help the economy but has only enriched the bankers. The financial deregulation promoted by American Administrations and by Alan Greenspan (Fed's president) led to excessive expansion of financial sector within the economy and to the exploitation of most people by greedy and unscrupulous banks. Regarding the strict regulation of awards scheme, the use of derivatives, the degree of capitalization, after the crisis it was not done much. The banks size is another thorny issue, *too big to fail may also imply too big to exist*, but Fed's presidents did nothing on this matter: no legislative solutions, no new regulations on strategic and institutional management, no new taxes.

Independent central banks from USA and EU were captured by financial sector that was able to impose an excessive deregulation of financial markets. Regulators apply favorable policies for the regulated ones when coming from the same sector, e.g. in USA Wall Street financial sector influenced the Fed's board appointment, some Nobel Prize winners in economics being proposed as governors were rejected by the Senate. However some Fed's governors have noticed that high unemployment and lack of demand are key issues to be solved on short and medium term. Stiglitz is a fierce critic of the Fed and its monetary policy: he reveals the contradictory policy measures proposed and applied by Alan Greenspan and also the lack of transparency in Fed's activity. New York Fed's chief helped the banks that have nominated him in this important job. AIG insurance company was saved

under the best possible conditions because the main beneficiary was Goldman Sachs. Moreover Fed was the lender of last resort for some foreign banks, which is completely unusual and quite strange. Some former investment banks, like Goldman Sachs, borrowed large sums from the Fed, albeit they were pretending to have a very good financial situation. Before the crisis Fed did not succeed in maintaining the economic stability and after the crisis it failed to bring the economy to normality.

Stiglitz thinks that European Central Bank, which only targets the inflation in Eurozone, performs even worse than the Fed, as it had weak and delayed reactions to the sovereign debt crisis, advocated for a voluntary restructuring of Greek debt (CDS contracts having no insurance role), tolerated an insufficient capitalization of banks even after the stress tests were made.

Stiglitz highlights the theoretical confrontation of ideas in economics between the followers of Milton Friedman, the leader of neoliberal (monetarist) school from Chicago University, and the followers of John Maynard Keynes, among them being John Hicks, Franco Modigliani and Paul Samuelson. While Milton Friedman strongly believed in markets freedom and omnipotence, he ignored the importance of market failures, minimized the state role, overdid the importance of money supply, neglected the function of monetary policy in ensuring the full employment (anyway market forces would correct any deviation from full employment). For Milton Friedman The Great Depression(1929-1933) was not a market failure but a state failure, because the Fed let the money supply to fall, as a result Ben Bernanke flooded the economy with liquidity, from 870 billion \$ borrowed to the banking system (by buying state and other bonds) in June 2007 it has been reached to 2,930 billion \$ in February 2012. Banks were saved by these funds but the economy has not revived. Milton Friedman was against any regulation of banking sector, but the experiment of a banking system without restrictions implemented in Chile proved to be a memorable failure (see the crisis of 1982) and the government needed a lot of funds and time to cover its debts. Illusion of free markets promoted by neoliberals proved profitable only for the financial sector and its managers and deeply damaging for the rest of economy. The monetarist claim that there is a constant velocity of money circulation showed to be a resounding failure, but this assertion was replaced by a new religion: inflation targeting.

For Stiglitz inflation targeting is based on questionable assumptions, hyperinflation was a problem in some periods after the Second World War but mainly due to factor cost rise (labor, raw materials, energy, interest rate) than due to high demand. Some countries faced imported inflation due to the increase of international prices of energy and food products. A higher inflation (around 5-6%) may cause some losses but they are almost negligible compared to those provoked by a financial breakdown. If the few major holders of bonds and stocks are benefiting from a low inflation, instead high unemployment affects enough people. There is not a stable relationship between unemployment and accelerating inflation rate, also the cost/benefit ratio of higher inflation is not easy to determine. Stiglitz is strongly convinced there is not enough aggregate demand in the economy, the state should support the increase of demand and promote active labor market policies.

At the end of his book Stiglitz goes forward with an agenda of seven reforms: reducing the rent hunting and leveling the playing field, reform of tax and fee system, reform of education and social assistance, tempering the globalization, a new social contract, restoring the sustainable and equitable growth, a political reform. Stiglitz sees achieving the economic growth based on large public investments, having priority the demand recovery that must precede increasing the supply of private sector. Supply side policies are under severe critics due to fiscal stimulus and disregard of public policies with spillover effects. Investments and innovation must be redirected from reducing work consumption to reducing

material resource consumption and protecting the environment. It is important to have not a quantitative growth but a qualitative one by means of influencing market forces.

2. Some short conclusions on Stiglitz's ideas

No doubt Joseph Stiglitz is one of the greatest economists in the world and he undertook a thorough and accurate analysis of the major problems that the American society is facing now. Similar to his friend Paul Krugman, Stiglitz has a great admiration for Keynes and he is an eager opponent of neoliberal ideas on completely free markets. High unemployment and social inequality are the main problems and threats for the stability and future of American society. Stiglitz conducted a detailed interdisciplinary analysis, appealing not only to the tools of economics but also to those of psychology, sociology and other related social sciences, but also to the paradigms of neoinstitutionalist school.

