

The Negative of the World

“Economic activity is devoid of content without the existence of the fine weave between the individual motivation for profit and the social fulfillment of the expectation of prosperity.”

The insistent call to trust the system is different from what it is hoped: the debatable founding of conceptualization in Economics is betrayed on the principle of methodological individualism. The situation is not different from that of the Holy Office which was created to cleanse, by way of pyre, certain individuals from the persistence of their religious faith – as a social phenomenon. The theoretical scaffold of Economics, centered on the reduction of fundamental behavior to a single benchmark, that of individual motivation, transforms the human actional field into a centrifuge of negative externalities.

The perspective of the market as a space of economic rationality is encapsulated in the calculations based on individual expectations, which, to the contrary, do not generate only rational behaviors. This mechanism brings along the tendency for speculation, which means – in the extreme – the tearing away of economic truth from any empirical referential. It also means the division of market participants into winners and losers, and into the included and the excluded in the societal plane, following the principle of wealth makes power. Which means, simply put, that the individual dissolves the social, the tree replaces the forest.

In fact, what we interpret as market is a projection largely lacking in economic rationality because it is manifested as a set of transactions which function at a loss for the great majority of the market's actors.

This conceptual defect has been noticed by the founder of Economics no less, Adam Smith, who suggested that the understanding of the functioning of the space of economic rationality implies a fine balance between fundamental intentions and trans-individual – meaning social – consequences. The theme is pervasive throughout the incipient period of capitalism, interested in the ethical fundamentals of profit. The inspired formula of the conviction that all which is good for society is also good for the capitalist explains, on the other hand, the success of the new method of producing wealth. The drastic limitation of the rate of interest, for example, was proven at the dawn of capitalism to be the measure for moderating the access to resources, destined to avoid the excessive polarization of society.

The birth of the theory of capitalism was not – and could not even be – delivered by methodological individualism. The original capitalism was a runaway hit exactly because it proved sensitive to the social consequences of the economical. The human intention for profit was reinforced by two-way moral reasoning, that of the lack of ostensibility of those who win and that of moral attitude, of their generosity towards those who lose.

The profound sense of the primary concepts of Economics lies in their consolidation on the individual pillars of fundamental initiative, seen as sustaining the advantage of the construction of the whole which is society. It is possible to spend individual gain in the plane of comfort only in a general context, it otherwise would contradict the very basis of life.

The absurdity of profiting by one's self was managed to be avoided by the pioneers of capitalism not because it was forbidden by religious precepts, but because the logic of prosperity had imposed the truth of conditioning wealth by social guidelines. Inter-individualism, which is inferred by methodological individualism, formally covers the essence of the social relations concentrated around wealth. The atomizing of society is an excessive parsimony, even if it is an essential hypothesis in formalizing fundamental calculations.

What leaves formalization out is the social sense of the purpose which we neutrally baptize as profit. It is a distributive effect both in regard to the roles between the fundamental factors, and also in regard to the consequences of their fundamental combination, which brings about the perspective of a correct relationship between individual and society. After all, the ethical basis of economic action is situated in the space defined by this natural relationship.

In the end economic activity is devoid of content without the existence of the fine weave between the individual motivation for profit and the social fulfillment of the expectation of prosperity. In a social context denied the chance for prosperity, the space of economic rationality is practically void. Prosperity, with its twin wealth have a socially contextualized sense. Prosperity and wealth are not anchoritic concepts.

The monopoly is revealed to be the consequence of the desensitization to structural equilibrium, even as an expression of the common sense, coming from the area of experience ruled by methodological individualism. The market tends, thus, to lose contact with the multitude of meanings emanating from man's perspective as a social being. It operates by excluding factors and costs in the realization of profit, therefore pushing for the evolution to the maximum polarization, specific to a monopoly. The market transformed into an anti-prosperity mechanism breeds monsters!

Frankly speaking, the monopoly is the natural expression of methodological individualism, but it has an unnatural consequence in canceling the participative dimension specific to the social finality of the economical. The epistemological forgery leads to the falsification of the ontological fundamentals of the world, which feed from the cooperative diversity of reality, because the monopolistic market exclusively reduces the relevance of the parties' existence to the consistency of the material gain.

Monopoly targets prosperity through social exclusion, even though capitalism was born as a recipe for the individual inclusion in the zone of prosperity. Methodological individualism is a cynical principle destined for a world which is seeking tragedy: the market economy becomes market society. All the goals end up being fundamental in a materialist sense, the capitalist social model being the corporation with a social monopoly behavior.

The consequence? The path of hominization ends in methodological individualism.

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The Monetary Policy and the Real Estate Market

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Abstract. *In this paper, we intend to study the connection between monetary policy measures and the boom and bust cycles of the real estate markets in different countries. Many recent articles consider that central banks had an important contribution in triggering the global crisis and the collapse of the real estate markets during 2007-2009 due to the low monetary policy rates and the inadequate regulation and supervision of the banking system. We consider the generalization of this idea is an error, as certain central banks like the National Bank of Romania (NBR) adopted prudent policies in the pre-crisis period.*

Keywords: monetary policy; real estate market; global crisis; developed countries; boom and bust cycles.

JEL Codes: E3, E5, O50.

REL Codes: 8A, 8J, 10A.

Introduction

The construction sector was an important driver of economic growth in many countries during the economic boom. The global crisis has generated a significant drop in the volume of construction works in many developed countries due to the reduced access to liquidity and increased risk aversion. The volume of construction works in US, EU-27 and Japan amounted to approximately EUR 1,379 bn in 2007, representing 5.3 % of the total GDP of the regions. In 2010, the volume of construction works in the aforementioned regions fell at EUR 1,261 bn, down by 0.6 pps despite the fact the certain countries were not affected by the collapse of the real estate market (Japan and Germany). The developed countries that have a high share of construction works in total output like Ireland and Spain have been the most affected regions by the reduced demand of real estate. The collapse of the real estate market has increased the likelihood of systemic risk considering that the balance sheets of the major financial institutions in developed countries deteriorated mainly due to the credit risk. According to the Global Financial Stability Report (GFSR) published by IMF in April 2011, the financial crisis generated by the collapse of the housing market may be more severe and persistent than other types of crisis. Crisis triggered by the collapse of the housing market is not a new phenomenon in the economy as they affected many countries in the previous decades. IMF considers that periods of boom and bust on the housing market may be triggered by excessive competition between the financial institutions, inadequate regulation and supervision, massive flows of foreign capital, low monetary policy rates for long periods as well as the increase of the population's average revenues.

1. The real estate market in developed countries

The US subprime crisis has demonstrated that the burst of speculative bubbles on a large real estate market could trigger a crisis with global effects. The American crisis has certain features, being the first crisis of the originate-to-distribute model in developed countries. In 2007-2008, the collapse of the US housing market was not singular, as similar episodes occurred in Britain, Spain and Ireland. According to GFSR published in April 2011, there was a timing of boom and bust housing market cycles in some developed countries with disastrous effects on the economies affected. We consider that this synchronization is not a random phenomenon, but is the result of financial

globalization and securitization. The deepening of the social inequalities in the 1990s determined US authorities to adopt measures for households with lower income to have access to purchasing houses. Consequently, the lending conditions for the population were eased, while the financial companies offered attractive financial products.

After 1997, house purchases were tax exempted, stimulating the real estate transactions on the US market (Baugnet et al., 2011). Fed aggressively lowered the monetary policy rate from 6.50 % in December 2000 to 1.0 % in June 2003 in order to offset the negative effects of the dotcom crisis in US. Consequently, interest rates significantly were reduced, while the financial companies offered promotional products such as: i) mortgages with very low initial interest rates that grew later (teaser rates), ii) mortgage loans with initial interest payments only (interest only) iii), consumer loans guaranteed with real estate assets. Securitization appeared in US in 1970s and represents a way of finance (Jobst, 2008). Securitization requires an asset transfer to a special purpose vehicle in order to get cash. The special purpose vehicle purchases the assets using the financial resources obtained by issuing asset-backed securities (ABS). The debt securities are later traded by institutional investors. The main advantages of securitization are credit risk dispersion, lower costs compared to the issuance of bonds or bank credit and the lack of regulation (Jobst, 2008). The main disadvantage is that the risk is not eliminated, but transferred to the last purchaser of securities (Bal, 2009).

Spain is the country in euro area with the largest share of the construction sector in total output. In 2010, the construction works represented 10.2 % of Spain's GDP compared to 5.9 % euro area average and 3.4 % in US. The construction sector boom during 2003-2007 is due to several factors. The Mediterranean countries such as Spain, Portugal and Greece obtained financial resources at lower real interest rates due to the adhesion to the monetary union. The growth differential between Spain and other countries of the euro area permitted a significant increase in the average disposable income of the Spanish population. In addition, they have adopted certain measures which have significantly boosted the housing market. Mortgage loans could be granted for periods of up to 50 years and buyers were tax exempted. The value added tax for the acquisition of new houses was reduced at 7 %. The immigrant flows and the high demand for houses from high income non-residents generated a boom of the local real estate market. According to OECD, during 2003-2007 the average price of houses in Spain grew by 59.6 %.

During 1995-2007, Ireland registered the highest increases in house prices among OECD countries (McCarthy, McQuinn, 2011). The average annual real growth of house prices in Ireland was approximately 9 % during the aforementioned period despite the hike of supply (Baugnet et al., 2011). This was the result of the structural changes that affected the Irish economy over the past four decades. Ireland was called the “Celtic Tiger” because of the economic development in a very short period. In 2005, Ireland became one of the richest countries in euro area and in the world after a long period of poverty and famine in the nineteenth century and much of twentieth century. The creation of the monetary union eliminated the negative impact of exchange rate fluctuations and increased the degree of integration of financial markets of the member countries. The “Great Moderation” (Bernanke, 2004) and the creation of euro area allowed Ireland to attract cheap resources from financial markets, most of them directed towards the real estate market. In 1985, the total value of mortgage loans granted by the financial institutions was only EUR 6.5 bn, while in 2007 reached EUR 123 bn (McCarthy, McQuinn, 2011). The Irish housing market boom is due economic factors and social changes. The increase of the disposable income of young persons and the easing of the credit conditions determined them to live separately from their families (Baugnet et al., 2011). Bank’s excessive exposure on the real estate market could have lead to the collapse of the entire Irish financial market during the global crisis. The Irish government injected a huge amount of liquidity in the financial system in order to prevent the systemic risk. As a result, Ireland faced a public debt spiral, being forced to demand the help of EU and IMF. Ireland’s public deficit in 2010 reached its highest level in EU-27 (31.3 % of GDP), while the public debt amounted to 94.9 % of GDP as compared to 24.9 % in 2007.

2. The real estate market in Romania

The “irrational exuberance” of the population and the foreign capital inflows directed towards the construction sector generated a housing boom in Romania. According to Eurostat, between 2000 and 2008, the volume of construction works tripled, being the most spectacular growth in EU-27. In 2010 the construction sector represented around EUR 11 bn, dropping by 26.7% as compared to 2008. In Romania, the share of construction works in total output is among the highest in EU-27 and therefore our country is vulnerable to housing market shocks. The housing market boom was due to a

number of factors. During the economic boom, the financial companies with foreign capital attracted very cheap financial resources from international markets and made investments in the real estate market in Romania at high yields. This is not specific only to Romania, but also to other EU-27 countries like Spain and Ireland. During the economic boom, the supply was insufficient to meet the high demand for new houses and office buildings. Although NBR adopted a prudent monetary policy by keeping its main interest rate and the minimum reserve requirements at high levels, there was a significant increase of the lending because of the competition between banks and of the abundance of foreign currency liquidity attracted from the foreign markets. Recently, there was a synchronization of the boom and bust cycles on the real estate markets of many developed and emerging countries. However, the real estate market in Romania has certain distinct elements. Romania does not have a market of sophisticated financial instruments related to the real estate market. A financial market without sophisticated securities could be a great advantage. If the local banks had invested in toxic financial instruments, the Romanian financial system would have faced bigger challenges due to massive deterioration of banks' balance sheets. We consider that there is still enough room for a new period of boom in the construction sector in Romania, as the infrastructure is not sufficiently developed.

Another feature of the Romanian economy is that most foreign direct investments (FDIs) were directed towards a small area (Bucharest-Ilfov). In 2010, the foreign direct investment stock in Bucharest-Ilfov region amounted to EUR 32.7 bn, representing 62.2 % of the total FDIs attracted by Romania according to the survey made by NBR and the National Institute of Statistics. In 2010, FDI stock in construction and real estate amounted to EUR 4.7 bn, representing 9 % of the FDIs. Most real estate investments were made in Bucharest-Ilfov due to the large number of people on a small area, the high average income and the high flow of FDIs into various sectors.

3. Monetary policy and the real estate market

IMF considers that we can not accurately forecast the collapse of real estate market in a certain country. However, there are certain macroeconomic indicators showing this outcome. The lending boom, the widening of the current account deficit as well as the rapidly rising real estate prices show a possible housing crisis in the future according to IMF. We consider that there should be given a higher importance to the correlation between labor

productivity and price developments on the real estate market. An example is US economy, as during Q1 2004 – Q2 2007, the average house prices grew well above the labor productivity gains. A similar phenomenon occurred in Romania during Q1 2004 – Q1 2008, when real estate prices soared. We consider that the authorities must stop the rising prices on the real estate market if for two or three consecutive years real estate prices surpass the labor productivity growth. But those measures could negatively affect the economic growth and the welfare of the population. In conclusion, we can not predict the exact period of a housing market bust, but we can limit the negative effects of such episodes through appropriate monetary and government policies.

In the last four years, different studies show the Fed's monetary policy errors and the inadequate regulation and supervision generated the subprime crisis and the global liquidity crisis. Taylor (2007) considers that Fed kept the monetary policy rates at too low levels between 2001 and 2005. According to its calculations, the monetary policy rate has been well below the rate indicated by a monetary policy rule. Blanchard, Dell'Arricia and Mauro (2010) believe that the decrease or the increase of the monetary policy rate can not always solve problems such as excessive risk-taking and the high leverage of companies and households. Mishkin (2007) considers that Fed's monetary policy is not responsible for the financial crisis in US in 2007. According to Mishkin (2011), asset-price bubbles can be of several types. The most dangerous form is determined by the credit boom, the low interest rates and the lack of government regulation, the recent global crisis being the most eloquent example. Another form is caused by irrational exuberance bubble due to a technological shock (Mishkin, 2011). This occurred in the US in the 1990s. Thus, in 1997, the US unemployment rate was below the NAIRU, Fed expecting a rise in inflation. Although macroeconomic models indicated interest rate increases in order to temperate the inflationary pressure, Greenspan decided not to tighten the monetary policy as the American economy was influenced by a positive technological shock caused by IT. We consider that the global liquidity crisis was due to an international context that was favorable to a certain point for the developing economies. Globalization and the liberalization of capital accounts in many emerging countries allowed an increase of the financial flows to different regions during the "Great Moderation". Despite the fact that the monetary authorities in emerging countries have adopted prudent policies during this period, the dollarization or eurization of the economies reduced the effectiveness of the domestic

monetary policies. Therefore, the emerging countries have become more vulnerable to shocks on the international markets and changes in Fed's and ECB's monetary policy stance. A severe crisis on a major economy can globally spread through trade and financial links. The global crisis has mainly affected the construction and car manufacturing sectors as households' behavior has changed significantly. They have adopted a prudent behavior, reducing their expenses for the acquisition of large value assets like houses and cars. Although the main objective of central banks that have adopted inflation targeting is price stability, they have a rather "looking at everything approach" (Bernanke, Boivin, 2003). The monetary authorities monitor all macroeconomic indicators in order to take the optimal decisions of monetary policy. The developments of the real estate market are of great interest to the monetary authority, as any shock on this sector affects financial stability and output. Ireland is the most eloquent recent example. The Irish real estate market shocks could have led to the collapse of the entire financial system and could have generated the country's default without the intervention of the international financial institutions. Svensson (2009) believes that targeting assets' prices should not be an objective for the central banks because it is very difficult in some cases to quantify whether price increases are due to speculation or if there are economic fundamentals that have caused this trend (such as increased productivity).

We consider that in Romania, the main threat to the financial stability is the high share of foreign currency loans in total loans. In September 2011, non-government loans in foreign currency represented 63.6 % of the total loans granted. There is nearly a complete eurization of the Romanian real estate market as asset prices are published in euro while mortgage loans are mainly in euro. According to NBR's Monthly Bulletin published in September 2011, housing loans in foreign currency accounted for 95.2 % of the total loans. We consider that this is a natural process. Thus, the banking system in Romania is generally dominated by foreign-owned banks that had access to the cheap resources on the international markets during the pre-crisis period. Consequently, they invested the abundance of liquidities in foreign currency on the domestic market as NBR adopted a prudent monetary policy and, therefore, the access to resources in local currency was limited. Consequently, the eurization of the economy could be considered a direct result of the financial globalization. In Romania, the high share of foreign currency loans in banks' balance sheets negatively affects the monetary policy transmission mechanism. The importance of the interest rate channel has significantly

reduced as NBR's interest rate changes in influence to a lower extent credit costs in the Romanian banking system. We consider that the importance of the exchange rate channel increased. The adoption of inflation targeting as a monetary policy strategy determined NBR to mainly focus on maintaining price stability and not the targeting of the exchange rate level. Central bank independence and exchange rate flexibility are essential institutional requirements for the adoption of inflation targeting. Debelle et al. (1998) consider that although many emerging countries adopted flexible exchange rates, there is still a tendency to exercise the management of the exchange rate in the short term. In Romania, the monetary authority adopted a managed floating exchange rate regime. Thus, the central bank intervenes in the forex market in order to influence the exchange rate when it considers that the developments may affect price and financial stability. Many recent articles consider that central banks have played an important role in triggering the global crisis in 2007-2009 as they maintained the monetary policy rates low for a long period of time and there was inadequate regulation and supervision. We consider that the generalization of this idea is a major error, Romania being an eloquent example in this sense. During January 2003 and September 2008, NBR maintained a high monetary policy rate in order to temperate the inflationary pressures arising from excessive domestic consumption. The monetary policy rate was 10.25 % when the global liquidity crisis started in September 2008. The Romanian monetary authority maintained high minimum reserve requirements on foreign currency liabilities to slower credit growth in foreign currency. However, the rate of growth of the loans in foreign currency remained high. During 2005-2006, private banks directed part of the resources towards non-bank financial institutions. The financial institutions that were members of foreign groups tried to avoid central bank's prudential measures. In 2007, NBR has limited certain prudential measures, allowing private banks to set their own rules on lending to individuals. The abundance of financial resources from foreign parent banks and the high competition between banks led to an expansion of lending during 2007-2008. Therefore, domestic consumption increased, the current account deficit reached unsustainable levels and real estate asset prices continued the upward trend recorded in the previous years due to the aggressive lending policies of private banks and pro-cyclical government policies.

4. Conclusions

The US subprime crisis has demonstrated that the burst of speculative bubbles on a large real estate market could trigger a crisis with global effects. During 2007-2009, real estate markets in many developed and emerging countries collapsed due to the global liquidity crisis. In US, the subprime crisis was mainly the result of a gradual easing of the monetary and fiscal policies in order to diminish the social inequalities that deepened after 1990. The boom of the real estate market in certain countries of the euro area like Spain and Ireland was mainly due to: 1) the adhesion to the monetary union and deepening of the financial markets which reduced significantly the financing costs, 2) higher economic growths as compared to Germany which led to a significant increase of the disposable income and 3) the abundance of liquidity on the international markets. Despite NBR's prudent monetary policy, the significant hike of real estate prices in Romania was mainly driven by: high inflows of foreign capital directed towards the real estate markets, high competition between private banks, pro-cyclical fiscal policies and, finally, the "irrational exuberance" of the population.

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Considerations regarding the Valuation and Valorization of Cultural Heritage

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Abstract. *This paper presents the theoretical framework for the valuation of cultural heritage and of the economic effects produced by investments in the preservation and restoration of cultural heritage. The following methods are considered: impact studies, hedonic pricing method, contingent valuation method and travel cost method. The paper focuses on methodological issues, difficulties encountered when implementing the methods, as well as on their specific limitations. Moreover, each method is illustrated through the results of quantitative studies in the field.*

Keywords: cultural heritage; economic value; hedonic pricing; contingency value; travel cost method.

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REL Code: 5Z.

1. Cultural heritage and cultural economics

In time, the concept of cultural heritage has received numerous definitions and interpretations. The International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) presents no less than 60 definitions of cultural heritage, or cultural property⁽¹⁾, the oldest of them dating back to 6 AD. According to UNESCO, “cultural heritage may be defined as the entire corpus of material signs – either artistic or symbolic – handed on by the past to each culture and, therefore, to the whole of humankind. As a constituent part of the affirmation and enrichment of cultural identities, as a legacy belonging to all humankind, the cultural heritage gives each particular place its recognizable features and is the storehouse of human experience” (UNESCO, 1989, p. 57). Vecco (2010) analyzed the evolution of the concept of cultural heritage and observed that, in Western Europe, it was characterized by expansion and semantic transfer, resulting in the generalization of its use. According to her, the concept extended in three directions, as follows:

- a typological and thematic extension, meaning that objects which were not included in the traditional concept of heritage are now considered to be a part of it. Therefore, this extension concluded in an integrative approach of cultural heritage;
- the selection criteria of cultural heritage have been also extended by including new factors (apart from historic and artistic values), such as cultural value, identity value or the capacity of the object to interact with memory;
- the change from a normative approach to one based on the capacity of an object to generate certain values and meanings. Heritage is no longer defined from a material perspective, making it possible to recognize intangible cultural heritage.

We may conclude that cultural heritage is a concept that experiences continuous extension and development, making it difficult to identify clearly its components. From a practical point of view, every change in the concept may result in the reevaluation of the assets considered to be a part of cultural heritage. This is a major obstacle which must be overcome when assessing the economic impact of cultural heritage.

Topics, such as the valuation of cultural heritage, fall at the border between economics and culture in a relatively new field of science: cultural economics. Its beginnings are associated with the publishing of J. K. Galbraith’s book “The Liberal Hour”, in 1960 (Ritenour, 2003, p. 103). A major issue in cultural economics is the discrimination between economic and cultural value. Throsby (2001) considers that economic value is strongly

connected to the marginal utility of an asset, while cultural value comes from the following sources: aesthetic value, spiritual or religious value, social value (giving people the sense of membership to humankind), historical value, symbolic value (acting as a depository of meaning) and authenticity value. Using cultural value as a starting point, Throsby defines a new concept, the cultural capital, as “an asset which embodies, stores or provides cultural value in addition to whatever economic value it may possess” (Throsby, 2001, p. 46). Applying the theory of sustainable development to cultural capital, Throsby formulates the principle of intergenerational equity (also called “intertemporal distributive justice”). According to it, if the stock of cultural capital is diminished, or even consumed (due to lack of investments, for example), the future generations will not be able to benefit from it because their interests are not reflected on the current market (Sache, 2009, p. 6).

On the other side, Ritenour (2003) criticizes many of the ideas expressed by Throsby (2001) because, in his opinion, they lack substance or validity. For example, he considers that Throsby fails to make a meaningful distinction between cultural and economic value because there isn't any objective methodology for determining the level of cultural value in an object. Moreover, he criticizes the principle of intergenerational equity because, in his opinion, not every piece of culture deserves to be passed on to the future generations. Ritenour also rejects Throsby's idea that the right of the future generations to culture is a matter of social justice. He continues by drawing attention to the fact that it is not fair to ask the productive economic agents to pay for the cultural experiences of future generations.

Klamer (2002) observes that the possession of cultural capital is gainful for individuals and organizations and shows the need to assess the contribution of cultural assets to economic profit. In his view, cultural capital is defined as “the capacity to inspire and be inspired” (Klamer, 2002, p. 467) because it is able to give meaning to objects and, ultimately, to human life. Klamer points out that, unlike economic capital, most of the cultural assets (such as cultural heritage, for example) are collective possessions and they need to be shared in order to be meaningful. He concludes by stating that economic goods are only instrumental because the ultimate goal of human beings is to obtain social and cultural goods. However, he admits the absence of indicators for measuring social and cultural capital.

Thompson (1999) approaches the subject from an accounting perspective and shows the need to cater for the impact of cultural capital on human resources. On the other hand, Thompson highlights the main problems that are encountered in the process of identifying and valuating investments in cultural capital.

In conclusion, many researchers in the field of cultural economics certify the importance of cultural capital, its impact reaching far beyond the economic sphere. Therefore, investments in the preservation and development of cultural capital should represent a priority for individuals, organizations and public authorities. Taking into account that, according to Klamer (2002), cultural capital is mainly a collective possession, some may think that investments in this area should be conducted only by public authorities. However, keeping in mind that cultural assets generate economic advantages, private investments in this area should be also encouraged. Perhaps the most important problem is the elusive character of cultural capital which makes it very difficult to value cultural capital and assess the economic impact of investing in it.

From now on the paper will focus on cultural heritage, which is a very important component of cultural capital. Section 2 presents the complex network of economic effects induced by investments in cultural heritage. In Section 3 we discuss the main methods used for the valuation of cultural heritage, while Section 4 gives the conclusion of this study.

2. The economic impact of investing in cultural heritage

Grefe (2004) examines if heritage acts as an asset or as a liability. To begin with, he notices that the valorization of heritage leads to creating new jobs. Grefe identifies four types of jobs which owe their existence to heritage:

- direct jobs refer to people employed in heritage institutions;
- indirect jobs refer to people who work in the fields of conservation and restoration of heritage;
- induced jobs refer to people who use heritage as a source of activity and inspiration (mostly in cultural industry);
- jobs in the tourism sector as a result of heritage tourism development.

Grefe illustrates his rationale with the example of France, where he estimates that cultural heritage has created 525,250 jobs (approximately 2.4% of the active employed population).

Grefe continues by assimilating heritage system to an ecosystem. Thus, he formulates a public policy in the heritage domain which aims to generate positive dynamics in the heritage ecosystem. The main characteristics of this policy are as follows:

- heritage must be well preserved in order to attract public's interest, which will result in more resources allocated for its conservation and development;
- the design of projects for the development and valorization of every heritage site;

- entrance fees should be fixed taking into account the quality of services offered to visitors (not only on a cost basis);
- the implementation of an effective marketing policy;
- the deterioration costs, which result from over-consumption of heritage, should be internalized by imposing them on the non-cultural businesses that benefit from heritage sites, such as hotels, restaurants, transport companies etc.

After studying the heritage ecosystem, Greffe arrives to the conclusion that investments in heritage are more sustainable if they are made in areas where heritage plays a secondary role and the level of economic integration is high.

Bowitz and Ibenholt (2009) investigate if investments in cultural heritage are beneficial for local economies and, for this purpose, they formulate a theoretical framework for estimating the economic impact of cultural heritage. Taking into account the increasing political focus on cultural heritage, because it is perceived as a way to stimulate economic activity in areas with economic problems, Bowitz and Ibenholt draw attention to the fact that many studies exaggerate the economic impact of cultural heritage. As a consequence, they plead for a sober and prudent analysis of the matter which must consider the short term, as well as the long term effects. Building their theoretical framework, Bowitz and Ibenholt propose the following classification of the economic effects produced by investments in cultural heritage:

- direct effects are a straightforward result of the implementation of the investment project. Usually, these effects are measured through sales, value added or employment. Because sales tend to be inflated and are exposed to shocks in the short term, the authors recommend the use of the other two indicators for a more realistic assessment of direct effects;
- indirect effects are categorized as follows:
 - input/output effects derive from the fact that the investment project may require deliveries of goods and services from the local economy. This demand will generate an increase in local production and local revenues only to the extent of the existing capacity;
 - multiplication effects refer to the fact that higher local revenues will generate an increase in the demand for local goods and services;
 - acceleration effects are short term effects which occur only in the investment phase. In this phase, the project may require increased deliveries from local suppliers which will boost the input/output effects and the multiplication effects;

- ancillary spending refers to the fact that visitors to a cultural heritage site will spend money in the local area for food, accommodation, retail goods etc. This spending will further increase the input/output effects and the multiplication effects;
- derived effects can be attributed, to a certain extent, to the investment project. For example, cultural heritage may be an important factor for organizing festivals and cultural events which will attract tourists from other areas. Also, it may trigger an increase in the export of local goods and services to other areas, even acting as a brand;
- gravitation effects refer to the fact that investing in culture may increase the attractiveness of the area, resulting in an increased number of inhabitants and an increased number of companies established there. If cultural heritage is associated with a positive image of the area it could be used as a marketing tool, making the region more attractive to invest in. However, gravitation effects can be observed only in the long run and it is quite difficult to assess them;
- counteracting effects refer to the costs generated by investing in cultural heritage that are borne by the local economy. There are three main types of counteracting effects: the displacement effect (imbalances on the regional labor market, reduced profitability for some of the local companies), the deterioration of cultural heritage, due to opening it to the public, and the need for investments in infrastructure (in order to provide cultural tourists with adequate public services).

Based on the above classification, we conclude that the main obstacles, which are encountered when assessing the economic effects of investing in cultural heritage, are the complexity of these effects and the difficulty to quantify them. Nonetheless, the literature in this area offers numerous studies on the economic impact of cultural heritage investments. Unfortunately, some of these studies use precarious methodologies and seriously overstate the economic impact of such investments, leading certain researchers (for example, van Puffelen, 1996) to recommend that impact studies should not be made.

Here we summarize the results of a few quantitative studies in this area:

- Hansen et al. (1996) compared two investment projects in Danish cultural heritage with regard to employment. The first project, concerning the extension of an old textile factory so that it could host three museums, generated 50 full-time jobs in the area. The other project, concerning the memorial house of the writer Hans Christian

Andersen, generated 27 full-time jobs with a much smaller initial investment than the first project. The higher efficiency of the second project was attributed to the international reputation of H.C. Andersen which attracted numerous tourists from outside the region and even from outside the country;

- Strauss and Lord (2001) estimated the regional economic effects of investing in 13 heritage sites in Pennsylvania, USA. They concluded that the initial investment of 88 million USD generated, in a period of 13 years, 289 million USD: 169 million USD representing direct effects and the rest coming from indirect effects. Bowitz and Ibenholt (2009) consider that this study overestimates the economic impact of the investment because, on one hand, all the effects were measured thorough sales and, on the other hand, all increases in the number of tourists in the area were attributed to the investment project;
- Bowitz and Ibenholt (2009) assess the local economic impact of the cultural heritage of Roros, a historical city in Norway. They arrive to the conclusion that the cultural heritage of the city (represented by its historical centre with well-preserved timber houses and specific architectural style) contributed, directly and indirectly, to the creation of 200 jobs (approximately 7% of the local labor force).

To sum up, in this section we presented the main components of the theoretical framework for assessing the economical effects of cultural heritage investments. Also, in order to illustrate the methodology, we reviewed the results of a few quantitative studies which seemed relevant for this subject. In the following section we examine the methods used for estimating the economic value of cultural heritage and we exemplify them with results from previous studies in this domain.

3. Methods for the valuation of cultural heritage

Following the work of Bănaciu (2007), Sache (2009) describes the valuation methods of cultural heritage used for reporting purposes. In this case, the reported value of cultural heritage fulfils two jobs: on one hand, it helps establishing the preservation and restoration costs, as well as the revenues obtained from the exploitation of cultural heritage; on the other hand, it helps establishing the market value of cultural heritage which is necessary for insurance contracts. Sache presents the following valuation methods which are mostly used for reporting the value of built heritage:

- the comparison of selling prices approach requires the valuator to identify a property with similar characteristics to the heritage that is

valuated (this property is called “comparable property”). The selection criteria for the comparable property refer to location, architectural style, size, historic and cultural characteristics. Heritage valuation will be made by comparison with the selling price of the comparable property, making the necessary adjustments in case the heritage needs restoration works or if it is subject to contracts with restrictive stipulations;

- the revenue approach is recommended for heritage which is able to produce commercial revenues or rent and this represents the most efficient use of the respective heritage. In the valuation process there are certain situations that should be taken into account: if the heritage needs restoration works in order to qualify for commercial use, the period of time required to obtain the authorization for the commercial use of the heritage (if necessary) and the additional maintenance and preservation costs caused by the use of the heritage in commercial activities;
- the cost approach is based on the hypothesis that heritage has intrinsic value (due to its appearance, to certain characteristics or to its symbolic status). This value is established taking into account the production cost of a replica to the heritage or, if this is not possible, the production cost of a modern building with similar purpose. When applying this method there should be taken into account the maintenance and preservation costs, as well as the fact that it may not be possible to adjust the built heritage to tenants’ needs.

However, the valuation of cultural heritage for reporting purposes is rather a matter of implementing the regulations and practices in this area than a scientific pursuit. Most of the existing research focuses on estimating the economic value of cultural heritage.

Ruijgrok (2006) defines the economic value of cultural heritage as the amount of welfare that heritage provides for society. Plaza (2010) also states that the economic value of cultural heritage is connected to the benefits generated by it, both commercial and non-commercial. These benefits refer to two types of value: use value (derives from the use of cultural heritage) and non-use value. The non-use value presents itself as an option value (for individuals who have never visited the cultural heritage site but wish to do it in the future), an existence value (for individuals who have never visited the site and do not wish to visit it in the future but perceive the existence of the site as a good thing) or a bequest value (the value of the knowledge comprised by cultural heritage that will generate benefits for future generations).

On the other hand, Ruijgrok (2006) analyzes why is it necessary to value cultural heritage though it is obvious that its real value cannot be expressed in monetary terms. From this perspective, he notices that the economic valuation of cultural heritage makes it possible to evaluate investments in this sector through cost-benefit analysis and to estimate the losses incurred by society through the destruction of cultural heritage. Ruijgrok concludes that economic valuation could influence certain economic decisions which, otherwise, would generate a heritage loss.

Bedate et al. (2004) draw attention to the fact that economic valuation of cultural heritage is a difficult task that mostly relies on methods used for the valuation of environmental goods (because they present certain similarities to heritage goods, such as uniqueness and irreversibility; Sache, 2009, p. 16). They identify three main methods used for the valuation of cultural heritage: hedonic pricing method, contingent valuation method and travel cost method. Bedate et al. point out that, while all these methods are far from being perfect, they are the only valid means of obtaining information for the rational administration of heritage goods. In the following subsections we present the three valuation methods mentioned above.

3.1. Hedonic pricing method

Hedonic pricing method assumes that the selling price of an asset is determined both by its intrinsic characteristics and the particularities of its environment (Bănaçu, 2004, chap. 7, p. 8). This method is employed mainly in real estate industry and explains why the value of two comparable properties will vary depending on the characteristics of their environments. The method allows for positive externalities (e.g. buildings that have higher prices due to being located in an area with low pollution) as well as for negative externalities (e.g. buildings with lower prices due to being located in the proximity of waste sites) (Alberini, p. 1).

Bănaçu (2004) presents the two steps employed by this method:

- the estimation of the hedonic price function which establishes the link between the subject of the analysis (the building/land price) and the variables that define the environment (structural elements, neighborhood, intangible ecological variables). Hedonic price function takes the form of a regression where the estimated coefficients for environmental variables determine their marginal value. In theory, all the effects of a public policy could be measured through the changes in property values (Alberini, p. 1);

- the estimation of the demand curve for intangible ecological assets (e.g. air quality), intangible social assets (e.g. the safety in the area) or, in the context of our topic, for cultural assets.

Ruijgrok (2006) used the hedonic pricing method for assessing the economic benefits of preserving Dutch heritage in Tiel and Culemborgerwaard areas. The area contains remnants of Celtic, Batavian and Roman civilizations, ruins dating back to the Middle Ages, as well as historical buildings (e.g. windmills). Using hedonic pricing method, Ruijgrok assessed the impact of preserving cultural heritage on housing comfort value. In this respect, he included in the regression of the building price a number of variables to express the historical and cultural value of the building such as: monumental status (national, municipal, potential or none), year of construction, architectural style (three main styles with a total of 24 substyles), authenticity (original, partially adapted or totally adapted) and the number of historical façade elements. On the basis of a sample of 591 houses, Ruijgrok estimated that the Cultural Heritage Conservation Plan has generated an increase in the housing comfort value of approximately 21.6 million EUR. Also, the results of the study showed that authenticity increases the price of a house with about 30,000 EUR, while an extra historical façade element increases the price with 3,777 EUR.

3.2. Contingent valuation method

Contingent valuation method aims to value those goods which, due to the absence of a trading market, cannot be valued through the selling price. It is a direct stated preference method where respondents express their willingness to pay (WTP – the maximum amount of money that a consumer would be willing to pay in order to increase his welfare or to prevent the loss of it in relation to the consumption of the cultural heritage under assessment; Plaza, 2010, p. 156) or their willingness to accept (WTA) compensation for their loss of welfare. Contingent valuation method is widely used for the valuation of cultural heritage and is the only valuation method that is able to capture the non-use value (Tuan and Navrud, 2008, p. 326).

Bănaciu (2004) describes the following steps employed by the contingent valuation method:

- the market of the goods that are valued has to be delimited. In this stage, the questionnaires are prepared (using logical, concise and non-interpretable questions) and the data collection method is established;
- the method used for determining WTP has to be established. In this respect, there are several choices, such as the closed referendum

(yes/no questions) and the open questions, for estimating the amount that respondents would be willing to pay for the preservation of cultural heritage;

- statistical analysis of the answers concerning WTP;
- graphical representation of the answers in relation to relevant indicators for the respondents of the questionnaire (such as age, income and education);
- interpretation of results and improvement suggestions. WTP for cultural heritage approximates the individual demand function and is used as a basis for determining the consumer surplus and the economic value assigned by the respondents (Plaza, 2010).

Ruijgrok (2006) considers that the most important ingredients of the contingent valuation method are the description of the heritage under valuation, the delimitation of the hypothetical market, the questions concerning WTP (including the payment method), as well as the questions concerning the characteristics of the respondents (age, income and education). Taking into account that people are not used to pay for cultural heritage, he emphasizes that the questions must not be misleading or guiding the respondents. Ruijgrok considers that filter questions should be included in the questionnaire in order to prevent WTP overestimation.

Plaza (2010) believes that contingent valuation method is used excessively when it comes to valuating cultural assets, without taking into account their mission. Even though WTP can prove useful for estimating the non-market value of a museum, she considers that the method is not accurate and will not produce valid results, especially for museums whose mission is to act as economic engines. In this case, Plaza recommends the use of market-oriented methods such as impact studies or the net present value.

Tuan and Navrud (2008) mention a variant of the contingent valuation method: choice modeling. While contingent valuation method estimates WTP for an entire project, choice modeling estimates the marginal WTP for certain attributes of the respective project. The advantage of the method relies in the fact that respondents are not restricted only to accept or reject the project, but they can customize the attributes of the project according to their own options. Possible difficulties associated with this method refer to respondent's lack of patience (to answer a detailed questionnaire), as well as to the cases where no alternative is favored by the respondent or the expected values for certain attributes of the project are not credible.

Below are summarized the results of several quantitative studies concerning the valuation of cultural heritage using contingent valuation method:

- Ruijgrok (2006) estimated the recreational and bequest value generated by the preservation of Dutch heritage in the areas of Culemborgerwaard and Tieler (see also Section 3.1). The questionnaire sought to determine respondents' WTP under the assumption that public authorities would abandon heritage conservation. Also, given the adverse attitude of the Dutch people towards taxes, the questionnaire asked the respondents to indicate the payment method of their choice. The questionnaire was completed by a representative sample of the Dutch population consisting of 380 respondents. Survey results showed that 85.2% of them were willing to pay for the preservation of cultural heritage in the respective areas. Based on their WTP, Ruijgrok estimated the recreational value of the heritage at about 36,000 EUR per year and its bequest value at 33.8 million EUR per year. Comparing these values with the Cultural Heritage Conservation Plan developed by local authorities, which spans over 10 years and requires investments in built heritage, landscape and archaeological remains estimated at 36.4 million EUR, Ruijgrok concludes that the benefits of this project greatly exceed the costs;
- Tuan and Navrud (2008) evaluated the economic effects of preserving the ruins of the Hindu temple complex at My Son, Vietnam. The study assessed the benefits of both visitors and non-visitors to the site and distinguished between foreign and Vietnamese visitors. The questionnaire was applied to 967 respondents, of whom 243 were foreign tourists, and proposed two methods of payment: increasing the entry fee for visitors and increasing taxes for non-visitors. Survey results showed that approximately 50% of the respondents agreed to pay for the preservation of the site, the average payment being almost 10 USD for foreign tourists and about 2 USD for Vietnamese people. Thus, the annual benefits were estimated at approximately 4.5 million USD. Furthermore, Tuan and Navrud proposed the maximization of revenues by increasing the entry fee because, within certain limits, the demand for visiting the site is inelastic. Under the assumption of an optimal entry fee (of 14 USD for foreign tourists and 1.89 USD for Vietnamese tourists), taking into account the preservation cost of the site (estimated at 12.89 million USD) and considering a time horizon of 20 years, the two authors estimated that the net present value of the investment would range between 0.3 million USD and 5.1 million USD (depending on the discount rate);

- Sache (2009) evaluated Mogoșoaia Palace using a questionnaire applied to 100 respondents. 74% of them agreed to an increase of the entrance fee in order to ensure the preservation of the site, the average WTP being 20 RON. The main reason invoked by the respondents who gave a negative answer was the lack of confidence in the authorities designated to manage the money. Estimated logit and probit models showed that WTP is determined by four main factors: the knowledge about the objective, the importance assigned to the preservation of the objective, the number of cultural visits per year and the education level. Considering a time horizon of 50 years, an average of 27,450 visitors per year, and assuming that 74% of them will accept to pay an entrance fee of 20 RON, Sache estimated the value of Mogoșoaia Palace at 8.5 million EUR.

3.3. Travel cost method

This method originates in the initiative of the US National Parks Service towards the valuation of national parks. Hoteling (1947) suggested that the valuation of a certain place or attraction should be made on the account of visitor's travel costs. The methodology was further developed by Clawson and Knetsch (1966). Bedate et al. (2004) describe the travel cost method as an indirect valuation method that uses the costs generated by visiting a cultural heritage site to estimate its recreational value. It must be stated that this method only captures the use value of cultural heritage, unlike the contingent valuation method which also captures the non-use value. The travel cost method can be approached from two different perspectives:

- the zonal travel cost method divides the visitors into groups taking into account the distance from their point of origin to the heritage site. The zones can be concentric but, in order to facilitate data gathering, it is recommended to assign them according to administrative or geographic units. The demand curve is obtained on the basis of average travel cost (some studies include here the entrance fee) and the number of visits from each zone. The area under the curve denotes the consumer surplus which is used as an estimate for the recreational value of the heritage site;
- the individual travel cost method takes into consideration that every trip to the site is defined by different parameters. Therefore, it is quite possible that two individuals starting from the same point of origin will incur different travel costs on their trips to the site. As a consequence,

this method begins by estimating the individual demand functions, then aggregates them to obtain the global demand function,

Next, Bedate et al. present some of the practical problems that occur when the travel cost method is employed, as follows:

- the consumer surplus will be underestimated if the opportunity cost of the traveling time is not taken into account. This opportunity cost may be measured through a fraction of individual salary but this fraction must not be chosen arbitrarily. On the other hand, when a tourist picks a certain route in order to enjoy the landscape, traveling time is no longer a cost, but a benefit;
- it is particularly difficult to estimate the travel cost in the case of multi-purpose trips (more than one site is visited during the same trip). Several solutions to this problem were proposed, such as: dividing the cost of the trip to the number of visited sites, distributing the cost of the trip according to the time spent by the tourist at each site or using the travel cost from the previous visited site. However, neither of these solutions is generally accepted;
- the existence of substitute sites is quite controversial when referring to cultural heritage. Certainly, for tourists with a particular interest in culture every site is unique and, therefore, cannot be substituted by another one. Nevertheless, other tourists have no objection towards replacing a site with alternate recreational opportunities;
- there are certain additional costs, outside fuel, that should be included in the travel cost. Such costs are: parking fees, vehicle maintenance costs and entrance fees to the heritage site. More questionable is the inclusion of food and accommodation costs because, usually, they contribute to the recreational experience;
- the visit length should be considered when estimating the travel cost. A possible solution to this problem is to classify visits to the site according to their length and to estimate a demand curve for each category;
- it is necessary to take into account site quality and congestion. The number of visitors is significantly influenced by the quality of the site. On the other hand, a congested site indicates that the demand for visiting is underestimated. Consequently, the consumer surplus will be also underestimated;
- the travel cost method assigns the same marginal utility for all visitors, regardless of their income. Greffe (1999) considers that this problem could be ignored because, usually, cultural tourism expenses represent only a reduced fraction of the households' budget.

Bedate et al. (2004) employed the zonal travel cost method for the valuation of the following cultural sites situated in the Autonomous Community of Castilla y León (Spain): The Iberian Organ Festival, the historic ensemble from Urueña, The Museum of Burgos and the Cathedral of Palencia. They divided the visitors into four zones, as follows: the neighboring provinces, central Spain, peripheral Spain and the non-peninsular zone which included the Balearic and Canary Islands and the European countries. The necessary data was collected using a questionnaire that was filled in by the visitors. The number of respondents was 300 (The Iberian Organ Festival), 130 (Urueña), 294 (Burgos) and 191 (Palencia). In the absence of information concerning the food and accommodation costs, Bedate et al. took into account only the transport costs (namely fuel, vehicle maintenance costs, insurance, taxes and other expenses), estimated by the Spanish State Administration office at 0.15 EUR per kilometer. Finally, the cultural demand functions were estimated and the consumer surplus for the considered heritage sites was computed. The results are as follows: 248.82 EUR (The Iberian Organ Festival), 272.26 EUR (Urueña), 1,171.97 EUR (Burgos) and 712.2 EUR (Palencia). The results allow for the ranking of the above heritage sites according to consumers' preferences measured through the travel cost. The authors conclude that this ranking is strongly correlated with the attractiveness of the heritage sites and does not take into account their historic or cultural value.

Poor and Smith (2004) also employed the zonal travel cost method to estimate the use value generated for visitors by Historic St. Mary's City, Maryland, USA. St. Mary's City was the British Colonial capital of the State of Maryland and represents one of the most important historical archeology sites in the US. The zones of origin were established on the basis of a questionnaire, submitted by 328 visitors between 1999 and 2001, and were delimited with the aid of zip codes. Three components were included in the travel cost: the transport cost, the opportunity cost of the traveling time (considered to be one third of the zonal salary) and the entrance fee. Using the information collected through the questionnaires and with the aid of econometric models, Poor and Smith estimated the demand function including, besides zonal travel cost, three additional explicative variables: income, ethnicity and age. The estimation results show that the demand for visiting St. Mary's City is elastic to changes in travel cost, while the income elasticity is, bizarrely, negative. As a consequence, visiting this cultural heritage site appears to be an inferior good. Therefore, if their income increases the visitors will seek other cultural activities. On the other hand, the average estimated value of the aggregate annual consumer surplus, for the period 1999-2001, ranges between 75,493 USD and 176,551 USD.

4. Conclusions

Cultural heritage is a key resource that belongs to all humankind. Its value transcends money and the economic universe, cultural heritage being a repository of knowledge and meaning that inspires and fulfills human beings. Therefore, investments in the preservation and valorization of cultural heritage are extremely important. In our opinion, such investments should not fall exclusively on public authorities. Conversely, given that cultural heritage generates a series of economic effects, we recommend mixed financing which may take the form of public-private partnerships. On the other hand, Sache (2009) suggests that major projects concerning the preservation and restoration of Romanian cultural heritage should be financed using European grants⁽²⁾.

The evaluation of investment projects in cultural heritage poses two important problems:

- first of all, the economic effects of these investments are very complex, they occur both on short and long terms and they are difficult to identify. Unfortunately, some researchers have analyzed superficially this domain which led to the exaggeration of these effects. Still, impact studies remain a valuable tool for evaluating investment projects in cultural heritage but they must take into account all the economic effects generated by the project (either positive or negative) and compare them to the effects produced by alternative projects (Bowitz, Ibenholt, 2009, p. 7);
- secondly, there is a significant need for a robust method that would provide satisfying answers to all the issues concerning the valuation of cultural heritage. The existing valuation methods were initially used for environmental goods and, afterwards, they were adapted for the valuation of cultural heritage. Moreover, they do not capture the entire concept of heritage value, but only parts of it. The non-use value proves to be the most difficult to estimate, only the contingent valuation method being able to capture it.