Quite surprisingly Stiglitz has radically changed from a supply-sider to a demand-sider, maybe under the influence of his good friend, Paul Krugman, and he now thinks that great income inequality badly affects aggregate demand, mainly consumer demand, and a genuine progressive tax system would counteract this unfair distribution of income and stimulate the demand. But also the profit tax system should be reformed to eliminate a large part of tax evasion (estimated at 2000 billion \$ per year), not to mention the huge funds drained in fiscal heavens. Stiglitz did not rule out the supply side (state) policies for restructuring the financial sector and other areas, like a more efficient competition policy, development of physical infrastructure, promoting technical and technological progress or supporting a reindustrialization policy. Stiglitz blames corporations for the framework of imperfect competition created by them and also for the monopolistic rents grabbed this way and points to the fact that enough corporations received, almost for nothing, exploitation rights for natural resources or generous public procurement contracts at very high prices. Many hidden subsidies, some included in the fiscal code, given to big corporations must be removed. A reform of corporate governance is urgently needed in the direction of restricting the power of general managers, including the absurdity of board designation, and increasing the power of shareholders.

Stiglitz is a keen analyst of the globalization process which he had investigated in its magnitude and complexity in several previous books. Globalization has been managed for the benefit of corporations and other interest groups, which practice the hunting of economic rents based on undervalued natural resources and very cheap labor and to the prejudice of the respective states. Stiglitz refers to the asymmetric globalization which places the laborforce at a glaring disadvantage against capital. He would also like some regulations on cross-border capital flows, especially short term speculative ones. Fiscal competition and American fiscal legislation have encouraged the outsourcing of jobs abroad and in this mode the US have lost a large part of the processing industry. But for USA globalization is not a zero-sum game, it is a winning game due to the free movement of goods and factors: many cheap natural resources and processed goods are imported, a lot of petrodollars are deposited in American banks, many direct foreign investments from Western Europe and Eastern Asia may be found here, many valuable human resources from other countries are working here.

There is little doubt it is required an agenda of political reforms pointing to financing the election campaigns, enlisting all voting people and introducing mandatory participation in voting (a civic obligation for any responsible citizen). Like Paul Krugman Stiglitz is deeply convinced that the Democrat party is more open to reforms and supports the interests of the 99% group (*Democrats are the good guys, Republicans are the bad guys?!), but I think he is profoundly wrong, mainly because Democrats leaders sustain unconditionally the corporations interests both in US and in other countries. So-called democracy export of Obama Administration may seem like a noble idea but it may remain an empty slogan if the same Administration tolerates (and sometimes supports) corrupt and autocratic political*

leaders, deeply hated by their people, or military regimes abroad together with an absolute dominance of intelligence services inside under the circumstances of preventing and fighting terrorism. It is better to have a powerful state in order to correct the market failures and the unequal distribution of income, to control and supervise the free markets actors, to counteract terrorist and criminal activities, and not instead to control and supervise excessively the ordinary citizens and their usual activities (what secret services did during the communist regime).

Maybe Alexis de Tocqueville, mentioned by Stiglitz, was the first to see the essential element of American pragmatism: *self-interest rightly understood*, which would mean that self-interest is not contrary to the collective welfare. Political battle against social inequality unfolds now everywhere in the world, both in democratic countries and in non-democratic regimes. USA is still a model of democracy and free market system but it is far from being a perfect society, although many politicians and representatives of corporations consider themselves as being perfect human beings (and making no mistakes at all) and the current political and economic system should not be changed in any way. But a system where 80% of young people feel alienated and do not want to vote, in which the middle class is heavily eroded and 16-17% of population is quite poor, where there is a deep social division, definitely is an improvable one and not a perfect one. Maybe more solidarity would be needed on behalf of rich people, more decency, more long term vision and less rapacity and less selfishness. Maybe we do not need a capitalist state dominated/captured by corporative oligarchy but a state to represent the interests of all citizens and social groups. Stiglitz is absolutely right: instead of having a dual economy and society (a split one) is much better to have a largely prosperous one, with liberty and justice for all.

In recent years, after the crisis, I have heard a lot of criticism of Nobel Prize laureats for not having solutions for a quick economic recovery. Obviously we have a crisis of capitalist system revealed by Stiglitz, requiring a thorough reform of governance on many levels, including the political one. But we also have a crisis of growth, rendered evident by the lack of jobs, the negative externalities and great impact on environment, insufficient resources (energy, technology, management), delay of reindustrialization and economic restructuring. It is not difficult to identify the engines of sustainable and consistent economic growth: recovery of consumer demand (including income redistribution), rebuilding the confidence of markets, investors, consumers, correction of market failures, increasing the economic competitiveness and strengthening the innovative industrial conglomerates, increased involvement in governance of social networks (civil society), enhancing the public and private investments in research and education, other public investments with certain spillover effects. In fact judicious combination of demand-side measures with the supply-side measures can be the key to a rapid economic recovery, provided that are not ignored the well reasoned solutions offered by many experts in economics, such as Joseph Stiglitz.