In conclusion, valuation and economic valorization of cultural heritage still pose a lot of unanswered questions that incite to future research in this area. One of the main challenges is to formulate an improved method (or set of methods) for the valuation of cultural heritage.

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Notes

- (1) ICCROM Working Group ‘Heritage and Society’, “Definition of Cultural Heritage – References to Documents in History”, selected by J. Jokilehto, 15 January 2005, pp. 9-47.
- (2) Regional Operational Programme, Priority Axis 5. Sustainable development and the promotion of tourism, Major Intervention Domain 5.1. The restoration and sustainable valorization of cultural heritage, as well as the creation of adjacent infrastructure.

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Institutional Metamorphoses regarding the Exercise of External Public Audit in Romania

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Abstract. *This work attempts a synthetic approach of the evolution of institutional organization and the exercise of public financial audit in Romania, emphasizing on historical, as well as on modern elements. Recent changes, based, obviously, on legal regulations, aim at implementing the types of audit specific to the audit supreme institutions and founded on the basis of their own external public audit standards, adopted according to the INTOSAI audit standards, the European guidelines for their application and other standards relevant to the public sector, elaborated by IFAC and accepted by the European Union. The finding of the accounts in order is followed by issuing of a conformity certificate for the audited entity.*

Keywords: Audit Office; external public control; special jurisdiction; financial audit; preventive and subsequent financial control; performance audit.

JEL Code: M42.

REL Code: 14J.

1. Introduction

Institutional modernization is fundamental for any state found in the process of European integration. In Romania's case, recent changes in legislation aimed at settling the audit types specific to SAI (Supreme audit institution) on the basis of the Audit Office's standards, adopted according to INTOSAI audit standards, the European guidelines for their application and other audit regulations relevant for the public sector, issued by IFAC and accepted by the European Union (Bostan, 2010).

According to the revised Constitution, the Audit Office is defined by article 140, paragraph 1, as the institution "exercising control over the formation, administration and usage of the state and public sector funds". This function is specific to the supreme institution of audit, defined by INTOSAI audit standards as "the state's public authority which, irrespective of its constitution and organization form, fulfills the public audit function, at the highest level in the state" (INTOSAI, 2008).

2. Significant moments in the evolution of the external public audit institution (Audit Office)

2.1. The century-old pathway of Magna Curia Rationum

Within a state's institutional system, the financial system plays an important part in the configuration, evolution and performance of economy. The financial system's appearance is related to some premises (Popescu, 1995):

- the organization of the state and its institutions;
- accounting organization;
- the achievement of monetary unification within the framework of national economy.

So, a financial system and even the Audit Office has existed ever since antiquity. There are enough relevant elements capable of supporting such an affirmation. For example, the Bible says: "Anything you shall give, you'll give it after counting and measuring, and write down everything you give or take".

The first accountants were the scribes and the first information support – tablets and papyrus. Documents certify the existence of certain audit office forms in ancient Greece and the Roman Empire. In Greece, in the IIIrd century BC, we find the *legislators' court* or *the audit office "of the 10"*, made up of Senate members. There was also an organization of auditor accountants. The accountants were *public* or *private*.

The Roman Empire had *Magna Curia Rationum*, an institution similar to the later Audit Office, and around 1000 AD *maestri dei conti* were the ones controlling public administrators.

2.2. The appearance of the national Audit Office

Quantitative and qualitative accumulation during Middle Ages, encouraged the process of democratization starting with the XVIIth century. We are talking about separation of powers, parliamentary life, political parties and, later on, even labour unions.

In the XIXth century, as a reflection of the society's democratic progress and due to the progress of the economy and the institutional system, the modern Audit Office appears as a state institution (Popescu, 1995).

The first national audit offices were founded during the first half of the XIXth century (Austria – 1805, France – 1807, Bavaria – 1812, Württemberg – 1818, The Great Duchy of Hessa – 1821, Prussia – 1824, The Netherlands – 1840, Saxa – 1842, Hanover – 1848, Spain – 1851).

The tasks found within this context were to be shaped and crystallized in time. They were closely connected to the realisation of morality – ethics and equity – and the control of law obedience in the financial field, as well as to maximizing economic efficiency.

Fulfilling these tasks was fundamental for the “health” and performance of the economic mechanism, as well as for the society's morality.

3. Historical stages in the development of the Romanian Institution of financial control/external audit: from the High Audit Office to the Superior Court of Financial Control

In Romania, the Audit Office was established by the Act of January 24th 1864, published by “Monitorul Oficial” N^o 18 from January 24, 1864, under the name of “The High Audit Office”. According to art. 15 from the above act, “the Office is charged with investigating and deciding upon the reckonings related to incomes of the treasury, counties' pay offices, administrations and indirect contributions administrations”.

Art. N^o 116 from the Constitution of 1866 (published by “Monitorul Oficial” N^o 142 from July 13, 1866) says that “For the whole Romania there is one Audit Office”, while art. N^o 114 says that “the reckonings' final regulation must be presented at the latest within two years after the end of each accounting

period”. Art. N° 116 from the Constitution of 1923 (published by “Monitorul Oficial” N° 282 from March 29, 1923) says that: “Preventive and management control of all state revenues and expenses shall be performed by the Audit Office, which will present every year to the Deputies Assembly the general report showing the previous budget’s management accounts and pointing out irregularities committed by ministers during budget implementation”.

According to the Act of 1929, “the Audit Office is an independent institution, has the same rank as the High Court of Cassation and enjoys the same rights”. With this new regulation the Audit Office keeps its control functions as well as the judicial ones.

But, after less than 20 years, the Audit Office was abolished by Decree N° 352 from December 1st, 1918.

Act N° 2 from March 28, 1973, published in “Buletinul Oficial” N° 44 from March 30, 1973, established the Superior Court of Financial Control (SCFC), functioning under the State Council. The act has been modified by Decrees N° 150 from June 19, 1974 and N° 36 from February 21, 1981.

The institution was empowered to perform financial and jurisdictional control tasks. However, let’s just keep in mind the fact that the mentioned normative act included a series of stipulations specific of the totalitarian state. For example: “The Superior Court of Financial Control oversees the compliance with the state’s and party’s decisions and the defense of the socialist property”.

SCFC played an important part in the implementation and coordination of financial control, having, at the same time, jurisdictional functions. According to the normative act which established it, the institution had to conduct financial control on the activity of central state authorities; to oversee the implementation of the financial stipulations found in the unique national plan of economic and social development and the state budget; to keep track of the state’s property fund situation, as well as to ensure the accomplishment of the obligations stipulated in the state budget; to ensure financial discipline and the appropriate use of the state funds by the central co-operative and other public organizations.

It also (Henegaru, 1970) had to coordinate banking – financial control activities. So, SCFC’s competence was extended to the whole economy, performing direct control especially at the level of central authorities.

Jurisdictional functions consist of:

- judging causes that establish compensations or fines due to damage caused by: the republican budget’s authorising officers, except ministers and central institution managers appointed by the Great National

Assembly, as well as prime – vice presidents, vice presidents and secretaries of county councils or central co-operative and public organizations;

- judging causes related to economic damage brought by erroneous measures or provisions ordered by general and ministries managers, as well as leaders of the head offices or other units similar to them;
- judging appeals regarding damages imputable, according to the Labour Code, to socialist units' leaders, if their value was greater than 20.000 lei.

SCFC had the following organisational structure: the central organizations and authorities' activity control department; the central financial and credit institutions' activity control department; the economico-financial complex control department; preventive financial control department; the jurisdiction board and the public ministry; the coordinating department of banking financial control; the plan – synthesis – documentation department and the administrative service.

Within these departments there were functioning state financial inspectors, financial judges and financial prosecutors.

Later, this institution was also abolished by Decree N° 94/1990.

4. Romania's Audit Office after the Revolution of December 1989

The Audit Office was reintroduced in the national administrative system by the Constitution of 1991, art. 139. According to this article: "*The Audit office exercises control over the formation, administration and usage of the state's and public sector's financial resources. Under the law, the office exercises jurisdictional tasks*".

According to Act N° 94/1992, in its initial form (it was modified and completed by Act N° 77/2002), the Audit Office was "*the supreme authority of financial and jurisdictional control within the financial department*". The Audit Office was judging and deciding regarding payment of civil compensations for damages caused by administrators, managers and accountants, as well as other persons found under the jurisdiction of the Audit Office.

The Audit Office was made up of (Băjan et al., 1994): the preventive control department, the subsequent control department, the jurisdictional department, the Office's jurisdictional board, county accounts chambers and the General Secretariat. Financial prosecutors were functioning with the Audit Office.

There were 24 (later 25) members of the Audit Office (Act N° 94/1992 regarding the functioning and organization of the Audit Office). All the members were account advisors. Since 2000, the Audit Office has

(The Government Ordinance N^o 119/August 31st, 1999, regarding the preventive internal and financial control; Act N^o 204/28.12.1999 for amending and supplementing Act N^o 94/1992) two subsequent control departments, the second one taking the place of the preventive control department.

The county accounts chamber consisted of a financial control department, including financial inspectors, and a jurisdictional board led by a president and consisting of financial judges.

The material and territorial jurisdiction of the Audit Office courts was regulated by the Act regarding the organization and functioning of the Audit Office.

5. Regulation of the external public audit in the context of European integration of the Romanian socio-economic system

Since November 2008, when the new organization and functioning law was adopted (Act N^o 217/2008 for amending and supplementing Act N^o 94/1992), the activities of Romania's Audit Office were divided into three categories: control, financial audit and performance audit. As before, the Office (Cosmanaru, 2009) exercises control over the formation, administration and usage of the public sector's financial resources, but the control function is performed through public external audit procedures stipulated in its own audit standards, elaborated in accordance with generally accepted international audit regulations.

According to the same normative act, financial inspectors become external public auditors. A clear distinction is made between the term "control", as the activity of checking the law enforcement regarding the establishment, administration and usage of public funds, and the notion of "external public audit", which includes financial and performance audit.

Financial audit is the activity of checking whether financial statements are complete, real and in accordance with the laws and regulations in force, providing an opinion to that effect. Performance audit means independent evaluation of the manner in which an entity, a program, an activity or an operation functions from the viewpoints of effectiveness, economy and efficiency.

The audited entity can be any public authority, national company/enterprise, autonomous administration, corporation, if the state or an administrative – territorial unit owns, together or alone, more than a half or its entire corporate funds.

Controls no longer end with financial administration discharge, as it happened before. If the accounts are found to be in order, the audited entity will be presented with a certificate of conformity. Otherwise, when deviations from legitimacy and regulations are found, the management of the audited public entity is informed about them. Establishing the extent of the prejudice and the necessary measures for its recovery is the responsibility of the audited entity's management.

According to Act N° 94/1992 regarding the organization and functioning of the Audit Office (chapter 1), republished under the art. IV of Act N° 217/2008 for the modification and completion of Act N° 94/1992, the institution exercises control over the formation, administration and usage of the state's and public sector's financial resources.

The control function is performed through external public audit procedures stipulated in its own audit standards, elaborated in accordance with generally accepted international audit standards.

The institution's executive management is performed by the *president*, with the help of two vice – presidents, who are account advisors. The plenum consists of 18 members, appointed by the Parliament, who are, also, account advisors.

The organizational structure includes departments, Bucharest and county accounts chambers and a general secretariat (Cosmanaru, 2009). Bucharest and county account chambers are managed by a director and a deputy director.

Referring to the financial and logistical support of the institution, we mention that the Audit Office's budget approved for 2010 by the State Budget Law, with subsequent rectifications, is 151.3 million lei divided as follows: 128.8 million lei for personnel expenses, 12.2 million lei for goods and services, 6.3 million lei for investments and 3.6 million lei for contracting and implementing the project that was not contracted from PHARE 2006 Program funds and 0.4 million lei for projects funded from external grants.

6. Infringements and sanctions

As shown previously, if after applying financial auditing procedures the accounts are found to be in order, a *certificate of conformity* is issued and the audited entity is informed about it.

If infringements that have caused prejudices are found, the management of the audited public entity is informed about them.

Regarding infringements and sanctions, we mention that, according to Act N° 94/1992 for the organization and functioning of the Audit Office, the following facts are considered to be infringements and are sanctioned accordingly:

a) failure to present the Audit Office with the accounts to be checked in due time – sanctioned with a civil fine that equals the salary per 1-3 months of the person considered responsible for the delay;

b) failure to obey the Audit Office's orders – sanctioned with a civil fine that equals the salary per 2-5 months of the person responsible for not carrying out the established measures.

If the audited entity fails to submit the requested papers, documents and information, in due time and following the structure established by the Audit Office, as well as to provide access to its premises, it will be charged with 50 lei per day of delay.

Infringements are established by external public auditors, and the fine is set according to the Office's regulation. The amounts represent civil fines and they become revenues for the state budget.

Failure to recover the prejudices, as a result of not implementing the Audit Office's measures by the entity's management, is considered an offence and is punished by imprisonment from six months to three years. Establishing the extent of the prejudice and the necessary measures for its recovery becomes an obligation for the audited entity's management.

Prosecutor's Office will be informed when in the auditing reports are found facts for which there are indications that they were committed in violation of criminal law.

Based on its findings, the Audit Office may adopt the following measures:

a) suspending the carrying into effect of measures that contradict legal finance, accounting and tax regulations;

b) blocking of budgetary or special funds if they are found to be inefficiently or illegally used;

c) removing the irregularities found in the controlled financial-accounting or tax activity.

It can, also, request the suspension from office of the persons accused of committing acts causing important prejudices or serious financial infringements, until the cases they are involved in are solved.

7. Conclusions

This paper reviews the significant moments in the development of the external public audit institution (the Audit Office), referring to Romania. We considered the centuries-old pathway of *Magna Curia Rationum*, the appearance of national audit offices, the historical stages in the development of the Romanian institution of financial control/external audit – from the High Audit Office to the Superior Court of Financial Control and the phase following the Revolution of December 1989. Special attention was paid to the regulation of the external public audit in the context of European integration of the Romanian socio-economic system.

During Romania's pre-accession phase to EU, the aimed legislative changes were determined by the review of the Romanian Constitution in 2003, thus acknowledging the cancellation of the Audit Office's jurisdictional powers, as well as the necessity of introducing the audit based on systems and the performance audit. The mentioned changes, also, strengthened the financial independence of the Audit Office and introduced the provisions regarding the overseeing procedures of the recommendations by the Parliament.

Subsequently there were regulated those types of audit specific to the audit supreme institutions, based on their own external public audit standards, adopted according to the INTOSAI audit standards and to other standards relevant to the public sector, elaborated by IFAC and accepted by members of the European Union.

Presently, the finalization of the external financial audit for public institutions managed by the main authorizing officers is made by issuing an audit opinion about the audited financial situations, considering, on a selective basis, the results of the controls conducted by subordinate authorizing officers on the execution accounts.

This opinion is mainly based on the audit report containing financial findings, findings regarding the results of the evaluation of management and internal control systems of the audited entity, as well as recommendations for rectifying shortcomings or improving activities.

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Oltenia – Micro-destination of Cultural and Medical Spa Tourism*

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Abstract. *A region, in order to express its viability as tourism destination, has to emphasize not only its defining elements, but also the activities from the recreative, curative or cultural field in which it has specialized in (processed after Cocean et al., 2002, pp. 297-298). This involves several stages, organically linked in a planned framework, with the establishment of the specific objectives and strategies, not only at micro and meso, but also at macro level, beginning with “the study of the motivational demand, of the resources, in terms of their functionality in tourism and their profitability in exploitation” (Erdeli, Gheorghilaş, 2006, pp. 288-289).*

The authors intend, based on these considerations, to reveal the elements of regional brand, with the identification of those functions or types of tourism (recreative, curative and/or cultural) which are specific to the region of Oltenia, that is “still unseen and unknown”.

Keywords: tourism micro-destination; destination image; regional tourism brand; medical spa tourism; destination marketing.

JEL Code: M31.

REL Codes: 14F, 14G.

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Introduction

Comprised in the South-West Oltenia development region, the historical region of Oltenia is the region “of the first continental, geological land of the Carpathian regions, in which the Romanian Nation has preserved its ethnicity and its most pure language, and finally, it is also the region where the Romanian specific features regarding the costumes, faith and culture appear in the most pure and characteristic form” (Popescu Voitești, 1943, p. 189), its dominant feature being “the meeting here of the Mountain with the Danube, the two axes that conditioned, since distant times, the history of the autochthonous element from the Carpathians” (Donat, 1943, p. 299).

Reflecting “the fundamental binomial from the Romanian history Latin origin-statehood” (Teodorescu, 2003, p. 3), Oltenia, as tourism micro-destination, is geographically delimited by the Olt river to the East, by the Danube river to the South and West and by the Southern Carpathians to the North. Regarding the administrative-territorial division, it includes the following counties: Dolj (one of the largest Romanian county), Gorj (with the largest area of alpine meadows), Mehedinți (with the incomparable Donau Valley, especially in the sectors of the Iron Gates/Portile de Fier and the Boilers/Cazane), Olt (with picturesque meadows of the Danube and Olt rivers) and Vâlcea (“the most richest area in foundations of the entire Wallachia” [Teodorescu, 2001, p. 140] and, in the same time, the area with the most mineral waters “known for long time and used nowadays in an increasingly manner [...], the resorts in which they are located can be compared [...] with any other resort from abroad that features similar waters” [Preda, 1943, p. 209]).

From the “tourism heritage chest” of the historical region of Oltenia, elements with geographical, historical, religious/cultural-artistic, ethnographical and folkloric character can be “taken out”, and that despite the pressure and the passage of time, preserved their identity and/or uniqueness.

Among the *geographical elements*, the Mountains of Oltenia (with the Parâng Mountains Group and Retezat – Godeanu Mountains Group) are considered to be “the most ecumenical and habitable of all mountains of the Romanian territory [...], in these mountains climb up and down and cross each other the most numerous, oldest and well-trodden paths of transhumance, on their peaks spoil during the summer the most largest and richest alpine pastures” (Conea, 1943, p. 16); the Mehedinți Plateau and the Getic Plateau with their specific numerous caves (the Topolnița Cave – with numerous spectacular karstic formations, the Women’s Cave/Muierilor Cave – lived-in since ancient times, the Tismana Cave, the Zamolxe’s Cave, the Polovragi

Cave, the Cloșani Cave – where the tourists can learn a lot of things about the bats, etc.); the natural bridge from Ponoare (God's Bridge - “a huge karstic arcade, produced by the collapse of the ceiling of a cave”), the Trovants Museum Natural Reserve (or “the stones that are growing” – formations of petrified silicon that grow in the form of stone tubers), the Sohodol Gorges, the Olteț Gorges (easy to pass through, but spectacular), Jiu Valley, the Danube river with the Boilers/Cazane and the Iron Gates/Portile de Fier that represent “the most impressive strait of Europe [...]” (Vâlsan, G., in Ionel, 2007, p. 70), etc.

But perhaps, of all geographical elements, the most important for the life and health remain the springs of mineral waters with which Oltenia is the most endowed of all micro-destinations of the country, being located in the following resorts: Călimănești, Căciulata, Olănești, Govora, Ocnele Mari – Ocnița, Săcelu and Bala.

Historical elements with character of identity/uniqueness are represented by the specific towers/fortresses (Romanian: “cule”) – “symbols of the fortification in order to defend the territory” (Theodorescu, 2003, p. 3) – from Măldărești, Groșerea, Greceanu Fortress, Glogova, the Fortress of Cuțui, the Fortress of Cornoiu or the Fortress of Tudor Vladimirescu, notably being not only the House of the Bans/Casa Băniei, the Glogoveanu House or the memorial house “Anton Pann”, but also the Roman Camp Drobeta, the Roman Baths, the Trajan's Bridge that “bound the extremities of the Carpathian chain, broken by the Danube [...], digging in the stone the first road over the gorges of the river [...]. From here, from the Banat of Oltenia, start the Basarabs – the brand of Oltenia; from here starts later the Michael the Brave/Mihai Viteazul; and closer to our days, also from under these mountains started Tudor Vladimirescu [...]” (processed after Mehedinți, S., in Ionel, 2007, p. 71). Also in this area, the tourists can admire the statue of Decebal carved into the mountain - “the largest statue in Europe, with just only six meters shorter than the Statue of Liberty in New York, but with eight meters longer than the monument of Christ in Rio de Janeiro” (processed after Neacșu et al., 2009, p. 284), the unforgettable landscapes along Transalpina (“the King's Road”) that makes the connection between Oltenia and Transylvania, or the ruins of the Ada-Kaleh fortress (once located on the border of three countries: Romania, Serbia and Hungary, and whose charm “fascinated Hans Christian Andersen and Alexander Korda” [Tuțui, 2010, p. 8]) and whose inhabitants – the turks – were “famous cigarettes producers and other products bearing the mark of their occupation”: rum, coffee boiled in sand, millet beer, rahat lakom, khalva, nut and syrup pastry, fruit jelly, cigars, hookah etc. (processed after Roman I., 2005, pp. 64-65).

In Oltenia, the culture could not be separated from the religion, the first schools were organized within the monasteries (Tismana and Bistrița – where our first book was printed, “the Liturgy Book of Macarie” – in the 14th century); in the same time, the monasteries represent, for more than two million inhabitants of the region, “the place [...] where the essence of the Christian living can be found for many centuries” (processed after Teofan, the Metropolitan of Oltenia, 2006).

Oltenia, being also “the cradle of the dynasty of the Basarabs” (Onciul, D., in Rezeanu, 2010, p. 10), the mark of their family was left especially on the *religious* level; later, the Brancovan style represents “the starting point of the entire subsequent development of the Wallachian architecture and art [...]” (Sitwell, 2011, p. 46), the Brancovan *culture* paving the way for a new *artistic* world.

Considered to be a “masterpiece of art, architecture, sculpture and painting within the entire monastic area of South-Eastern Europe...” (Teodorescu et al., 2011, p. 186), the Horezu (or Hurezi) monastery was founded by Constantin Basarab, whose portrait, together with his wife and children, in fresco, descends in a direct tradition from Ravenna [...] (Sitwell, 2011, pp. 40-41); by its artistic and spiritual dimension it was established as a true center of spreading of some models [...], all other churches from the region of Vâlcea, painted in the Brancovan era, being grateful to the iconography and style of painting from Hurezi (processed after Văețiși, 2011, p. 54).

Other important monasteries within the region of Oltenia are (processed after Teofan, the Metropolitan of Oltenia, 2006): the Vodița monastery (that gave sense to the existence of a nation), the Tismana monastery (“the heart of the Romanian monachism”), the Cozia monastery (“a mystery that will never be cleared up”), the Topolnița monastery (“grown” on a rock), the Govora monastery (with the two roots of the Romanian law: “the Correction of the Law” and “the Govora Nomocanon”), the Ostrov hermitage (where the wife of Neagoe Basarab and the mother of the Michael the Brave/Mihai Viteazul entered the monastery), the One Wood Monastery (built from a single piece of wood, like the Manger of Bethlehem) that, although it has “a very Romanian aspect, it looks like the wooden churches from Norway or Sweden” (Sitwell, 2011, p. 36), the Surpatele monastery (where Anton Pann composed the music for “the Lord’s Prayer”/“Our Father”), the Călui monastery (“the heavenly home of the Buzescu/Buzești brothers and of Doamna Stanca, the wife of the Michael the Brave/Mihai Viteazul”), Sadova monastery (where the tourists can admire the glory of the Craiovești boyars and of the Basarabs and Brâncoveni voivodes), the Arnota monastery (where is buried the voivode Matei Basarab),

Frăsinei monastery (or “the Athos of Oltenia”), Dealu Mare monastery (located on the border of three counties: Dolj, Gorj and Mehedinți), Saint Ana/Sfânta Ana monastery (from where the tourists can see how “the Danube stops in prayer at the gates of the Heaven”). All this, and much more (over 50) can be found within the historical region of Oltenia that “oases of mountains, forests, plains, rivers and... holiness” (processed after Teofan, the Metropolitan of Oltenia, 2006).

Another element with cultural-artistic character that confers uniqueness for the tourism micro-destination of Oltenia is the work of Constantin Brâncuși, with sculptures in Craiova and with the monumental ensemble in Târgu Jiu, that symbolizes “in a triptych concentration: the mystery of the sacrificial love, Easter joy and eternal light” (Daniel, the Metropolitan of Moldavia and Bucovina, 2007, pp. 44-45), and that consists of: the Table of Silence (or “the Table of the Hungry Men”, seen by Brâncuși as another new Last Supper), the Gate of the Kiss (symbol of eternal love, victory over death), the Column of the Infinite, or “the endless Column” – as symbol of eternal life and revival of the body (Daniel, 2007, pp. 33-41).

Oltenia is already famous for the elements with *ethnographic* character, being considered as “the place where the most beautiful Romanian carpets are woven [...] – *chilime* (carpets decorated with stylized plant and animal motifs), peasant rugs or quilts (the note of the author) that have a large and gorgeous scale of colors, especially red and blue and a very special design” (processed after Sir Sacheverell Sitwell, 2011, pp. 31-32), the place where the national costumes are sewn (the costume with “vâlnic”, with “boscele” or with “zâvelci”, “oprege” or “fâstâce” etc., of curly or diaphanous linen and embroidered with gold, silver and/or silk thread, sequins, beads, etc.), famous not only for the “spectacular combinations of geometrical and vegetal motifs [...]” (processed after Ișfănoiu and Popoiu, 2008, pp. 66-85), but also for their joyful colors (such as “red of Tismana”), and the place that is well-known for the pottery – “millenary craft tradition” – where are modeled the most appreciated articles of ceramis of the country – the ceramics of Horezu, where the artistic ceramics, partly or totally enameled, is made [...], with shapes that remember of the Neolithic period, figures and images of birds – the cock of Horezu – in specific colors (the green of Vlădești, the black of Lungești and “the yellow of Horezu” [processed after Cristea and Constantinescu, 1980, pp. 243-245]) and with specific ornaments (spiral, snake, wave, etc.) [processed after Ghițulică et al., 1980, pp. 196-197]. In addition to the center from Horezu, are to remember the ceramics of Șișești and the ceramics of Oboga.

Also the elements of the Oltenian *folklore* (the ceremonial of the customs, literary, musical or choreographic) are rich and various, Oltenia, “without having the exigence to be the first, in any direction, of all Romanian regions, [...] still holds a remarkable place in any field” (Rezeanu, 2010, p. 11). Thus, there are famous within the country: the Oltenian “doine”/elegiac songs (called also “long songs”, “of forest”, “as on the valley”, “green leaf” [Kahane, 2007, pp. 17-18], etc.), ballads (the ballad of Iancu Jianu, the ballad of Novac, etc.), the Oltenian dances such as “sârba”, “rustemul”, “bordeiașul”, “alunelul”, “Banul Mărăcine” (all “gathered” in “the hora of the village”; hora is a Romanian folk round dance) and the “inimitable and age-old dance of the sun” – “Călușul” (processed after Ghițulică et al., 1980, p. 192) – included in the UNESCO World Heritage, the customs such as “Paparuda”, “Dragobete”, “Învăruicitul”, etc.

The most important cities of this region are: Băilești, Calafat, Caracal, Craiova, Drăgășani, Drobeta-Turnu Severin, Orșova (“the gate of the Christendom along the Danube Gorges and the area situated in the north of the Danube” [Juan-Petroi, 2008, p. 13]), Râmnicu Vâlcea, Slatina and Târgu Jiu.

Operational framework

The research conducted in October-December 2010 – January 2011 on a sample of 1,887 young people aged 20-24 years, with ongoing studies, aimed to identify the extent to which the perceptions of the residents coming from different Romanian regions related to the tourism micro-destination of Oltenia helps in the development of the identity within the elaboration process of the destination marketing strategy.

According to the classification of the types of tourism proposed by the World Tourism Organization (WTO/UNO) in 1979, which takes into account the reasons guiding the choice of the tourism destination (business and professional tourism, medical spa tourism, cultural tourism, leisure tourism, visiting friends and relatives and other types of tourism), the respondents could choose the main type of tourism practiced within the historical region of Oltenia.

Regarding the distribution of the types of tourism for the micro-destination of Oltenia, the results are as follows: 28.1% of the respondents considered the *leisure tourism* as being representative for this historical region, 22.6% opted for *medical spa tourism*, 19.1% chose *visiting friends and relatives*, 18.3% opted for *cultural tourism*, 8.3% chose *other types of tourism*, while 3.6% of the respondents opted for *business and professional tourism* (Figure 1).

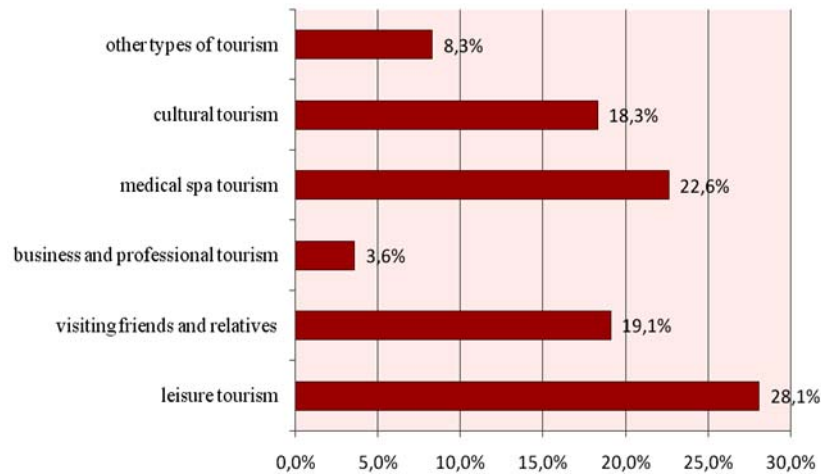


Figure 1. *The distribution of the types of tourism for the micro-destination of Oltenia*

Taking into consideration the regions of origin of the respondents, it can be noticed that the *leisure tourism* holds the first position as predominant type of tourism in case of the respondents with the following regions of origin: Muntenia, Banat-Crișana, Transylvania, Bucovina, Moldavia and Maramureș; the respondents with the regions of origin Oltenia and Dobrogea consider the *medical spa tourism* as being representative for the analyzed historical region. A significant percentage was recorded by the type of tourism *visiting friends and relatives*. The last place was constantly occupied by the *business and professional tourism*. Regarding the established regional structure, the situation is as follows (Table 1):

1) Muntenia as region of origin (Figure 2):

- 29.4% of the respondents chose *leisure tourism* as representative type of tourism for the historical region of Oltenia;
- 24.5% opted for *visiting friends and relatives*;
- 20.1% chose medical spa tourism;
- 16.8% opted for cultural tourism;
- 5.9% chose other types of tourism;
- 3.3% of the respondents – business and professional tourism.

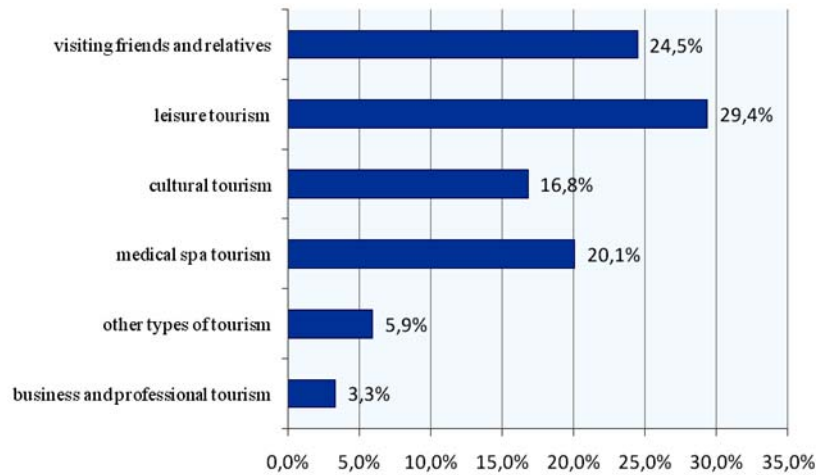


Figure 2. The distribution of the types of tourism for the micro-destination of Oltenia.
Region of origin of the respondents: Muntenia

2) Oltenia as region of origin (Figure 3):

- 29.9% of the respondents chose *medical spa tourism* as representative type of tourism for their region;
- 25.2% opted for *leisure tourism*;
- 21.5% chose cultural tourism;
- 10.3% opted for visiting friends and relatives;
- 8.4% chose other types of tourism;
- 4.7% of the respondents opted for business and professional tourism.

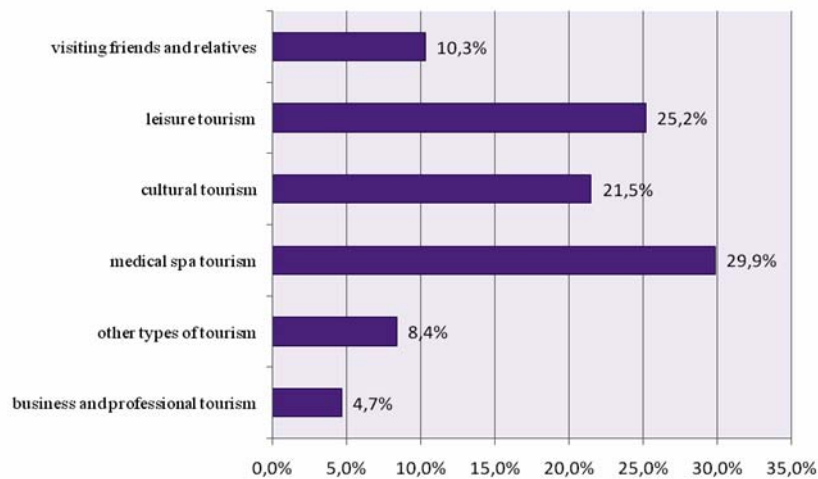


Figure 3. The distribution of the types of tourism for the micro-destination of Oltenia.
Region of origin of the respondents: Oltenia

3) Banat-Crișana as region of origin (Figure 4):

- 27.2% of the respondents chose *leisure tourism* as representative type of tourism for the historical region of Oltenia;
- 23.2% opted for *visiting friends and relatives*;
- 20.8% chose cultural tourism;
- 16.8% opted for medical spa tourism;
- 7.2% chose other types of tourism;
- 4.8% of the respondents opted for business and professional tourism.

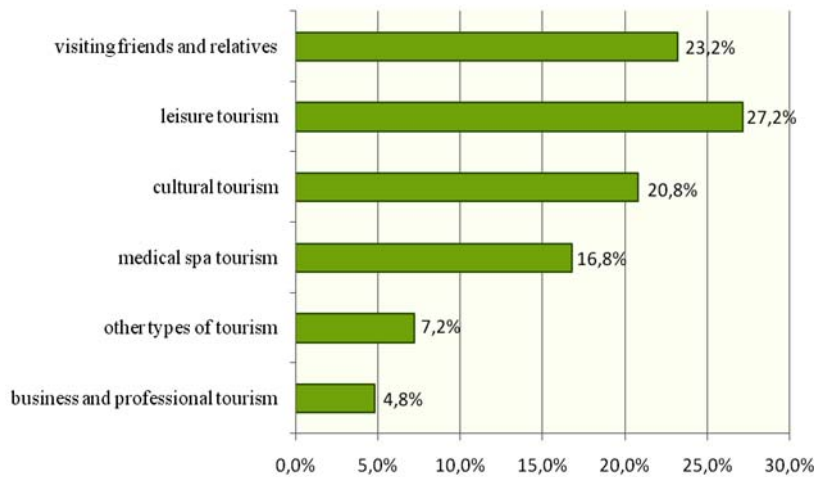


Figure 4. The distribution of the types of tourism for the micro-destination of Oltenia.
Region of origin of the respondents: Banat-Crișana

4) Transylvania as region of origin (Figure 5):

- 29.0% of the respondents chose *leisure tourism* as representative type of tourism for the historical region of Oltenia;
- 24.8% opted for *medical spa tourism*;
- 21.4% chose visiting friends and relatives;
- 16.2% opted for cultural tourism;
- 6.0% chose other types of tourism;
- 2.6% of the respondents opted for business and professional tourism.

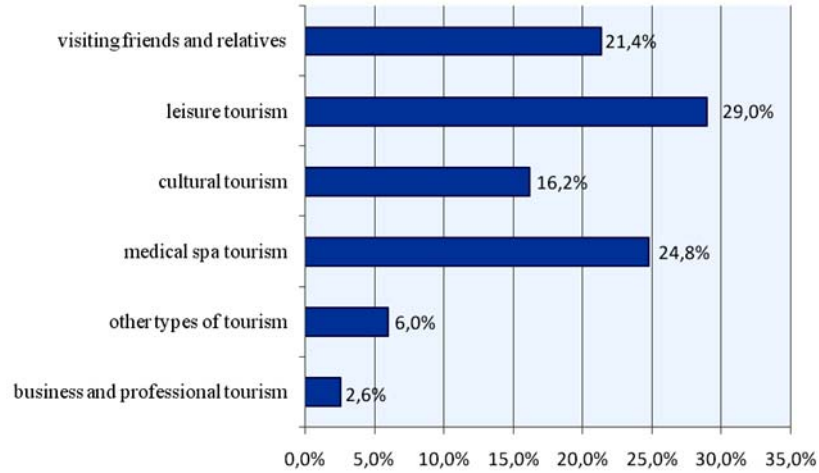


Figure 5. The distribution of the types of tourism for the micro-destination of Oltenia.
Region of origin of the respondents: Transylvania

5) Bucovina as region of origin (Figure 6):

- 29.8% of the respondents chose *leisure tourism* as representative type of tourism for the historical region of Oltenia;
- 24.6% opted for *medical spa tourism*;
- 20.2% chose visiting friends and relatives;
- 16.7% opted for cultural tourism;
- 6.1% chose other types of tourism;
- 2.6% of the respondents opted for business and professional tourism.

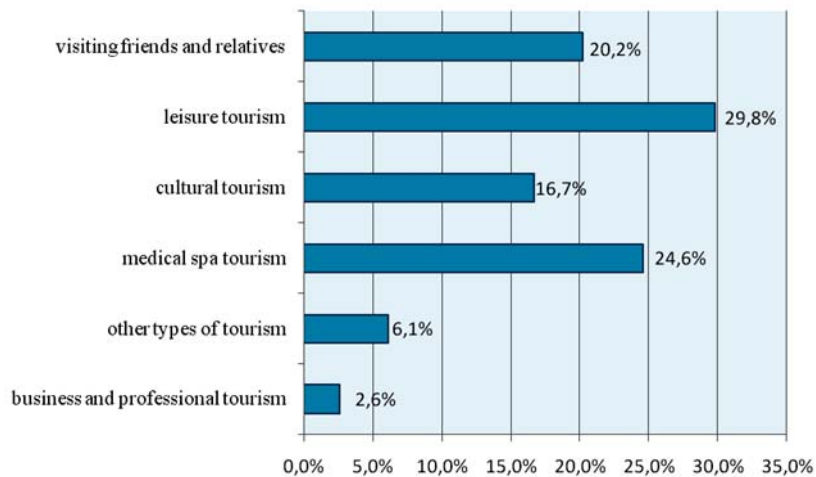


Figure 6. The distribution of the types of tourism for the micro-destination of Oltenia.
Region of origin of the respondents: Bucovina

- 6) Moldavia and Maramureş as regions of origin (Figure 7):
- 33.6% of the respondents chose *leisure tourism* as representative type of tourism for the historical region of Oltenia;
 - 23.9% opted for *medical spa tourism*;
 - 17.7% chose cultural tourism;
 - 12.4% opted for visiting friends and relatives;
 - 8.0% chose other types of tourism;
 - 4.4% of the respondents opted for business and professional tourism.

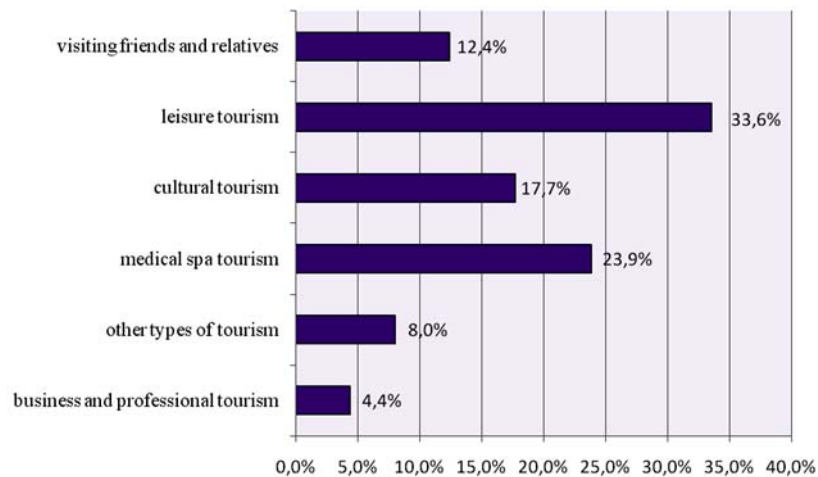


Figure 7. The distribution of the types of tourism for the micro-destination of Oltenia.
Regions of origin of the respondents: Moldavia and Maramureş

- 7) Dobrogea as region of origin (Figure 8):
- 31.7% of the respondents chose *medical spa tourism* as representative type of tourism for the historical region of Oltenia;
 - 25.8% opted for *leisure tourism*;
 - 16.6% chose visiting friends and relatives;
 - 14.2% opted for cultural tourism;
 - 7.5% chose other types of tourism;
 - 4.2% of the respondents opted for business and professional tourism.

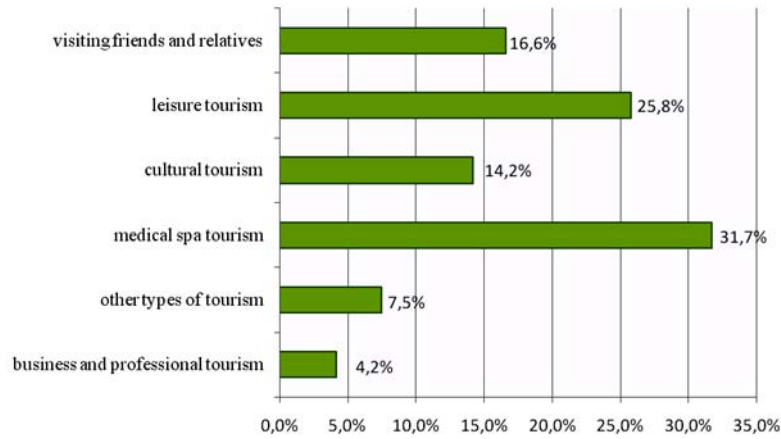


Figure 8. The distribution of the types of tourism for the micro-destination of Oltenia.
Region of origin of the respondents: Dobrogea

Table 1

**The distribution of the responses by types of tourism
and by region of origin of the respondents**

– % –

Region of origin of the respondents \ Types of tourism	Business and professional tourism	Other types of tourism	Medical spa tourism	Cultural tourism	Leisure tourism	Visiting friends and relatives
Muntenia	3.3	5.9	20.1	16.8	29.4	24.5
Oltenia	4.7	8.4	29.9	21.5	25.2	10.3
Banat – Crișana	4.8	7.2	16.8	20.8	27.2	23.2
Transylvania	2.6	6.0	24.8	16.2	29.0	21.4
Bucovina	2.6	6.1	24.6	16.7	29.8	20.2
Moldavia and Maramureș	4.4	8.0	23.9	17.7	33.6	12.4
Dobrogea	4.2	7.5	31.7	14.2	25.8	16.6

The choice of the respondents for the *leisure tourism*, *medical spa tourism*, *cultural tourism* and *visiting friends and relatives* indicates that the tourism micro-destination of Oltenia offers the tourists the opportunity to take part in different activities, it encourages them that “there are many things to do”, while the *medical spa tourism* and the *cultural tourism* can form umbrella types of tourism. The preference of the respondents for the type of tourism *visiting friends and relatives* can be explained not only by the hospitality of the inhabitants of this region (as it also results from the associations made by the respondents to this micro-destination), but also by the proximity of the other historical regions of the country: Banat, Transylvania and Muntenia.

The references made by the respondents to the natural and anthropic tourism resources of the tourism micro-destination of Oltenia are illustrated by order of relevance in Figure 9.

A. NATURAL POTENTIAL	% of the respondents
<i>topography</i> : the Parâng Mountains, the Mehedinți Mountains, the Mehedinți Plateau, the Oltenia Plain, the Sohodol Gorges, the Women's Cave/Muierilor Cave, the Topolnița Cave, the Polovragi Cave, the Ponoarele Cave, etc.	3.0
<i>climate/climatic elements</i> : high temperature.	0.4
<i>hydrography</i> : Danube River, Iron Gates/Porțile de Fier, Olt River, Jiu River, Olteț River, Lotru River, Gâlcescu Lake, Brădișor Lake, etc.	6.5
<i>flora and fauna</i> : the lilac forest from Ponoare (God's Bridge), the Cozia National Park, the Iron Gates Natural Park.	0.2
B. ANTHROPIC POTENTIAL	% of the respondents
<i>historical traces and art monuments</i> : Severin Citadel, the Tower of Sever, the Trajan's Bridge, Tudor Vladimirescu "Cula" (Cerneți), the Roman Camp Drobeta, the sculptural ensemble of Constantin Brâncuși, the statue of Decebal.	24.7
<i>elements of ethnography and folklore</i> : folk music (Maria Tănase, Maria Lătărețu, Maria Ciobanu), folk dances (călușul, sârba, bordeiașul), gastronomy (leek stew, "pâine la țest" – specific baked bread, zaibăr – local red wine, wine of Drăgășani, water melon, curled dock), customs and traditions (Paparuda, Dragobete), ceramics (Horezu), etc.	5.9
<i>museums and memorial houses</i> : the memorial house "Constantin Brâncuși" (Hobița), the memorial house "Nicolae Ceaușescu" (Scornicești), the memorial house "Marin Sorescu" (Bulzești), the memorial house "Anton Pann" (Râmnicu Vâlcea), the Art Museum of Craiova, the Museum of Oltenia, the Măldărești Museum Complex, the Art Museum "Casa Șimian"/"Șimian House" (Râmnicu Vâlcea), etc.	4.9
<i>cultural-artistic institutions</i> : Cozia Monastery, Horezu Monastery, Tismana Monastery, One Wood Monastery, Lainici Monastery, Govora Monastery, Polovragi Monastery, Vodița Monastery, the National Theatre "Marin Sorescu" (Craiova), the "Elena Teodorini" Opera and Operetta Theatre (Craiova), "Oltenia" Philharmonic Orchestra, etc.	10.7
<i>events</i> : Craiova Days, "Marin Sorescu" Days.	0.2
<i>contemporary constructions</i> : the "Frații Buzești" National College (Craiova), the University of Craiova, the "Nicolae Romanescu" Park (Craiova), the University Botanical Garden "Alexandru Buia" (Craiova), the "Traian" High school (Drobeta - Turnu Severin), the Jianu Fountain (Craiova).	2.5
<i>human settlements</i> : Craiova, Râmnicu Vâlcea, Drobeta-Turnu Severin, Târgu Jiu, Slatina, Orșova, Căciulata, Călimănești, Olănești, Govora, Drăgășani, Rânca, Voineasa, Băilești, Filiași, Săcelu, etc.	32.5
C. MISCELLANEOUS	% of the respondents
<i>personalities</i> : Constantin Brâncuși, Mihai Viteazul/Michael the Brave, Constantin Brâncoveanu, Matei Basarab, Tudor Vladimirescu, Nicolae Titulescu, Nicolae Bălcescu, Ecaterina Teodoroiu, Theodor Aman, Elena Teodorini, Gheorghe Țițeica, Ion Oblemenco, Dinu Săraru, Amza Pelea, Theodor Costescu, Dem Rădulescu, Marin Sorescu, Tudor Gheorghe, Horațiu Mălăele, Sabin Bălașa.	4.4
<i>other elements/aspects</i> : Transalpina, coal, specific features of the Oltenians (brave/smart/proud/stubborn/hospitable people), the movie "Nea Mărin Miliardar"/"Uncle Marin, the Billionaire", affiliation (home, grandparents), the movie "Mihai Viteazul"/"Michael the Brave", environmental problems (desertification, pollution), social problems, drought, simplicity, simple past, etc.	4.1

Source: adapted after Minciu, R. (2001). *Economia turismului*, Editura Uranus, p. 161.

Figure 9. Structure of the tourism potential of the region of Oltenia

The tourism micro-destination of Oltenia benefits from a better appreciation in terms of its anthropic potential as respondents often referred to cities (Craiova, Râmnicu Vâlcea, Drobeta-Turnu Severin, Târgu Jiu) and spa resorts (Căciulata, Călimănești, Olănești, Govora), the sculptural ensemble of Constantin Brâncuși (the Column of the Infinite, the Table of Silence and the Gate of the Kiss), monasteries (Cozia Monastery, Tismana Monastery, One Wood Monastery, Lainici Monastery) and elements of gastronomy (sausages, leek stew, water melon, wine of Drăgășani, etc.). Under these circumstances, “the tourism function of the region remains divided between two tendencies: the one that enlighten, for which it has remarkable resources, but is less cost-effective, and the curative one, that tends to polarize numerous options” (Cocean, 2010, p. 235).

Conclusions

Although from the conducted research it can be concluded that the *leisure tourism* is the representative type of tourism for the region of Oltenia, it is also necessary to develop other activities like sports activities (hiking, biking, climbing, rafting, swimming, etc.), cultural activities (shows, festivals, fairs, exhibitions, etc.), or even more, to develop some types of tourism that are specific to each market segment (sports tourism, adventure tourism, scientific tourism, etc.) organized within the spa resorts, simultaneously with a better presentation of the curative effects of their mineral waters. In order to achieve this, similar researches should be conducted for other categories of population, of different ages and with different level of education.

For defining a regional brand it is necessary to correlate the results of the research with other psycho-sociological adjacent researches, and after that with similar researches for the segment “potential tourists”.

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The Challenges of Basel III for Romanian Banking System

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Abstract. *Basel III represents a fundamental review of the regulatory and supervision framework of the banking industry in the future, the aim being to strengthen the stability of the financial system. The purpose of this paper is to analyze the impact of Basel III introduction upon the banking system at European level, respectively, upon the Romanian banking system. If at European level it is estimated a substantial deficit in capital and liquidity, with major impact on profitability indicators, the impact of Basel III upon banking system in Romania is considered to be limited. The measures which credit institutions could take to mitigate the impact of alignment with the new standards are business model adjustment and balance sheet restructuring.*

Keywords: financial stability; banking system; Basel III; systemic risk; Romania.

JEL Codes: G21, G32.

REL Codes: 11C, 14K.

1. Introduction

Basel III represents a fundamental review of the regulatory and supervision framework of the banking industry in the future, the aim being to strengthen the stability of the financial system. Structured on two parts, in this article we analyze the impact of Basel III introduction upon the banking system at European level, respectively, upon the Romanian banking system.

The motivation of Basel III introduction is based on the following reasons (Walter, 2011, pp. 1-2):

- negative effects of banking crises. Economic literature shows that the banking crisis results materialize in loss of economic production equal to about 60% of GDP in the pre-crisis period.
- the frequency of banking crises. Since 1985, there were over 30 banking crises in the Member States of the Basel Committee, which corresponds to a probability of 5% as a Member State to face a crisis in a given year.
- Basel III benefits exceed implementation costs, because a stable banking system is the cornerstone of sustainable development with beneficial effects on long-term.

The new Basel III aims to strengthen the banking system stability by applying stringent standards designed to improve the capacity of shocks absorption from economic and financial sector and to reduce the risk of contagion from the financial sector towards real economy (Walter, 2010). The new standards take into consideration the improvement of risk management, increasing transparency and publication requirements of credit institutions, and the problems of systemically important banks. The measures require higher standards for banks regarding capital adequacy, liquidity and leverage effect, the main goal being reducing the negative effects of financial crises.

The major difference from the previous agreements consists in more extensive coverage, the measures being both micro prudential (target individual bank risks) and macro-prudential (target the whole banking system). At micro-prudential level, measures consist in (BNR, 2011, p. 124):

- consolidation the capital base by increasing the minimum requirement of equity (ordinary shares, financial results reported and reserves) and the minimum requirement for Tier 1 (equity and hybrid instruments), and by reconsidering the eligibility criteria for instruments considered when determining Tier 1;
- increased requirements for covering risks, major emphasis is placed on those risks highlighted during the crisis: the trading book exposures (trading book), counter-party credit risk (CCR), securitized exposures;

- limit the leverage effect as additional measures to capital requirements calculated according to risk;
- introduction of international liquidity standards, which provide short-term (30 days) resistance to shock/crisis of liquidity and on long-term (one year) a solid profile of structural liquidity.

At macro-prudential level, the measures have anti-cyclical character and consist in (BNR, 2011, pp. 124):

- introduction of an countercyclical capital buffer in order to protect the financial system against systemic risks associated with unsustainable credit growth (represents 2.5 percent over the minimum capital-Tier 1 composed of common stock, retained earnings and reserves), as well as a capital conservation buffer in order to cover losses if the bank faces financial problems (varies within a interval which reaches maximum value at 2,5 percent depending by the phase of economic cycle). Anti-cyclical capital buffer is directly proportional to systemic risk and is calculated according to credit/GDP indicator;
- computing a leverage effect, the purpose being to limit debt levels in the banking system in times of boom;
- systemically important banks, concerns being orientated to reducing the probability and impact of their bankruptcy, reducing public sector intervention and the imposition of a level playing field by reducing the competitive advantage that these banks hold in financing.

The Committee also envisages the additional requirements in order to absorb losses and the possible introduction of additional capital charge (capital surcharges) for these banks.

Full implementation worldwide, with strict deadlines, of Basel III is essential for strengthening the financial system. The responsibility of implementation falls not only in the task of regulators, but extend the expert sphere towards managers of banks and, default, towards audit, which has a key role in independent and disciplined reviewing of management efforts. The challenge is represented by the fact that the implementation takes place during a post-crisis unequal and insecure recovery of countries. Growth prospects have weakened and sovereign debts emphasize the fragility of financial systems in some euro area countries.

2. The impact of Basel III upon European banking system

The purpose of Basel III is to strengthen the banking system stability by eliminating deficiencies highlighted by the current crisis. Improving the quality of capital base and new standards in liquidity management are intended to tighten banks ability to absorb shocks, avoiding use of public funds for recapitalization, the beneficial effects heading towards consumers, investors and governments.

Table 1

Summary of Basel III measures at EU level

	Deficiencies highlighted by crisis	Measures proposed by Basel III	The objectives
Capital requirements	Insufficient capital base for covering losses, which led to the use of public funds	The improvement of the quality of capital base by: - inclusion in equity (Tier 1 core) in addition to retained earnings and reserves of ordinary shares, excluding preferred shares; - remove items included in Tier 1 additional without enough capacity to absorb losses; - increasing the minimum requirements of Tier 1 from 4% to 6% and minimum equity requirement (Tier 1 basis), from 2% to 4.5%. - introduction of a countercyclical capital buffer and a capital conservation buffer (2.5 percent), both provided from equity elements	Limiting exposure to risk, strengthening financial stability
	Insufficient transparency of capital structure	Increased requirements regarding the transparency of regulatory capital	Increased transparency requirements
Leverage effect	High risk of bankruptcy	The introduction of leverage effect as additional measure	Reducing the probability of systemic risk manifestation and increased resistance to situations of crisis
Liquidity standards	High share of short term resources in financing long term assets	The introduction of international minimum standards for liquidity risk	Reducing the probability of systemic risk manifestation and increased resistance to situations of crisis
	An overrating of liquidity		
Systemically important banks	Recapitalization of institutions to mitigate systemic risk committed considerable public funds which led to the growth of sovereign debts	Additional requirements imposed to systemically important banks	strengthening financial stability, increased transparency, avoidance of public funds utilization in saving credit institutions
	The lack of a proper regulatory framework regarding the restructuring and bankruptcy of these institutions	Shaping a new framework for crisis management	

Source: NBR Financial Stability Report 2011, pp. 127-128, www.bnro.ro.

The impact of new rules is significant, because without any mitigation actions it is estimated a deficit of capital of 1,050 billion € for Europe and 600 billion € for the US (Härle et al., 2010, p. 3).

Capital and liquidity deficit for Europe and USA will be significant. Long-term funding will partially alleviate liquidity shortages.

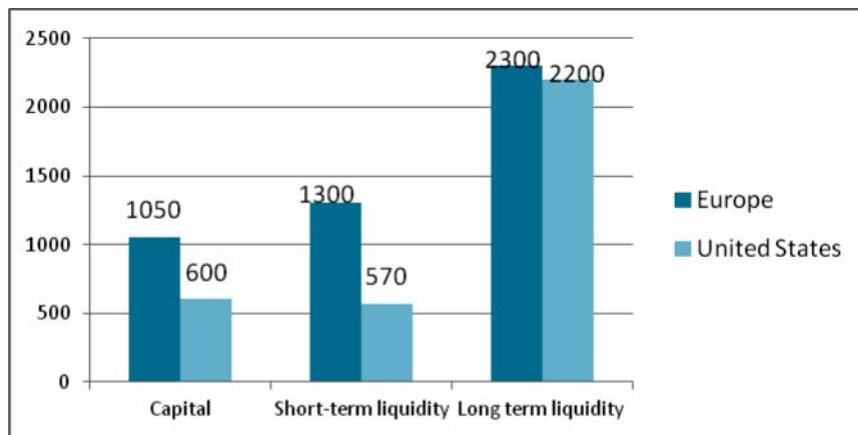


Figure 1. Capital and liquidity shortfalls for Europe and USA, static perspective, 2019 (€ billion)

Source: Härle, Philipp et al. – “Basel III and European banking: Its impact, how banks might respond, and the challenges of implementation”-November 2010, EMEA Banking, p. 3.

Assuming full implementation by 2019 of all the measures and before any mitigation actions the pretax ROE for European banks would fall by between with 3.7 and 4.3 percentage points from the pre-crisis level of 15 percent (Härle et al., 2010, p. 4). The effects will be felt gradually. Analyzing different transitional period it is estimated that ROE will decline 0.3 percentage points by 2013 and 2.1 percentage points by 2016. ROE decline appears due to new requirements regarding the quality of capital base, introducing leverage effect and minimum global liquidity standards. The task of credit institutions is also extremely difficult, because banks face a significant challenge to achieve technical compliance with the new standards, at the same time with orientation towards success.

The impact of Basel III on the main business segments: retail banking, corporate and investment banking is different. Both retail and corporate banking activity are mainly affected by those requirements of Basel III which affect the entire bank, in particular higher capital and liquidity standards. Some retail institutions will also be affected by measures concerning the quality of capital

base (the deductions of silent participations in Germany). If Basel III' effects upon retail products are less relevant, new requirements will affect many of standard banking products for corporate segment by increasing financing costs. Products with relatively high risk weight (structured finance or unsecured loans) will be substantially affected. Of the three segments, the investment banking and in particular capital markets supports most changes, under the impact of new capital ratios. The activity of OTC derivatives market will be affected by the fact that banks should hold a higher level of capital to cover market risk and counterparty credit risk.

Table 2

Status of Basel III adoption (as of end September 2011)

Country	Basel III	Next steps - Implementation plans
Belgium	2	Follow EU process - EU proposal published on 20 July 2011
France	2	Follow EU process - EU proposal published on 20 July 2011
Germany	2	Follow EU process - EU proposal published on 20 July 2011
Italy	2	Follow EU process - EU proposal published on 20 July 2011
Luxembourg	2	Follow EU process - EU proposal published on 20 July 2011
The Netherlands	2	Follow EU process - EU proposal published on 20 July 2011
Spain	2	Follow EU process - EU proposal published on 20 July 2011
Sweden	2	Follow EU process - EU proposal published on 20 July 2011
Switzerland	1	Draft regulation on Basel III to be published for public consultation on 17 October 2011 - Final SIFI regulation (level: Banking Act) adopted by parliament on 30 September 2011 - Draft SIFI regulation (level: accompanying ordinances) to be published in Q4 2011
USA	1	Draft regulation for consultation planned during 2011. Basel 2.5 and Basel III must be coordinated with the Dodd-Frank regulatory reform legislation
European Union	2	Proposal (directive and regulation) published by the European Commission on 20 July 2011
Turkey	1	Draft regulation expected to be published in mid-2012
Saudi Arabia	3	Final regulation issued to banks
Japan	1	Public consultation planned in early 2012 - Publication of final rules text by the end of March 2012 - Implementation of final rules (end of March 2013 - In Japan, the fiscal year for banks starts in April and ends in March)

Source: http://www.bis.org/publ/bcbs/b3prog_rep_table.htm.

In terms of Basel III adoption stage, at the end of September this year, most European countries it stands in the second stage, ie the draft regulation was published, the US it stands in the first stage, ie the draft regulation has not yet been published, the most advanced stage of adoption being registered by Saudi Arabia, which stands in the third stage, ie the final regulation was

published and sent to eligible participants. Basel III was developed specifically to reduce the frequency and the intensity of financial crises and a lot of studies indicate that the agreement will reduce the significant costs of crises. Such benefits will not materialize without a consistent implementation of new standards. Any weakening or delay in the implementation will worsen the fragility of confidence in the financial system.

At first analyze, impact on US banks appear to be similar, although slightly attenuated, because the American banking sector, measured by asset value, is lower compared with the European one. It is estimated a deficit of Tier 1 of about € 600 billion and a long-term financing gap for the United States of 2,200 billion €. These shortcomings will affect the profitability of American banking system, reflected by a reduction of ROE indicator of about 3 percentage points. The leverage effect included in Basel III does not represent a major constraint. However, we remark some key differences. Regarding capital, deducting mortgage rights play an important role in the US compared with Europe, while minority interests are less relevant. The impact of measures regarding risk-weighted assets is not directly comparable between Europe and the United States as a result of very different starting position of the two industries. Given the fact that many US banks have not implemented yet Basel II, the capital indicators of these institutions may be more affected by the simultaneous transition towards Basel II and respectively III (Härle et al., 2010, p. 6).

3. The implications of Basel III upon banking system in Romania

The impact of new Basel III capital requirements upon Romanian banking system is considered to be limited. At the middle of 2011, the Romanian banking system level, Tier 1 owns about 80% of total equity and hybrid capital instruments are missing (BNR, 2011, p. 126). This structure of own funds mitigates the potential impact of implementing Basel III capital requirements. The leverage effect at the aggregate level registered a value of 6%, therefore the impact of introducing new requirements will not substantially affect the Romanian banking system. Also, the analysis of equity (total and Tier 1) highlights that banks fall under the new Basel III' standards on capital adequacy. The value of total equity represents 14.2 percent of total risk-weighted assets and the value at system level of Tier 1 in total risk-weighted assets is 13.6 percent at end of June 2011.

Table 3

The evolution of own funds and leverage effect September 2008 - June 2011 (percent)

	09.2008	12.2008	12.2009	03.2010	06.2010	09.2010	12.2010	03.2011	06.2011
Percentage of total equity:	100	100	100	100	100	100	100	100	100
<i>Tier 1</i>	76,7	77,2	78,4	79,8	79,3	79,7	80,3	81,0	80,1
Capital	48,7	43,7	46,0	47,3	49,8	51,3	50,8	51,7	53,1
Prime Capital	4,4	3,8	4,0	6,1	6,1	5,8	5,7	5,8	5,8
Legal reserves	28,2	34,6	33,4	33,0	32,6	32,4	32,3	30,2	30,2
Profit of current period	-	-	3,75	0,0	0,0	0,7	2,5	0,0	0,0
Loss of current period	-0,6	-0,7	-2,2	-1,2	-3,0	-3,5	-5,0	-0,5	-2,6
<i>Tier 2</i>	23,3	22,8	21,6	20,2	20,7	20,3	19,7	19,0	19,9
Revaluation reserves	9,6	8,1	6,06	5,0	5,6	5,7	5,6	5,7	5,7
Subordinated loans (net)	15,2	15,8	17,2	15,7	16,6	16,3	15,7	15,0	15,2
Subordinated loans (gross)	17,5	17,9	20,1	19,0	20,4	20,7	20,3	20,0	20,7
Leverage ratio (Tier-1 equity/ Total average assets)	6,55	8,13	7,55	8,09	7,91	7,89	8,11	7,96	7,79

Source: NBR Financial Stability Report 2011 and Monthly Bulletins, www.bnro.ro.

For reasons of financial stability, NBR decided that liquidity supervision of branches falls in tasks of the competent authority from host Member State and to have applied the standards of liquidity and the individual level, even if they are met at the consolidated level. Credit institutions will react differently to the new standards, depending on the transition period necessary to meet the requirements. If the transition period is shorter, banks may prefer to reduce the credit supply to increase capital levels, changing the structure of assets. Gradual implementation of new standards may mitigate the impact, the banks being able to adapt, by capitalization of profits, equity, changing the structure of liabilities.

Even if the impact of Basel III upon Romanian banking system is considered to be limited, we propose a series of measures which credit institutions could take to mitigate the impact of alignment with the new standards:

1) business model adjustment. Banks will review the profitability indicators in the context of a superior regulatory environment. Also, some business segments will be evaluated on the basis of “accessibility”, given the deficit of financing and capital in the future. Credit institutions will redesign their products and services to ensure that they continue to meet customer needs and, in the same time, with optimization of capital and bank liquidity. The adjustment of products mix can be achieved in several ways:

- banks can orient towards products which satisfy customer needs but undertake lower capital requirements;
- launching packages of products that combines financing with savings, banks being able to attract deposits from population, respectively, small and medium enterprises;
- banks can increase the share of short-term loans to reduce financing costs (eg orientation towards revolving loans in detriment of mortgages).

Banks should strive to improve their ability to transfer risks. One way is closer cooperation between the lending organization and product development, so both teams are committed to increasing the volume of credits that can be securitized or syndicated. Another way to transfer risk is the extension of partnerships regarding syndication and securitization issues, both geographically and by industry.

2) balance sheet restructuring. Basel III is based on integrated management of assets, capital, and funding and credit institutions have not the possibility of optimization the assets and liabilities independently. For many banks, a significant impact of Basel III comes from capital deductions. The new rules regarding capital quality depart from Basel II and offers limited space of maneuver, because banks must deduct:

- the capital of their insurance subsidiaries, which exceed a threshold of 10 percent, thereby reducing the ability to use this capital in the activity of the consolidated entity;
- the value of any defined-benefit pension fund asset;
- the investments in unconsolidated financial institutions over the 10 percent threshold.

Given the objective of improving capital quality, banks have a large range of options, in order to mitigate the impact of Basel III adoption. Thus, credit institutions (Härle et al., 2010, p. 16):

- can optimize the scope of consolidated capital by purchasing the minority shares or by reducing the excess capital of banking subsidiaries;
- can optimize their holdings in financial institutions by reducing unconsolidated investments below the thresholds defined by the capital deductions;
- can review contracts and determine the exact value of pension assets that can be readily withdrawn from the fund, and thus become eligible for recognition in regulatory capital.

Beyond the unique effort to align the balance sheet to the new capital requirements, banks have to invest permanently in its management capacity.

Many banks have only a corporative image of the balance sheet and a less precise diagnosis in terms of business lines. Banks face significant challenges: a chronology well defined, significant results after implementation, an unprecedented complexity of measures and interdependence. The implementation complexity requires experts for each credit institution. Depending on the fulfillment degree of Basel III requirements and their ambitions to build some of the most sophisticated risk processes, some institutions will navigate the complexity of the implementation easier than others. The challenge comes from three main areas: design, data quality and reporting complexity:

- *Design complexity.* Based on deficiencies of previous Accords, Basel III rears the standards to an unprecedented level for banking industry. The complexity resides especially from the key elements of the new regulation (the introduction of countercyclical capital buffer and capital conservation buffer) and the additional requirements to Basel II, materialized in:
 - building an integrated vision of credit risk and default for trading book, unlike Basel II, where regulatory capital for credit risk has been addressed only in the banking book;
 - the development of methodologies for calculating VaR and incremental risk charge, none of which were required under Basel II;
 - the extension of securitization charge from banking book to the trading book.
- *Data quality and reporting complexity.* High quality data are essential for efficient functioning of the bank's risk processes.
- *Operational complexity.*

The efficiency of banking corporative governance, depending on business model and risk profile, is the first step towards successful implementation of Basel III. Also, internal auditors play an important role because they have to critically analyze operations and to recommend improvements for internal control framework.

Conclusions

Basel III is more than a regulation for financial institutions in a post-crisis world and it will fundamentally affect the profitability of the banking industry. The reforms target micro-level, in order to increase the resistance of individual banks to stress periods, respectively, macro-prudential level, in order to reduce the frequency of financial crises. The new standards are intended to improve the

capacity of the banking sector to absorb shocks, through a better management of risks under the coordinates of strengthened corporate governance and high transparency conditions.

The impact of Basel III upon European banking system is significantly. Assuming full implementation by 2019 of all the measures and before any mitigation actions the pretax ROE for European banks would fall by between with 3.7 and 4.3 percentage points from the pre-crisis level of 15 percent. The impact of Basel III on the main business segments: retail banking, corporate and investment banking is different. Both retail and corporate banking activity are mainly affected by those requirements of Basel III which affect the entire bank, in particular, higher capital and liquidity standards. Of the three segments, the investment banking and in particular capital markets supports most changes, under the impact of new capital ratios. The activity of OTC derivatives market will be affected by the fact that banks should hold a higher level of capital to cover market risk and counterparty credit risk.

The impact on US banks appear to be similar, although slightly attenuated, because the American banking sector, measured by asset value, is lower compared with the European one. However, we remark some key differences. Regarding capital, deducting mortgage rights play an important role in the US compared with Europe, while minority interests are less relevant. The impact of measures regarding risk-weighted assets is not directly comparable between Europe and the United States as a result of very different starting position of the two industries. Given the fact that many US banks have not implemented yet Basel II, the capital indicators of these institutions may be more affected by the simultaneous transition towards Basel II and, respectively, III.

The impact of new Basel III capital requirements upon Romanian banking system is considered to be limited. At the middle of 2011, the Romanian banking system level, Tier 1 owns about 80% of total equity and hybrid capital instruments are missing. This structure of own funds mitigates the potential impact of implementing Basel III capital requirements. The leverage effect at the aggregate level registered a value of 6%, therefore the impact of introducing new requirements will not substantially affect the Romanian banking system.

For banks, the challenge comes from three main areas: design, data quality and reporting complexity. The measures which credit institutions could take to mitigate the impact of alignment with the new standards are business model adjustment and balance sheet restructuring. The efficiency of banking corporate governance, depending on business model and risk profile, is essential for successful implementation of Basel III.

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A Static Analysis of Pakistan's Trade Policy with Selected Asian Countries*

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Abstract. *The paper critically analyzes Pakistan's trade policy during 1996-2006 and explores the determinants of bilateral export and import flows between Pakistan and selected Asian countries (SAC) in recent past. It contains the policy issues which may be helpful for policy makers of other developing countries facing same conditions. A gravity model of international trade is empirically tested with the help of generalized least square (GLS) method of estimation in panel data. Our results show that the income of trading countries is a determining factor of Pakistan's import flows but not for export flows. For exports, the openness of economies is playing central role instead the incomes of trading countries. The exchange rate is also found as a determining factor of Pakistan's export flows and import flows. There is convincing evidence that current import and export flows are highly correlated with previous year whereas infrastructural bottlenecks have negative impact on Pakistan's import and export flows.*

Keywords: trade policy; regional commerce; gravity model; import-export flows; generalized least square method; currency exchange rate.

JEL Code: F13.

REL Codes: 10D, 10E.

* This paper is drawn mainly from published M. Phil thesis of Malik (2010).

1. Introduction

Like many other developing economies, Pakistan followed an import substitute industrialization strategy in the initial stages of its development to provide protection to industries producing import competitive goods. Tariffs on consumer goods were set higher than the tariffs on intermediate and capital goods, the imports of intermediate and capital goods were either freely allowed or were subjected to low tariffs. This policy was adopted to support the industries of capital goods and intermediate goods. Development strategy during much of the sixties continued to be heavily biased towards industry through export bonus scheme, import controls and tariffs, tax concessions such as tax holidays, accelerated depreciation allowances and loans at very low interest rates to support industrial sector in the growth strategy (Kemal, 1978). The government maintained an over-valued exchange rate to ensure the cheap availability of capital goods and other imported inputs to the industrial sector. By keeping prices of agricultural inputs at below world market prices, it made domestic raw materials available to the industrial sector at very cheap prices. These policies not only led to healthy growth in the exports of manufactured goods but also helped to diversify the product composition of Pakistan's exports.

During the seventies, separation of East Pakistan in December 1971 created many difficulties for international trade of Pakistan because a bulk of trade was carried between East Pakistan and West Pakistan. West Pakistan's exports to East Pakistan were consisted of 52% of manufactured goods and 48% of primary commodities whereas East Pakistan's exports to West Pakistan were consisted of 80% of manufactured goods and 20% of raw material. Separation of East Pakistan was creating a shortage problem. In order to this problem, the Government of Pakistan revised its export policy and took many steps to improve its international trade. Trade agreements were made with Muslim countries and export bonus scheme was abolished on 12th May, 1972. All these steps were taken for promotion of foreign trade but country continued to face serious balance of payment difficulties due to high oil prices in international market which resulted in inflation at close to 30 percent in 1973-74. Natural calamities of floods and pest attacks did the remaining damage to the economy and destroyed crops severely, putting pressure on prices and affecting industrial production. Government fulfilled the gap between external payments and receipts with large amounts of foreign loans and grants.

Economic liberalization and deregulation began in the early 1980s. The economic policies initiated wide ranging structural reforms as part of the Structural Adjustment and Stabilization Programs that aimed at liberalizing and deregulating the economy. The adoption of these programs led not only

adjustments in demand management policies but also major changes in industrial and trade policies in the form of deregulation, privatization, and trade liberalization (Sajid, Chaudhary, 1996). In addition, different policy measures of fiscal incentives, tax holidays, de-licensing of investment regimes and reduction of tariffs on capital goods were adopted to encourage private investment and to improve the viability of Pakistan's industrial sector to compete international markets. A major change in economic policy from the previous decades was the adoption of a managed floating exchange rate system. The transition to the new system led to an adjustment in the rupee which boosted Pakistan's exports.

The process of trade liberalization continued in the nineties as the government undertook significant steps to reform the foreign trade regime including rationalization of the tariff structure, reduction of non-tariff barriers and simplification of import procedures along with an aim to enhance exports by improving the world market share of Pakistan's core exports in major markets. The maximum tariff on imports came down from 225% in 1986-87 to 25%, at present there are four slabs in the customs tariff 25%, 20%, 10% and 5%. Pakistan has made substantial progress in eliminating or reducing tariff barriers to trade. But there are not serious efforts in improving trade structure. Pakistan's export structure has a very narrow base, both in terms of products and markets, most of the exportable items are of low value addition. The composition of exports mainly consists of textile manufactures and food items, largely originating from the agricultural sector where the incidence of uncertainty is quite high and the market is highly competitive. The textile sector constitutes over 65% of our total exports, its production and exports have attained almost maximum capacity and there is a need to shift the focus to other exportable items. Pakistan is not a major trading player in the international trade. Pakistan's imports have generally been greater than its exports. Like exports Pakistan's imports are highly concentrated to few items. Pakistan's objectives in negotiating bilateral and regional (preferential and free) trade agreements are primarily to seek better market access by addressing tariff and non-tariff measures, to further facilitate and promote trade, investment and to enhance the comparative value of Pakistan's exports. During mid 90's Pakistan's foreign policies are primarily aimed at strengthening trade relations with Asia.

Pakistan is pursuing a policy of export-led growth for which the issues of market access are important. As a consequence, an orchestrated trade policy has been carefully designed. During 1990's the government placed new importance on developing trade links with nearby nations and realized the need to increase regional blocks in international trade. So, Pakistan has adopted a conscious

strategy to gradually increase regional blocks in international trade especially with Asian countries. China, Japan, Malaysia, Saudi Arabia, Singapore and Indonesia are among those Asian countries who showed a much pronounced rise in trade with Pakistan during recent years and almost 35 percent to 40 percent of Pakistan's imports are from these countries. Japan, Saudi Arabia and Hong Kong (China) are among world's top seven major export markets of Pakistan since 1996-2006. So, present paper will examine major determinants of Pakistan's trade with above mentioned six selected Asian countries (SAC) and will attempt to synthesize the current international trade problems faced by Pakistan in trade with SAC. Table 1 represents the percentage share of SAC in total trade volume of Pakistan.

Table 1

%age share of SAC in total trade volume of Pakistan								
Countries	Variables	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
China	% Share in Total Exports	3.30	2.48	2.19	2.34	2.46	2.82	3.39
	% Share in Total Imports	4.89	5.56	6.87	7.40	8.94	9.46	11.57
Japan	% Share in Total Exports	2.09	1.82	1.27	1.09	1.14	0.77	0.73
	% Share in Total Imports	5.38	5.01	6.58	6.00	7.04	6.43	5.69
Malaysia	% Share in Total Exports	0.55	0.57	0.7	0.67	0.46	0.39	0.42
	% Share in Total Imports	4.00	4.41	4.63	3.86	3.29	2.48	3.09
Saudi Arabia	% Share in Total Exports	2.98	3.61	4.27	2.83	2.26	2.00	1.70
	% Share in Total Imports	11.7	11.6	10.7	11.4	12.0	10.47	11.43
Singapore	% Share in Total Exports	0.52	0.51	0.78	0.95	0.39	0.23	0.40
	% Share in Total Imports	3.04	3.12	3.49	3.15	1.81	1.62	1.57
Indonesia	% Share in Total Exports	1.47	0.82	0.65	0.36	0.49	0.35	0.43
	% Share in Total Imports	1.51	2.34	2.11	2.29	2.79	2.65	2.77

Source: The World Bank (2001-07).

Unfortunately, the percentage growth rate of Pakistan imports from Asian countries has generally been greater than its exports. Pakistan's imports and exports are highly concentrated to few items. One third of Pakistan's exports consists of manufactured and semi-manufactured goods. Export earnings deficit has sharp fluctuations. This is because of a number of handful products. The

imports are also concentrated to few items namely, machinery, petroleum products, chemicals, transport equipment, edible oil, iron and steel, fertilizers and tea which account for more than 70% of total imports. The country has to import these products to move on the road of development⁽²⁾. Table 2 represents the major items of exports and imports of Pakistan with SAC.

Table 2

Major items of exports and imports of Pakistan with selected asian countries

Countries	Variables	Items
China	Major Exports	Cotton yarn & woven fabrics, Organic Chemical, Leather & Leather Manufacturers, Ores, slag & ash, Fish & fish product
	Major Imports	Boiler machinery & mech. appl, Electrical/appl./parts, Organic Chemicals, Petroleum products & oil, Misc chemical products
Japan	Major Exports	Cotton yarn & woven fabrics, Leather and leather manufactures, Sport goods, Fish & Fish product, Petroleum & oil
	Major Imports	Road vehicles, Boilers, Machinery & Mach. App, Iron & Steel, Telecommunication app/equipt., Organic Chemicals
Malaysia	Major Exports	Cotton yarn & woven fabrics, Rice, Fish, Made up textile articles, rags etc., Manmade filament & yarns
	Major Imports	Animal or vegetable fats & oil, Organic chemicals, Boilers, Machinery & mechanical appliances, Plastic, Telecommunication equipments.
Saudi Arabia	Major Exports	Articles of apparel/cloth access., Made up textile article, rags etc., Rice, Cotton yarn & woven fabrics, Foot wear
	Major Imports	Petroleum products & oil, Organic Chemicals, Plastic, Fertilizers, Leather & leather manufactures
Singapore	Major Exports	Made up textile articles, rags etc., Pharmaceutical products, Cotton Yarn & woven fabrics, Article of apparel/cloth access.
	Major Imports	Boilers, Machinery & mechanical appliances, Telecommunication appl. & equip., Plastic & articles thereof, Organic chemicals, Petroleum products & oil
Indonesia	Major Exports	Cotton yarn & woven fabrics, Ed. Fruits & nuts, Leather & leather manufactures, Made up textile articles, rags etc., Manmade filaments & yarns
	Major Imports	Animal or vegetable fats & oil, Petroleum products & oil, Manmade fibre & yarns, Paper, paperboard & articles, Organic chemicals

Source: The World Bank (2001-07).

Total trade is sum of two components, exports and imports. Present paper will identify which component has larger contribution in total trade of Pakistan in its international trade. Patterns of trade are analyzed by employing mathematical and econometric tools. Pooled data of Pakistan, China, Japan, Malaysia, Indonesia, Saudi-Arabia, and Singapore is applied with the help of generalized least squares (GLS) estimation technique. Time series data covering the period 1996-2006 has been selected because the government placed new importance on developing trade links with nearby nations and realized the need to increase regional blocks in international trade. For this study, the data has been taken from International Financial statistics (IFS) (CD ROM, 2006), State Bank of Pakistan's Publications and Pakistan Economic Survey.

2. Literature review

To analyze the impact of bilateral trade policies on economic outcomes, researchers have generally used gravity models. There are wide ranges of applied research where the gravity model is used to examine the bilateral trade patterns and trade relationships. Gravity models utilize the gravitational force concept as an analogy to explain the volume of trade, capital flows and migration among the countries of the world. The gravity models have significant explanatory power. The effect of policies on trade flows can then be assessed by adding the policy variables to the equation and estimating deviations from the baseline flows. The gravity models allow more variables to be taken into account to explain the extent of trade (Hamilton et al., 1992, Baldwin, 1994, Deardorff, 1998, Paas, 2000)⁽³⁾. There are wide ranges of applied research where the gravity model is used to examine the bilateral trade patterns and trade relationships (Bergstrand, 1985, 1989, Koo, Karemera, 1991, Oguledo, Macphee, 1994, Zhang, Kristensen, 1995, Frankel, 1997, Rajapakse, Arunatilake, 1997, Karemera et al., 1999, Mathur, 1999, Sharma, Chua, 2000, Paas, 2000, Hassan, 2000, 2001, Jakab et al., 2001, Kalbasi, 2001, Martinez, Nowak, 2003, Soloaga, Winters, 2001, Christie, 2002, Carrillo, Li, 2002, Egger, Pfaffermayr, 2000, Matyas et al., 2000). Tinbergen (1962) was the first to conceive the gravity model in its simple form while Poyhonen (1963) was the second. Numerous adjustments, additions and modifications were made in the gravity model since then. It became popular for modeling trade flows (Eichengreen, Irwin, 1998, Feenstra, 1998).

In the 1990s, many studies have been conducted by using gravity model to access the impact of regional integration in Asia. These studies suggest that the unilateral trade liberalization would yield many more gains for the region compared to preferential trade liberalization and small economies in the region would gain much more from preferential trade liberalization than larger economies (Srinivasan, 1994, Srinivasan, Canonero, 1995, Pigato et al., 1997, Srinivansan, 1998).

According to Wei (1996) an OECD member country imports about two and half times as much from itself than other identical foreign country. Dash (1996) reviews that due to the low level of mutual trust, spillover effects of the ethnic and religious conflicts and the magnitude of bilateral disputes in South Asia, it is unrealistic to believe that any substantial growth of regional cooperation is possible without easing political tensions. According to Matyas (1997) one of the most fruitful ways to formalize the modeling and predicting foreign trade flows is through the use of Gravity type models. Hariss and

Matyas (1998) have generalized a time series of cross-sectional data set with an application of random effect gravity model to exports flow in the APEC region.

According to Limao and Venables (1999) transport costs depend on many complex details and land distance is much more costly than sea distance. Hassan (2001) concludes that the seven SAARC economies are not only reducing trade among themselves but also with the rest of the world (ROW). Chaudhary and Qaisrani (2002) have investigated the role of trade instability on investment and economic growth. The results show that export instability does not directly affect economic growth and investment in Pakistan. According to Zarzoso and Lehman (2003) infrastructure, income differences and exchange rate are important determinant of bilateral trade flows to assess the trade potential between southern common market (MERCOSUR) and European Union trading blocks. Paulino and Thirlwall (2004) have used panel data and times series cross section analysis to estimate the effect of trade liberalization on export growth, import growth, balance of trade and balance of payments for a sample of 22 developing countries that have adopted trade liberalization policies since the mid-1970s. Results show that liberalization stimulates export growth but raises import growth by more leading to a worsening of the balance of trade and payments. This has constrained the growth of output and living standards of people of developing countries.

Rose (2004) empirically proves that regional trade agreements do have statistically significant effect in influencing bilateral trade in Asia. According to Baunsgaard and Keen (2005) developing countries are still heavily dependent on trade tax revenues. Further trade liberalization may be hindered unless they are able to develop alternative sources of revenue. According to Noshab (2006) on regional front, Pakistan did not make serious efforts in trade promotions through the establishment of free trade areas with other countries during the 1990s. However, during last four years it has been very active in this regard and many fruitful efforts have been made leading to many free trade agreements and consequent increase in trade volume. According to Soesastro (2006) economic integration in East Asia has been largely market driven and East Asian governments should redirect attention to the WTO with a clear focus on further liberalization and stronger non-discriminatory rules.

Bader (2006) provides empirical evidence in support of the hypothesis that imports of intermediate and capital goods are critical inputs in the export production of the Pakistan. Hussain and Jalil (2006) address the question of whether intervention in foreign exchange market in Pakistan has been successful in either altering the exchange rate level or smoothing the exchange rate fluctuations. According to empirical results there is evidence of

effectiveness of official intervention on exchange rate level as well as on the variance. According to Baysan and Pitigala (2006), South Asian countries are more interested in trade with the industrial economies, that is the EU and the US than with the neighboring sub-regional economies and this could be due to differences in factor endowments with the large industrial economies.

3. Theoretical background of the model

The focus of the present paper is to formulate the gravity type model to examine the trade potential of Pakistan with SAC. Gravity model of international trade states that: “The trade flow between two countries is proportional to the product of each country’s ‘economic mass’, generally measured by GDP each to the power of quantities to be determined, divided by the distance between the countries’ respective ‘economic centers of gravity’, generally their capitals, raised to the power of another quantity to be determined (Christie, 2002)...”

This is expressed as:

$$T_{ijt} = \frac{\beta_0 (Y_{it}^{\beta_1} \times Y_{jt}^{\beta_2})}{D_{ijt}^{\beta_3}}, i = 1, j = 2, 3, 4, 5, 6, t = 1996, 1997, \dots, 2006 \quad (1)$$

where:

T_{ijt} is total trade between two countries in t time. Y_{it} GDP in i country. Y_{jt} is GDP in j country and D_{ijt} is the distance between the countries’ respective economic centers of gravity.

In this equation, GDP is directly proportional to the trade between countries and indirectly proportional to the distance between them. Taking equation (1) into natural log form:

$$\ln T_{ijt} = \ln \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} - \beta_3 \ln D_{ijt}, \\ i = 1, j = 2, 3, 4, 5, 6, t = 1996, 1997 \dots \dots 2006 \quad (2)$$

Gravity model is estimated in terms of natural logarithms (\ln). Due to its log-log-linear structure, the coefficients of the gravity model are in terms of elasticity or ratio of percentage changes. These dimensionless measures are comparable across countries and give us direct measures of the responsiveness of trade flows to the trade potential variables of Equations. So, the equation (2) becomes:

$$\ln T_{ijt} = \ln \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln D_{ijt},$$

$$i = 1, j = 2, 3, 4, 5, 6, t = 1996, 1997 \dots \dots 2006 \quad (3)$$

Most estimates of gravity models add a certain number of variables to test specific effects. According to objectives of study, if we want to examine the impact of $\sum_{h=4}^{11} \beta_n F_{ijht}$ distinct factors then the model becomes:

$$\ln T_{ijt} = \ln \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln D_{ijt} + \sum_{h=4}^{11} \beta_n F_{ijht} + \varepsilon_{ijt},$$

$$i = 1, j = 2, 3, 4, 5, 6, t = 1996, 1997 \dots \dots 2006 \quad (4)$$

where,

$\sum_{h=4}^{11} \beta_n F_{ijht}$ is a sum of specific independent variables either facilitating or restricting trade between two countries.

There are a huge number of empirical applications in the literature of international trade which have contributed to improvement of performance of the gravity equation. Some of them are closely related to our work. In recent papers, Matyas (1997), Matyas (1998), Chen and Wall (1999), Breuss and Egger (1999), and Egger (2000) improved the econometric specification of the gravity equation. Berstrand (1985), Helpman (1987), Wei (1996) and Limao and Venables (1999) are among others who contributed to the refinement of the explanatory variables considered in analysis and addition to new variables. In modeling of gravity type model present paper has taken those specific independent variables in $\sum_{h=4}^{11} \beta_n F_{ijht}$ which either facilitate or restrict trade of Pakistan with SAC.

$$\begin{aligned} \sum_{h=4}^{11} \beta_n F_{ijht} = & \beta_4 \ln N_{it} + \beta_5 \ln N_{jt} + \beta_6 \ln OP_{it} + \beta_7 \ln OP_{jt} + \beta_8 \ln ER_{ijt} + \\ & + \beta_9 \ln IN_{it} + \beta_{10} \ln IN_{jt} \end{aligned}$$

$$T_{ij(T-1)} + \varepsilon_{ijt}, i = 1, j = 2, 3, 4, 5, 6, t = 1996, 1997 \dots \dots 2006 \quad (5)$$

where,

N_{it} is the population of i^{th} country at time t . N_{jt} is the population of j^{th} countries at time t . Data on exchange rates ER_{ijt} are available in national

currency per US dollar for all countries. So these rates are converted into the j^{th} countries' currencies in terms of Pakistan's currency (i^{th} country's currency). OP_{it} is openness of economy in i^{th} country at time t . OP_{jt} is openness of economies in j^{th} countries at time t . IN_{it} is the inflation rate in i^{th} country at time t . IN_{jt} is the inflation rate in j^{th} countries at time t . $T_{ij(T-1)}$ is lag value of bilateral import flows of i^{th} country to j^{th} countries at time t in million US dollars. ε_{ijt} is the error term.

Total trade is sum of two components, exports and imports. So we have driven two separate equations to identify which component has larger contribution in total trade. By adding specific independent variables, the generalized equation of our import model is as follows:

So, by adding specific independent variables, the generalized equation of our import model is as follows:

$$\ln IMP_{ijt} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln D_{ijt} + \sum_{h=4}^{11} \beta_n F_{ijht} + \varepsilon_{ijt},$$

$$i = 1, j = 2, 3, 4, 5, 6, t = 1996, 1997 \dots \dots 2006 \quad (6)$$

where,

\ln is the natural log of variables, j is used for selected Asian countries, i for Pakistan and t for time. The explanatory variables are defined as follows:

IMP_{ijt} is bilateral import flow of i^{th} country to j^{th} countries at time t in million US dollars. Y_{it} is the GNP of i^{th} country at time t in million US dollars.

Y_{jt} is the GNP of j^{th} countries at time t in million US dollars. $\sum_{h=4}^{11} \beta_n F_{ijht}$ have been discussed in detail in equation (5).

Using the same methodology for gravity model of Pakistan's export flows, the natural log form is:

$$\ln Exp_{ijt} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln D_{ijt} + \sum_{h=4}^{11} \beta_n F_{ijht} + \varepsilon_{ijt}, \quad (7)$$

$$i = 1, j = 2, 3, 4, 5, 6, t = 1996, 1997 \dots \dots 2006$$

where,

\ln is the natural log of variables, j is used for selected Asian countries, i for Pakistan and t for time. The explanatory variables are defined as follows:

EXP_{ijt} is bilateral import flow of i^{th} country to j^{th} countries at time t in million US dollars. Y_{it} is the GNP of i^{th} country at time t in million US dollars.

Y_{jt} is the GNP of j^{th} countries at time t in million US dollars. $\sum_{h=4}^{11} \beta_n F_{ijht}$ have been discussed in detail in equation (5).

The gravity model developed in this paper has used balanced panel data with the generalized least squares (GLS) estimation technique⁽³⁾. In this technique, we assume that the intercept (β_0) represents the mean value of all cross-sectional intercepts and the error component (ε_{ijt}) represents the random deviation of individual intercept from the mean value. In GLS method, it is assumed that error component (ε_{ijt}) and independent variables are uncorrelated. With this assumption one is able to separately identify those factors which affect bilateral trade flows⁽⁴⁾. It is also proved from a priori point of view that the GLS estimation technique is appropriate for panel data when we estimate trade flows between samples of trading partners from large population⁽⁵⁾. Our sample includes only six major trading partners of Pakistan from a large population of Asia for detailed study. So, present paper has used GLS estimation technique.

4. Empirical results and general discussion

The models have good R-Square values and F-Statistics test shows that both models are significant at 1% level of significance. We have performed different diagnostic tests which show that there is no multicollinearity problem among the variables. The auto correlated error structure also supports the analysis. So, the equation (6) for import model and equation (7) for export model is estimated through GLS estimation technique and results are given in the Table (3).

Table 3

Independent variables	Import model dependent variable (IMP)	Export model dependent variable (EXP)
β_0	-0.053 (0.7294)	0.126 (0.461)
<i>Y</i>	0.064*** (0.0134)	0.036 (0.201)
<i>N</i>	0.078*** (0.0031)	-0.058** (0.044)
<i>ER</i>	-0.055*** (0.0073)	0.127*** (0.000)
<i>OP</i>	-0.117*** (0.0000)	0.148*** (0.000)
<i>IN</i>	0.001 (0.5446)	-0.001 (0.417)
<i>D</i>	-0.0613* (0.0635)	0.088*** (0.0149)
$IMP_{ijt(IMP-1)}$	0.877*** (0.0000)	
$EXP_{ijt(EXP-1)}$		0.702*** (0.000)
R-Square	0.89	0.71
F Statistic	94.79***	28.769***
Prob (F-stat)	0.000	0.000

Note: (***) for 1% level of significance.

(*) for 10% level of significance.

P-values are given in parentheses.

All values are calculated by author.

In our import model (Table 3), the income of trading countries (Y) is positive and significant factor. The empirical results show that Pakistan's import flows with SAC increase by 0.064% with 1% increase in Y . It indicates the level of development. If a country develops, consumers demand more exotic foreign varieties that are considered superior goods. Moreover, large domestic markets are able to absorb more imports. So an increase in the incomes of trading countries increases bilateral imports. There are many empirical studies in the literature who have confirmed a positive relation between import flows and income growth⁽⁶⁾. In our export model the income of trading countries (Y) is positive and insignificant. One reason for this difference is due to the high level production in SAC due to diversified nature of goods and their economies of scale, especially in China. Empirical studies on the relationship between export growth and income growth have largely supported the view that export growth has a favorable impact on income growth⁽⁷⁾.

Asia is the world's most populous continent with more than 60% of the world's current human population⁽⁸⁾. So, it is an important factor in estimation. Population size of trading countries (N) is statistically significant factor and has positive relation with Pakistan's import flows which means big absorption effect of Asian domestic markets are causing more reliance on international trade transactions. (N) has negative relation with Pakistan's export flows. The majority of the general equilibrium studies have found the population size of the trading countries to have a negative and statistically significant effect on trade flows⁽⁹⁾.

The impact of exchange rate (ER) has a negative and statistically significant relation with Pakistan's import flows from SAC. Depreciation of Pakistani currency has many adverse effects along with increase in prices and foreign debt. Unfortunately Pakistan's imports have generally been greater than its exports and it has to face the problem in balance of trade. According to empirical results Pakistan's import flows with SAC decrease by only 0.05% with 1% increase in ER . The impact is very small because Pakistan's imports are highly concentrated to few items that account for more than 70% of total imports. The empirical studies of Matyas (1997), Harris and Matyas (1998), Akhtar and Malik (2000) support the view that import flows are negatively correlated with ER whereas it has a positive and statistically significant relation with Pakistan's export flows to SAC. Along with many adverse effects of budget deficit and inflation, exchange rate is playing a vital role in increasing Pakistan's exports demand in SAC.

Openness of SAC economies (OP) is statistically significant factor and has a negative sign. The empirical results show that Pakistan's import flows with SAC decrease by 0.12% with 1% increase in the OP . According to Social

Policy and Development Centre (SPDC) annual report (2005-06) present efforts to liberalize the economies of Asia are insufficient. Asian countries are relying too much on negotiations while neglecting sensible trade policy reforms at home. Most of the trade liberalization policies have self imposed restrictions on trade through both tariff and non tariff barriers (NTBs)⁽¹⁰⁾. The average tariffs on manufacturing and primary goods are still high in South Asian economies as compared to East Asian economies⁽¹¹⁾. There are many studies which suggest that present efforts to liberalize the economies of Asia are insufficient⁽¹²⁾. (*OP*) is statistically significant factor and possesses a positive sign in export model. The empirical results show that Pakistan's export volume with SAC increases by 0.148% with 1% increase in the *OP*. Many studies have found it to be trade-enhancing and statistically significant⁽¹³⁾.

Inflation (*IN*) is statistically insignificant and possesses a negative sign in both models. Lag value of both models show a statistically significant and positive sign⁽¹⁴⁾. There is convincing evidence that current import flows are highly correlated with previous year⁽¹⁵⁾. It is supported by the empirical results that trade relations once established last for long time.

Distance (*D*) is used as proxy variable for transport cost. Distance between a pair of countries naturally determines the volume of trade between them. The distance variable is significant and has negative sign in both models. It also supports the theory that transportation cost is an important factor in determining the international prices of a country⁽¹⁶⁾. The empirical studies of Matyas (1997), Harris and Matyas (1998), Hassan (2001) and Rahman (2003) support the view that export flows are negatively correlated with transportation costs.

5. Conclusion and policy implications

Pakistan is a country which highly depends on trade because country needs to import variety of goods to fulfill the increasing demands resulting from its economic recovery and development. Pakistan's export structure has a very narrow base, both in terms of products and markets, most of the exportable items are of low value addition. The composition of exports mainly consists of textile manufactures and food items, largely originating from the agricultural sector where the incidence of uncertainty is quite high and the market is highly competitive. The textile sector constitutes over 65% of our total exports, its production and exports have attained almost maximum capacity and there is a need to shift the focus to other exportable items. As a result, Pakistan has to face the problem of deficit in balance of payments. This situation is not only

faced by Pakistan but many Asian economies with exception of few successful East Asian countries are facing this problem especially south Asian economies.

From the empirical evidences of the gravity model, we can conclude that the income of trading countries is a determining factor of Pakistan's import flows but not for export flows. For exports, the openness of economies is playing central role instead the incomes of trading countries. The exchange rate is also found as a determining factor of Pakistan's export flows and import flows. There is convincing evidence that current import and export flows are highly correlated with previous year whereas infrastructural bottlenecks have negative impact on Pakistan's import and export flows.

Six pronounced factors simultaneously constrain the growth of Pakistan's trade with SAC. These include non-availability of export surpluses in accordance, inefficient production process, non-availability of vocational training institutes to produce sector specific technical manpower, unstable exchange rate and inconsistency in economic policies, lack of diversification of exports both commodity-wise and market-wise and inadequate transits facilities in order to promote intra-regional trade. Joint ventures may also be encouraged in area where Asian countries have accumulated sufficient experiences. These include among others agro-based industries, textile, engineering, paper and chemicals. In order to promote technological collaboration SAC may also devise a common policy towards technology transfer. Hence, there is need to address all of these issues for sustainable growth in bilateral as well as regional trade within SAC.

Notes

- (1) For further details see Pakistan Economic Survey (2006-07).
- (2) There is a huge number of empirical applications in the literature of international trade, which have contributed to improvement of performance of the gravity equation. Some of them are closely related to our work. In recent papers, Matyas (1997; 1998); Chen and Wall (1999); Breuss and Egger (1999) and Egger (2000) improved the econometric specification of the gravity equation. Berstrand (1985); Helpman (1987); Wei (1996); Soloaga and Winters (1999) and Limao and Venables (1999) are among others, who contributed to the refinement of the explanatory variables considered in analysis and addition to new variables.
- (3) If each cross-sectional unit has the same number of time series observations, then such a panel is called a balanced panel.
- (4) For comprehensive discussion on assumptions of GLS method see Gujarati (2003) fourth edition and Harris and Matyas (1998).
- (5) There are many researchers who have empirically tested this view for example; Harris and Matyas (1998); Egger (2000) and Gujarati (2003).
- (6) For example Akhtar and Malik (2000); Rahman (2003); Chaudhary et al. (2007)

- (7) For example; Matyas (1997); Akhtar and Malik (2000); Chaudhary et al. (2007).
- (8) Asian Development outlook (2007).
- (9) According to Linnemann (1966); Sapir (1981); Bikker (1987); Matyas (1997); Harris and Matyas (1998).
- (10) For further details see annual review of Social Policy and Development Centre (2005-06).
- (11) For further details see Bhagwati (1993), p. 69.
- (12) See Bhagwati (1993); Bandara and McGillivray (1998) for example.
- (13) Oguledo and Macphee (1994); Rahman (2003); Akhtar and Malik (2000).
- (14) Many studies have used lag values of dependent variable as independent variable in Gravity type models for example, Matyas (1997; 1998) and Matyas et al. (1997).
- (15) According to Harris and Matyas (1998) lag value of bilateral import flows is used as instrument variable, which allows for a correlation between contemporaneous trade flows and those of the previous years, yielding a dynamic model of import flows. This habit persistence in import flows is likely due to (among other factors) political ties.
- (16) For detailed discussion on three types of transportation costs see, Amjadi A. and L.A. Winters (1997), Limao and A.J. Venables (1999) and Egger (2000).

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Social and Environmental Issues in Corporative Management: A Romanian Story

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Abstract. *The complex process of monitoring entities environmental impact entails ability, respect for the environment and reduction of the ecological footprint. This research defines Romanian trends as regards the effects and actions to adapt to climate change and characterizes corporate management in terms of compliance with environmental management systems requirements. The main objective is to assess the current state of environmental management implementation and identifies relevant social and environmental issues that companies use to include in corporate management. The current agenda would allow developing a framework for environmental management implementation in Romanian entities, in order to assume the corporate social responsibility.*

Keywords: climate change; adaptation; social and environmental impact; corporative management; Romania.

JEL Codes: M14, Q01, Q54.

REL Code: 15D.

1. Introduction

The context of sustainable development is strongly influenced by current global climate changes. The extent and intensity of environmental impacts caused international, national, regional, local, and individual positions and actions (in terms of individuals and economic entities). The starting point of this accounting research is the presentation of Romanian activities directed towards environmental protection and the trends assessed by the authority in the field, in terms of adapting to climate change.

In a broader sense, climate change is understood as any form of climate deviation that has no physical cause and is not statistical in nature. The causes of this complex phenomenon are *natural* (changes in solar activity, long term alterations of the Earth's orbit, internal natural processes of the climate system) and *anthropological* (the increase in carbon dioxide and other greenhouse gases atmospheric concentration). In a narrow sense, climate change indicates significant alterations of climatological elements during a given period, entailing economic, social and environmental consequences. Climate change is an environmental problem leading to risks in the development process (European Communities, 2009). Food crisis, water shortage, spread of diseases in new areas, damage caused by floods, the labour migration forced by the desertification of farmlands and the rising sea and ocean levels are only a few of the effects of climate change that all countries must recognize.

The perspective of the planetary history explains and refines the understanding of the problem. Effects such as global warming have been offset by stimulating the development of new species that have found the new conditions favourable for life and have multiplied explosively in the absence of competition, recreating an atmosphere with less carbon. Therefore, the answer was primarily provided by nature instead of technology or policy, and has resulted in the disappearance of some species and the emergence of others. This is already perceived as a risk: dozens of species disappear each day, and biotechnologies based on cultures of microorganisms having a versatile enough behaviour as to meet technological needs/purposes are able, at least in theory, to generate global epidemics, leaving nature as the sole regulating factor of climate change. Nowadays, the danger of climate change must be approached not only from an ecological, but as well as from the social and economic perspectives.

The current paper aims to position Romania from the perspective of the effects and actions to adapt to climate change, as a substantiation to assess the current level of environmental management implementation and to identify environmental and social elements that are relevant for entities to include in

their corporative management. Achieving the objective has determined the presentation, in the *first section* of the paper, the manifestations of climate change that have affected the Romanian environment, based on the quantitative information concerning temperature levels or precipitation, and extreme weather events, discussed in terms of vulnerability and impact on various economic and social sectors. In order to create the scientific context it was developed the concept of adaptation to global climate change and multiple perspectives identified in approaching the concept, both in the literature and by the Romanian and international regulators. *Section 2* reviews the European Union Eco-Management and Audit Scheme (EMAS) requirements to assess the current degree of environmental management implementation in Romanian entities. *Section 3* completes this picture with data from a questionnaire-based study that was aimed at assessing the way Romanian entities incorporate social and environmental aspects into corporate management. Finally, there are presented the conclusions of the study, its limitations and future research directions.

2. Adaptation to climate change: realities and reactions

The phenomenon of climate change and its effects are manifestations of an acute reality, to which the only one rational and efficient response is *adaptation*. Accordingly, in addition to the global concerns to reduce the emissions of greenhouse gases, in the context of the Kyoto Protocol, an increasing number of countries develop and implement strategies and plans to adapt to the consequences of climate change. One of the most recent documents is the Climate Change Adaptation Plan, recently adopted by the government in Paris, preparing France for temperatures higher by 2°C to 3,5°C and precipitations levels lower by 30%, namely heat and drought conditions.

Manifestations of the climate change phenomenon in Romania

The adoption of the best adaptation measures requires an accurate knowledge of the possible effects of climate change on social and economic sectors. Based on the data provided by the Romanian Ministry of Environment and Forests (RMEF) in the Appendix to MO 1170/29.09.2008 concerning the adaptation to the effects of climate change, there have been identified a series of manifestations of the climate change phenomenon in Romania, and the adjacent economic and social implications.

Temperature. Compared to the global annual increase in average temperature of 0.6⁰C in the period 1901 – 2000, in Romania the annual average

temperature increased by only 0.3°C in the period 1901-2006, the increase was 0.5°C , compared to a global increase of 0.74°C (1906-2005).

Similar to the global situation, there have been changes in the regime of extreme weather events (based on the analysis of the data above from multiple weather stations).

- An increase of the annual frequency of tropical days (daily maximum temperature higher than 30°C) and a decrease of the annual frequency of winter days (daily minimum temperature lower than 0°C);
- A significant increase in average minimum summer temperatures and the average maximum winter temperatures (up to 2°C in the South and South-East during the summer).

Precipitations. In the last eight years (2000-2007) in Romania there were registered two opposite extreme rainfall events: draughts in 2000 and 2007 and floods in 2005. In 2007 there has been registered an extreme weather event, the winter 2006-2007 being the warmest winter since observational measurements are performed in Romania; at the time, pronounced deviations of maximum/minimum temperatures from the average multiannual regime have persisted over long periods of time.

The longest drought periods recorded in the twentieth century had a peak year: 1904, 1946, and 1990. The area affected the most by the hydrological drought in Romania in the last decades of the twentieth century and at the beginning of the twenty-first century was the South, excessively in the Oltenia region.

These results confirm one of the 4th Assessment Report (AR4) conclusions of Intergovernmental Panel for Climate Change (IPCC), showing an increase in the frequency and intensity of extreme weather events caused by the escalation of the global climate change phenomenon.

Impact and vulnerability. The sectors affected by the increasing temperatures, the changes in precipitation levels, and the manifestation of extreme weather events are: biodiversity, agriculture, water resources, forestry, infrastructure – land and buildings, tourism, energy, industry, transportation, healthcare and recreation. In addition, there are some indirectly affected economic sectors, such as: food, woodworking, textiles, biomass and renewable energy production.

The increase in winter temperatures will result in a 6 to 8% in energy demand for heating, in the period 2021-2050. Instead, until 2030, the energy consumption during the summer may increase by as much as 28%, because of high temperatures.

Adaptation to climate change: concepts and perspectives

The two fundamental choices in response to risks caused by anthropogenic climate change are the mitigation of climate change (limiting global climate change through reducing the emissions of greenhouse gases and enhancing their sinks) and the adaptation to climate change. Starting from the assertions of Füssel and Klein (2005), in Table 1 are analysed and adapted the two feedbacks.

Table 1

Mitigation vs. adaptation to climate change

	Mitigation of climate change	Adaptation to climate change
<i>Benefited systems</i>	All systems	Selected systems
<i>Scale of effect</i>	Global	Local to regional
<i>Life time</i>	Centuries	Years to centuries
<i>Lead time decades</i>	Decades	Immediate to decades
<i>Effectiveness</i>	Certain	Generally less certain
<i>Ancillary benefits</i>	Sometimes	Mostly
<i>Polluter pays</i>	Typically yes	Not necessarily
<i>Payer benefits</i>	Only little	Almost fully
<i>Monitoring</i>	Relatively easy	More difficult
<i>Responsibility</i>	Unidentified	Specialized organizations (i.e. IPCC) and entities
<i>Research</i>	Exact sciences	Post-normal sciences

Currently, adaptation to climate change has become a pervasive topic in public debates on environmental policies. Detailed and regionalized cost estimates as a basis for cost-benefit analyses are rare (Osberghaus, Reif, 2010). Accounting, as a communication and managerial tool, is expected to provide a comprehensive account of resource consumption and its effects. However, in terms of *natural* resources and the regeneration of natural resources, the question arises: Can one speak of the correct application of the comprehensiveness principle? Gray and Bebbington (2000) raise the problem of a fundamental conflict between the main objective of a business (profit) and environmental protection, especially from the perspective of sustainable development goals. In addition, Ngwakwe (2010) emphasizes the fact that “there is no alternative to accounting at the moment for communicating corporate sustainability information”. We adhere to the aforementioned assessments through the current paper, which is also an attempt to create an objective image of the Romanian situation in the European context, in terms of the actions taken to adapt to climate change and the feedback form Romanian entities management.

Adapting to climate change is an intensely debated issue in the literature. We base this assessment on the conceptual approach provided in Table 2.

Table 2

Adaptation to climate change – conceptual approach	
Source	Concepts
Burton, 1992, in Smit et.al., 1999	<i>Societal adaptation to climate</i> is “the process through which people reduce the adverse effects of climate on their health and well-being, and take advantage of the opportunities that their climatic environment provides”.
Smit, 1993	<i>Adaptation</i> involves “adjustments to enhance the viability of social and economic activities and reduce their vulnerability climate, including its current variability and extreme events as well as longer term climate change”.
Stakhiv, 1993	<i>Adaptation</i> means “any adjustment, whether passive, reactive or anticipatory, that is proposed as a means for ameliorating the anticipated adverse consequences associated with climate change”.
Smith et al., 1996	<i>Adaptation to climate change</i> includes all adjustments in behaviour or economic structure that reduce the vulnerability of society to changes in the climate system.
Watson et al., 1996	<i>Adaptability</i> refers to “the degree to which adjustments are possible in practices, processes, or structures of systems to projected or actual changes of climate”.
Tol et al., 1998	Adaptation is considered in a balanced context, seen as a change not static but a dynamic response to continuous climate change. This will in turn help to determine the optimal control level of greenhouse gas emissions, and optimal government policies to adapt to climate change.
Smit et al., 2000	Adaptation to climate stimuli includes the ability to adapt through feedback to extreme events, to yearly climate variability and long-term changes in the mean conditions, both individually and in interdependence.
Füssel and Klein, 2005	Adaptation primarily aims at moderating the adverse effects of unavoids climate change through a wide range of actions that are targeted at the vulnerable system (It may also include taking action to seize new opportunities brought about by climate change.)
Blanco et al., 2009	Adapting to climate change is somewhat similar to mitigating natural hazards, through climate change results in spatially dispersed and systemic impacts, while natural hazards are generally localized, episodic events.

Academia was the first in addressing this issue and leading the way towards institutional efforts and specialized regulations. Table 3 presents the concept of adaptation to climate change, as defined by specialized organizations.

Table 3

Adaptation to climate change – regulatory approach	
Source	Concepts
IPCC, 2001	Adaptation refers to actions that people take in response to or in anticipation of projected or actual changes in climate, either to reduce the adverse impacts or to take advantage of opportunities offered by such changes.
European Commissions, 2007	Adaptation aims at reducing the risk and damage from current and future harmful impacts cost-effectively or exploiting potential benefits.
IPCC, 2007	Adaptation means the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

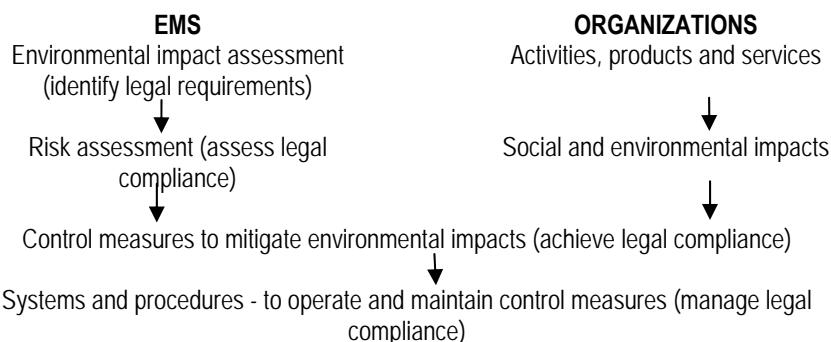
The central public authority in Romania for environmental issues, the Ministry of Environment and Forests (MEF), defines (OM 1170/29.09.2008) adaptation to climate change as follows:

“...the ability of natural and anthropic systems to respond to the effects of climate change, including climate variability and extreme weather events, in order to reduce potential damages, seize the opportunities or faces the consequences of climate change”.

The negative impact of climate change, including that of climate variability and extreme weather events on natural and anthropic systems, determines the degree of system vulnerability. Watson et al., (1996) believe that vulnerability depends not only on system sensitivity, but also on its adaptive capacity when confronted with new climate conditions. The instruments, resources and institutional structures needed to effectively implement the measures for adaptation constitute the *adaptive capacity*, which is enhanced by an adaptive management system oriented towards sustainable performance: economic, social and environmental performance. A successful adaptation depends on technological advancements, institutional commitments, financing availability, and the willingness to communicate (Watson et al., 1996).

3. Environmental management system: a normative view

An Environmental Management System (EMS) is “that part of an organisation’s management system used to develop and implement its environmental policy and manage its environmental aspects” (ISO 14001, 2004). Figure 1 shows a schematic of the key elements of an EMS. The EMS process can be expressed in terms of environmental management techniques set out below.



Source: Caraiani et al., 2007.

Figure 1. Key elements of an EMS

The normative view offers opportunities for the debate, design, and implementation of an environmental management system, in the context of area-specific and voluntary regulations. The choices depend on the degree of responsibility, culture and respect for the environment. Table 4 provides a synthetic view of the main normative options in the field of environmental management systems.

Table 4

EMS – Normative choices			
	Description	Applicability	Standard/ Regulation
In-house EMS	Many companies choose to design and implement an EMS to their own specification. An in-house EMS may be as effective as any other, but the main drawback for regulators is that it is more difficult to assess the effectiveness of such an EMS in the absence of a standard approach, including assessment criteria.	International	-
EMS: Requirements with guidance for use	The standard specifies the different elements of an EMS and how they relate to one another based on a methodology known as plan-do-check-act. The overall aim of the standard is to support environmental protection and prevention of pollution in balance with socio-economic needs. In common with all management systems, the standard provides a means for continual improvement of performance. Conformity against the requirements of ISO 14001:2004 can be demonstrated through self-declaration, accredited certification or by other independent means. Organisations are also required "to establish, implement and maintain a procedure(s) to identify and have access to applicable legal requirements and other requirements to which the organisation subscribes related to its environmental aspects" and "to determine how these requirements apply to its environmental aspects". This requirement is intended to promote knowledge and understand legal responsibilities. This standard does not require an organisation to establish libraries of legal or other documents that will rarely be referenced or used, but to develop information that will help the organisation to know what is legally required and how it relates to their organisation.	International	ISO 14001/2004
EMS: Guide to the phased implementation of an EMS including the use of environmental performance evaluation	The standard: <ul style="list-style-type: none"> • provides guidance to organisations on environmental management and the use of environmental performance indicators; • describes a six-phase, incremental approach to implementing an EMS using environmental performance evaluation; • is suitable for any organisation, particularly small and medium-sized enterprises, to implement an EMS – for example to ISO 14001 standard; • may be used to demonstrate improved environmental performance to customers and stakeholders. 	British entities	British Standard (BS) 8555/2003

Eco-management and audit scheme (EMAS)	It is a registration scheme, not simply a standard. It is a voluntary initiative designed to improve organisations' environmental performance. Its EMS specification is the same as that of ISO 14001:2004 but it places additional emphasis on legal compliance and environmental performance.	European	European Council, Directive no. 1836/1993
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The voluntary adoption of EMAS involves the recognition of and the compliance with the entire set of provisions, as a sole guarantee of a reliable and rigorous approach of environmental management. The main characteristics of EMAS are summarized below:

- is an European regulation with precise requirements;
- involves the binding obligation of an external audit;
- requires the mandatory disclosure of the audit report and the disclosure of results arising from the implementation of measures resulting from the audit, to inform stakeholders;
- operates under the specific requirement of compliance with legal provisions;
- the focus is the continuous improvement of environmental performance/impact.

The main EMAS objective is the continuous improvement of environmental performance through the implementation of adequate measurement, evaluation and reporting tools. The main results consist of the continuous improvement of environmental issues management, as well as providing reliable information in the field. This voluntary environmental management tool is operational since 1995. The development of EMAS has undergone three major qualitative stages:

- EMAS 1 – 1993-1995 – EMAS is adopted by the European Council and opens for participation by industrial companies;
- EMAS 2 – 2001 Regulation No. 761/2001 adopted by the European Council open to all economic sectors including public and private services;
- EMAS 3 – 2009-2010 New Regulation No. 1221/2009 adopted by the Council and entered into force on 11 January 2010. This new regulation aims voluntary participation in EMAS of all entities inside and outside the European Community.

On a declarative level and in terms of legislation, Romania is in line with the actions to adapt to global climate changes. However, the efforts are very limited. According to the data provided by the Ministry of Environment and Forests, there are currently four Romanian entities holding the EMAS certification.

Table 5

Romanian organization EMAS certified

Organization name	Date of registration	Number of sites	Industry
Association of Metropolitan Zone of Oradea	2007	1	Urban development
Evangelical Parish of Sibiu	2009	3 (Church, Parish House, Parish Centre)	Service
Evangelical Parish of Sibiu	2009	1 (Luxemburg House)	Service
SC Schaeffler România SRL Brașov	2009	1	Automobile industry, tools

Source: MEF, 2010.

4. Empirical research of the issue

The assessment of the degree of environmental management implementation by Romanian entities was performed from two different perspectives.

The first approach was centred on the international *legal and institutional framework* for the environmental management systems and the manner in which it was assimilated by the Romanian economic environment. The adoption by Romania of the *Regulation on the voluntary participation by organizations in EMAS* (MO no. 1514/6.06.2011) was considered to be a leverage factor for the increase in the degree of implementation. Consequently, it was found that the number of entities which adhered to the EMAS has increased as opposed to the previous study (one entity in 2009, see Dascălu et al., 2009). However, the fact that at the end of 2010, only four Romanian entities were certified by EMAS reveals a very low level of implementation for this type of management system.

Searching for the causes and explanations of this *status quo*, during the second phase, we focused on the Romanian economic entities, by means of a questionnaire-based research.

Target sampling and questionnaire design

The sample choosing process was an attempt to identify the Romanian companies displaying interest for social and environmental issues. Therefore, a part of the population consists of entities that have voluntarily registered on the first Romanian corporative social responsibility portal (www.responsabilitatesociala.ro). The rest of the population consists of listed companies of the *Bucharest Stock Exchange* (BVB), which *must* report, as requested by the Corporate Governance Code, the state of the integration of social and environmental aspects in their operational activities (*The Apply or Explain Declaration*).

The surveyed companies were asked to answer a series of questions about the management of social and environmental issues. An identification was attempted for the actual ways social and environmental actions are enclosed (or not) in the corporate management process and the actual ways social and environmental information is built, prepared and disclosed by the annual financial statements, social responsibility reports or by other means of reporting.

Discussions and results

The respondents reside in different industries (finance, beverages, pharmaceuticals, energy transportation, cosmetics, software), also having different sizes and organizational patterns. 71% of the responding entities are registered on the aforementioned *www.responsabilitatesocială.ro* portal, which shows that, in the absence of any legal constraints, the voluntary character is the leading influence factor, placing the entity inside or outside the social and environmental aspects sphere of interest. The very limited number of respondents (only 5% of the surveyed entities) leads to the conclusion that the assimilation of the social and environmental aspects is still at an early stage, being still far from becoming a current or mature practice. This conclusion correlates with the previous findings concerning the reduced number of entities using EMAS.

Even if all the entities stated the concern of their corporate management for the social and environmental issues, 57% of them provided a negative answer to the question regarding the use of the legal and institutional framework for the environmental management (EMAS, ISO 14000 or ISO 26000). Thus, most of the surveyed companies voluntarily support the idea of social and environmental reporting, but very few of them actually use the voluntarily applicable legal framework in the field of environmental management. We consider this aspect to be specific for the early stage of the environmental management in Romania: in the absence of regulations, the social and environmental actions are managed as punctual, independent projects, whose results are informally presented, and treated somewhat similar to advertising campaigns.

In support of the aforesaid idea we can provide the answers we received to the question regarding the reporting form for the social and environmental impact. The surveyed entities have chosen very different reporting techniques, too diverse to be comparable (43% annual reports, 43% Corporate Social Responsibility reports, 14% social and environmental media campaigns). Moreover, the *www.responsabilitatesocială.ro* portal was created and is managed by a group of Public Relations (PR) and communication experts, so

the disclosed information mainly refers to the entities' media campaigns, and far less to the entities' social and environmental impact. The term "reporting" seems to be used in a very broad sense, as in the absence of mandatory regulations many of entities decide to report exclusively the positive aspects. In these circumstances, a legitimate question arises concerning the content of the social and environmental reporting: impact or campaign? In other words, the place of the environmental management is taken by a sort of "PR or communications management", and punctual short-term projects take the place of coherent long-term strategies. A PR-specific point of view becomes obvious from the analysis of the results: "Why need regulations to do good deeds?"

Table 6 presents the importance that respondents assigned to the EMAS related aspects.

Table 6

EMAS – related aspects importance	
EMAS-related aspect	The importance of the aspect (on a scale from 1 to 5)
Environmental impact measurement	4.43
Environmental policy	4.29
Environmental programs	4.29
Environmental reporting	4.15
Environmental impact identification and reporting	4.14
Environmental internal audit	3.87
Compliance audit	3.59
Authority registration and validation	3.59

Items with scores higher than 4.00 aimed at environmental strategy and tactics coherence in order to identify, evaluate and report environmental impacts. Third-party verification, auditing or any kind of relations with governmental authorities were assigned significantly lower scores, revealing the entities' reluctance for the idea of authority or regulation, in a field which was almost un-regulated until recently. There is a clear demarcation between the relative importance attributed to recognition and monitoring environmental impact from those that require validation of policies, systems and procedures through checks by competent bodies. The results suggest entities tend to build in-house EMS, without the authorities involvement; this may be an explanation of the fact that most Romanian entities chose not to register for EMAS certification.

Regarding the main aspects having environmental impact considered by corporative management, Table 7 reveals that most respondents place the energy (power) and water consumption on top, as they are easy to measure and manage, and are already enclosed by the current form of the financial

statements. The other elements on the list, considered representative for the environmental component of corporate management received fewer nominations, which are not regulated elements in terms of collecting and reporting information describing environmental impact negative component (waste, greenhouse effect gases emissions, and pollution). The surveyed entities do not account as important to invest in order to reduce the ecological footprint, which means that profit is still allowed to prime over sustainable development.

Table 7

Aspects having environmental impact, considered by the corporate management

Aspect having environmental impact	Corporate management degree of monitoring (%)
Energy consumption	71
Water consumption	57
Waste storage and disposal	43
Other	57
Greenhouse gases emissions	29
Soil, water and air pollution	29
Environment protection costs	29
Ecological footprint reduction investments	14
None	0

The low level of interest for investments reducing the ecological footprint, as well as for information collection about gas emissions and soil, water, and air pollution may also be interpreted in correlation with the industry of the analysed company. They may also be interpreted in correlation with the global crisis impact. The surveyed entities do not belong to highly polluting industries, and, by consequence, do not obey reporting constraints from the environmental protection governmental institutions.

In order to get information about companies' incentives to perform environmental management, the respondents were requested to classify based on importance the benefits associated to an environmental-aware corporate management. Table 8 presents the importance respondents assigned to the possible positive effects of environmental management.

Table 8

The benefits of including environmental issues into corporative management

Benefits	The importance for respondent (on a scale from 1 to 5)
Respect for the environment	4.71
Improving the company's environmental performance	4.53
Improving the company's public image	4.43
Employee motivation	4.43

Long-term costs reduction	4.43
Competitive advantages	4.01
Preferential treatment from customers	3.55
Improving relationships with government authorities	3.00
Preferential treatment from insurance companies	2.85
Preferential treatment from banks	2.85

To conclude the aforementioned data, the top rated benefits are the ones bearing real and long-term positive effects, revealing a proper perception of the environmental management's role. The companies do not appear as opportunist, as direct benefits from customers, financiers and other types of users bear a significantly reduced score.

Getting a competitive advantage (4.01) is an important benefit of the environmental management, as long as the company's industry has a real concern and the power to monitor and publish this aspect. In the absence of some adequate stimuli (such as competitive pressure) the competitive advantage cannot occur. The 4.01 score suggests that even if the environmental management's ability to provide a competitive advantage is acknowledged, the lack of competitive pressure on the market has led to a disregard of this aspect.

It is remarkable that the respondents do not perceive the improvement of the relationship with certain stakeholder groups (customers, public authorities, insurance companies, banks) as a direct benefit of the environmental management. By following Table 9, which offers a synthesis of the answers regarding information requests, we may see that these same stakeholder groups showed the least interest in the companies' social and environmental information.

Table 9

Frequency of requests for environmental impact information (%)

Stakeholder groups	YES	NO	Frequency of requests		
			Never	Once	More than once
Environmental institutions	43	57	57	0	43
Local community	14	86	86	14	0
Researchers (interviews etc.)	58	43	43	29	29
Banks	29	71	71	0	29
Insurance companies	28	71	71	14	14
Central or local administration	43	57	57	14	29

The dominant element is the reduced frequency with which various categories of stakeholders have requested information on the environmental impact. Analyzing the results it appears that researchers were interested in 58% of information on the environmental impact of entities, while the local community once called such data, which assesses its interest to 14%.

Table 10 shows the companies' perception concerning the stakeholders which are interested in environmental information, in the form of the relative importance attributed to each category of users.

Table 10

**Entities perception regarding users of
social environmental information**

Users/Stakeholder category	The importance for respondent (on a scale from 1 to 5)
Community	4.86
Shareholders	4.53
Customers	4.53
Employees	4.43
NGO's	4
Government/Agencies	3.55
Financial creditors	3.44
Suppliers	3.43
Researchers	2.55
Others	2.55

Most of the respondents have never received any request from the main categories of stakeholders who should monitor (environment institutions, local communities) and use in their own risk assessments (banks, insurance companies). The results place the community first in responding entities perceptions regarding the stakeholder category concerned in obtaining and using information on environmental and social impact. It must be underlined the fact that, even if researchers are the stakeholder type with the most frequent information requests, the respondents place this type of stakeholder on the last place, as the perceived importance of this group is very low. As a consequence, the entities are not motivated to report the environmental impact, which in turn generates a very low interest for an environmental-oriented corporate management.

5. Conclusions

The results obtained from the empirical research fall within a tacitly recognized reality of the Romanian environment: the difficult communication between the business environment and public administration, between the business environment and the civil society, between the business environment and the academic environment. The specific issues to environmental management analysed in the present paper fall under the influence of complex, oversized and often contradictory legislation. The procedures for environmental certification are difficult and bureaucratic, leading in many cases to discourage

initiatives from companies to achieve voluntary certifications or to implement voluntary environmental management systems.

The results of the study are convergent with those of the Steurer and Konrad (2009) study, which states there are realities with a negative influence over the corporate responsibility practices development in the Central and East European countries:

- The lack of the governmental initiatives to stimulate environmental performance: *“in most of the countries of the region, systematic government incentives and initiatives for social and environmental performance are generally missing”* (United Nations Development Programme-UNDP, 2007, p. 23);
- The quality of the civil society, which is not perceived as an important stakeholder, partly because the area is still underdeveloped. A possible explanation may be found in the UNDP (2007, p. 31) report: *“The awareness, ability and organizational power of NGOs to put pressure on business and government are limited. Existing NGOs commonly see the business community as a source of funding”* and not as a potential target for critical activism.

The main limitation of the research is related to the low number of respondents, which does not allow the generalization of results at this stage. Also, a perceived limitation of the research was generated to the data collection method, which did not allow absolute control over the qualification of the respondents and therefore invalidated a number of questionnaires, whenever the respondents' role within the entity failed to meet the objectives of the research. We believe that one of the factors that have negatively affected the response rate was the low importance attributed by respondents to researchers as a stakeholder group, hypothesis confirmed by the results of the study.

The future research is supported by the responding entities declared unanimous concern for integrating social and environmental aspects in their corporative management. By continuing to interview the current study respondents it is envisaged to create a framework for implementing an EMS, in compliance with international standards (ISO 14001) or Community regulation (EMAS).

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General Equilibrium Analysis of Electricity Market Liberalization in Singapore: A Comparative Study

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Abstract. *The liberalization in electricity market in Singapore has been undertaken for more than 15 years. This paper evaluates the influence of competition policies by computable general equilibrium (CGE) model. Instead of the direct measurement of the impact of competition policy, the benefit of liberalization is reflected by the simulation of a hypothetical regulatory condition. Comparing to the regulatory scenario, simulation result implies the current liberalization raises GDP and exchange rate significantly, but also leaves the tradeoff between higher national income and lower consumer welfare to government. If such choice of economic policy is necessary for political demand, a formal legal framework is required to enforce the restoration of the economy from regulatory restrictions.*

Keywords: electricity market; general equilibrium; liberalization; Singapore.

JEL Codes: C68, L43, L51, P51.

REL Code: 17E.

1. Introduction

In last decades, the global electricity market has experienced successive reforms of regulation. These reforms aimed to relax the public controls and alleviate political distortion in such industry previously dominated by state monopolies. Since 1995, Singapore also pushed the electricity market liberalization by issuing several legal and competition policies.

Electricity industry is generally regarded as natural monopoly because of its strong property of economies of scale, thus should be regulated. However, regulation also brings inefficiency in cost control. For Singapore, electricity is an important intermediate input in economy, and the demand of electricity is rapidly growing as shown in Table 1.

Table 1

Electricity Generation and Sales		
Year	Generation (GWh)	Sales (GWh)
1995	22,057.4	20,239.6
2000	31,665.0	29,133.1
2001	33,088.5	29,596.5
2002	34,664.5	31,089.3
2003	35,330.6	31,985.7
2004	36,809.6	33,171.2
2005	38,212.7	34,761.3
2006	39,442.0	35,921.8
2007	41,134.2	37,420.3
2008	41,716.8	37,940.3
2009	41,800.6	37,974.2
2010	45,367.5	41,199.8

Source: Yearbook of Statistics Singapore 2006, Yearbook of Statistics Singapore 2011.

The average annual growth rates of electricity generation and sales through 1995-2010 are both 4.9%, which results from the concentration of large energy users as foreign direct investment. Therefore the liberalization in electricity market just responds to the large energy consumption and maintains its attractiveness for foreign capital as Singapore development strategy.

In this paper, I evaluate the impact of liberalization of electricity market in Singapore by comparative method from general equilibrium perspective. The computable general equilibrium (CGE) model combined with a hypothetical scenario gives the comparison of macroeconomy of liberalization and price regulation.

2. Review of electricity market liberalization

The liberalization of electricity market in Singapore can be traced back to 1995, when Public Utility Board (PUB) was the sole energy provider of water, electricity and gas. And then government concluded to transfer the electricity and

gas business to Singapore Power Ltd. (SP), and remain the regulatory function of PUB in energy sector. Although SP is corporate entity, it is still state-owned, and owning the generation, transmission and retail segments of the industry. In 1998, the government implemented a wholesale electricity market Singapore Electricity Pool (SEP), to facilitate electricity trading between generators and retailers, as a prelude to opening the retail segment to competition.

In 2000, the government separated the natural monopoly segments, i.e. transmission and distribution, from competitive segments, i.e. generation and retail. Then the electricity supply moved to a more competitive structure under legal framework in 2001: government issued Public Utilities Act that remove the regulatory function of PUB and transfer the responsibility of PUB to the Ministry of the Environment and Water Resources from the Ministry of Trade and Industry; established a new regulatory agent, the Energy Market Authority (EMA); passed the Electricity Act and Gas Act, so the electricity and piped gas industries were enforced as competitive markets. Meanwhile, the Energy Market Company Pvt. Ltd. (EMC) was set up as a joint venture between EMA and M-co (the Marketplace Company) Pte Ltd as the wholesale market operator.

The liberalization came into a new period in 2003, when the National Electricity Market of Singapore (NEMS) began to operate. With the new regulatory framework, EMA grouped consumers into contestable and non-contestable categories. Consumers are deemed “contestable” if they have maximum power requirements exceeding 2MW, then they could purchase electricity from either the retailers, the wholesale market via the Market Support Services Licensee (MSSL) or trading directly in the market. Non-contestable customers can only buy from SP Services, which is responsible for providing electricity supply to non-contestable customers as well as support services.

The timeline for contestability is divided into three phrases. In Phase 1, the number of consumers with an average monthly consumption exceeding 20 MWh was 250 on January 2003, and up to the end of 2003, 5,000 contestable customers had been approved; in Phase 2, another 5,000 contestable consumers with an average monthly consumption of 5 MWh or more had been approved in six months; the remaining 1.1 million consumers with average monthly consumption of less than 10 MWh to be contestable in Phase 3 by the end of 2004.

3. Computable general equilibrium model

To explore the impact of policy change on macroeconomic performance, a computable general equilibrium (CGE) model is widely used instrument. Here I also apply this model in the liberalization of electricity market of Singapore. By observing the Input-Output Tables of Singapore for 2005, which are the latest I-O tables published for Singapore, I categorize 153 social sectors of Singapore to 11 sectors: (1) Agriculture, (2) Manufacturing,

(3) Construction, (4) Commerce, (5) Transport & Information Communication, (6) Financial Services, (7) Business Services, (8) Electricity, (9) Water, (10) Gas, and (11) Other Services, where Electricity, Water, and Gas sectors can be disaggregated from Utility sector according to the absorption table in the Input-Output Tables of Singapore for 2005.

In this model, I construct a fully regulated electricity market by imposing marginal cost pricing to firms. By this hypothetical constraint, I can compare the macroeconomic variables under regulation to the current liberalization, which has been derived as the benchmark outcome, and then measure the benefits of liberalization inversely.

3.1. Production

For the production side, I follow the conventional constant returns to scale assumption in CGE model and separate production to two stages. In the first stage, I aggregate labor and capital through Cobbe-Douglas production function:

$$VA_i = \omega_i \times A_i^{\alpha_i} \times K_i^{1-\alpha_i} \quad (1)$$

where ω_i is the efficiency parameter, α_i is the share of labor in output, and i denotes different production sectors. And in the second stage, I integrate the value-added and intermediate input in Leontief production function:

$$Q_i = \min\left(\frac{VA_i}{\alpha_{VAi}}, \frac{q_{li}}{\alpha_{li}}, \dots, \frac{q_{ni}}{\alpha_{ni}}\right) \quad (2)$$

where Q_i is the quantity of output, VA_i and q_{ni} are the quantity of value-added and intermediate input respectively, and α_{VAi} and α_{ni} refer to the fixed proportion of each factor of production utilized.

Every sector is assumed to be constant returns to scale except electricity, since electricity industry has a strong property of economies of scale, which indicates decreasing long-run average cost, and corresponds to increasing returns to scale in terms of output (Hosoe, 2006), so I separate the electricity sector from these 11 sectors and subscript it by e . For this reason, the CGE model allows electricity sector to earn markup beyond marginal cost, and the real rate of return in electricity sector can be described by markup rate μ in terms of capital:

$$r_{Ke} \times K_e = (1 + \mu) \bar{r}_{Ke} \times K_e \quad (3)$$

where r_{Ke} is the marginal product of capital, and bar denotes the situation of perfect competition.

3.2. Demand

The model assumes a representative household, and the utility function of the consumption of this representative household is a Cobb–Douglas function of individual consumption goods:

$$U = \prod C_i^{\alpha_i} \quad (4)$$

where C_i is the consumption level of good i and α_i is the share of good i in total household consumption expenditure.

The representative household contributes labor and capital to production, and earns factor income as household income, such as wage and dividend less income tax. Addition to factor income, household receives the transfer payment from government as part of household income.

3.3. Trade

To describe trade, I assume the trade of Singapore does not affect world price, in other words, to assume constant terms of trade. With this assumption, the trade equation is specified as the constant elasticity of transformation (CET) function. In this form, domestic sales and exports of goods make up the gross output. On the other hand, goods sold domestically and imported from abroad should meet the demand of domestic firms and household, and the combination of the domestic goods and imports follows the constant elasticity of substitution (CES) function with Armington model, which assumes imperfect substitution between home and foreign goods in consumption.

3.4. Government

The aim of liberalization is to remove the intervention of political power in market, thus here I assume the government only considers the redistribution of income. The government collects tax from firms (corporate tax), households (income tax), and imports (import tariff), and redistribute the revenue in the form of expenditure and transfer payment.

3.5. Macroeconomic balances

The CGE model requires three macroeconomic balances: the government balance, the current account balance, and the savings-investment balance to reach macroeconomic closure. The government balance imposes equality between government revenue and the sum of government expenditures and savings:

$$Y_G = E_G + S_G \quad (5)$$

where government savings S_G is assumed to be fixed in practice of CGE modeling.

The current account balance imposes equality between the spending of a country and the earning of foreign exchange:

$$\sum p w m_c \times Q M_c + \sum t r n s f r_o = \sum p w e_c \times Q E_c + \sum t r n s f r_i + S_F \quad (6)$$

where pwm_c and pwe_c are the import price and export of commodity c respectively; and $trnsfr_o$ and $trnsfr_I$ are the transfers out of country and transfers to country respectively; and S_F refers to foreign savings. In this model, foreign savings is exogenous and fixed, and the exchange rate is flexible.

The savings–investment balance incorporates total investment and total savings:

$$\sum I_{Pri} + \sum I_{Pui} = S_I + S_G + S_F \quad (7)$$

where I_{Pri} and I_{Pui} are the private and public investment of good i respectively, and S_I is private savings, including savings of firms and households.

3.6. Data base and calibration

A social accounting matrix (SAM) is needed for solving CGE model. Based on the research purpose and data availability, follow the fashion of Akkemik (2009), I prepare the SAM for Singapore and set 2005 as the base year by the Input-Output Tables of Singapore for 2005. The SAM consists of 11 commodity and activity sectors as organized at the beginning of Section 3, four institutions (enterprises, households, government, and the rest of the world), and two production factors (labor and capital).

The data for SAM is mainly obtained from I-O Tables of Singapore for 2005, but there are still few parts come from various sources such as the yearbook of statistics (labor income) and government budget (transfers among institutions), so the original SAM was unbalanced. The unbalanced original SAM was balanced by using the cross-entropy method, i.e. estimate the domestic sales and transfers to minimize cross-entropy distance. The aggregate SAM is shown in Table 2:

Table 2

Aggregate SAM for Singapore 2005 (Unit: Billion Singapore Dollars)

	ACT	COM	FAC	ENT	HOU	GOV	CAP	ROW	Total
ACT		61.7						298.9	360.6
COM	161.3				83.8	21.9	41.7		308.7
FAC	195.8							13.9	209.7
ENT			111.9			1		-23.4	89.5
HOU			83.9	11.3		0.6			95.8
GOV	3.5	9.5		7.1	4			17.2	41.3
CAP				72.9	8	18		-47.6	51.3
ROW		237.5	13.9	-1.8		-0.2	9.6		259
Total	360.6	308.7	209.7	89.5	95.8	41.3	51.3	259	

Notes: ACT: activities account; COM: commodities account; FAC: factors account; ENT: enterprises account; HOU: households account; GOV: government account; CAP: capital (saving–investment) account; ROW: rest of the world account.

Source: Singapore Input-Output tables 2005, Yearbook of Statistics Singapore 2006, Government Budget 2006.

4. Regulatory policy simulation

Generally speaking, the counterpart of liberalization is regulation, so I shall assume a hypothetical scenario of regulation before macroeconomic simulation, for comparison between the current liberalizing and hypothetical regulated environment. This scenario can be realized by supposing government implements a price regulation in electricity market, for example, removes the markup of electricity pricing. This seems an unrealistic assumption since it simultaneously assumes symmetric information between firms and government and cost-free subsidy to sustain firms, but it still provides the outcome of “artificial” marginal cost pricing comparing to the perfect competition. The markup rate in the electricity market in Singapore in 2005 has been calculated by Chang (2007), which is 0.188.

Now make the model allow the endogenously determined intermediate input, production supply and demand, and the international trade. The base situation of the CGE solution can be regarded as the benchmark, which represents the current liberalizing process, and the result of the simulation of regulatory scenario provides the variation of key variables in regulation relative to liberalization. The result of simulation is shown in Table 3:

Table 3

Macroeconomic Result	
Variables	Percentage change relative to benchmark
Electricity price	-18.8
Electricity consumption	0.13
GDP	-1.69
Equivalent variation/GDP	0.18
Private consumption	0.52
Government consumption	0.04
Exchange rate	-0.29

According to the simulation result, the regulation may increase the utility of households by 0.18 percent of GDP, measured by Hicksian equivalent variations method. This welfare improvement is attributed to the decreased price of electricity and other goods that use electricity as intermediate input. The GDP will considerably fall by 1.69 percent under regulation, which is associated with the significant fall of exchange rate that greatly appreciates Singapore dollars relative to foreign currency and reduces net import.

5. Conclusion

This paper gives the quantitative comparison between current liberalizing and fully regulatory economy by CGE model. The current liberalization in electricity market in Singapore ensures the rapid development of economy by balancing the benefits among economic sectors. According to the research of Chang (2007), the markup rate of electricity market is decreasing from 2003, thus we may expect the liberalization and competition policies in electricity and complement markets would generate more incentives to move to a more competitive economic environment.

This paper also provides suggestions on policy implementation, either for the liberalization side or the regulation side. The intention of liberalization is to gain the efficiency, reduce price and user cost, lower entry and exit barriers, and improve social welfare; and the last one is also the starting point of regulation. However, the restrict regulation does reduce the electricity cost of institutions, and improves the consumer welfare to some extent, but would cause a deterioration of national current account because of the appreciation of domestic currency. Although such regulatory policy is needed in certain times for political and economic stabilization, a formal legal framework is required, to enforce the conditions of policy to restore the economy from regulatory restrictions.

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Equity Risk Premium for Investments Projects in Renewable Resources

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Abstract. *Risk premium is an important factor for different models that estimate the shareholders equity, the debt cost used to evaluate both the financial assets as well as investment projects. The paper presents a brief history of the risk premium, the main estimation methods together with the influence factors. Different risks are associated to the investments in the renewable resources and they are more difficult to evaluate than the investments in other projects.*

Keywords: risk; equity risk premium; required rate of return; risk aversion.

JEL Codes: G31.

REL Code: 11D, 11E.

The risk premium is the main component of any return-risk model from the finance field and it represents a factor that is included in the estimation of the shareholders equity, the cost of debt (by adding the credit risk spread) used in corporate finance and in the valuation of the financial assets. The scientific research about the risk premium is strongly related to the change of the investors' perceptions regarding the shares, and the first studies were done by the economists.

Goetzmann and Ibbotson (2005a) remind the definition given by John Stuart Mill in the now classic paper *The principals of political economy* (1848): writing about a farmer that was thinking to invest in some land, Mill argues that he will be probably willing to use the capital (for an instant return) in any way that will bring him a profit, no matter how small, but above the risk value, and above the interest that he is willing to pay for the capital if he will borrow it or that he will be able to acquire for the land, if the land would be his own. This way, Mill divided the concept of profit, that could be obtained by the investing in the land, in three parts: first – the interest that must be paid for the borrowed capital determined as opportunity cost of money. This is the equivalent to the risk-free rate. The second component is the “risk value” associated to the investment that is the equivalent to the risk premium. The third Mill's component is the excess profit, no matter how small. Today, the third component is the “alpha” coefficient – a part of the compensation that is expected to be small on a competitive market.

Eloquent data used to estimate the historic premium of the shares opposite to the bonds were collected in the middle of the 20th century, and the econometric estimations of the risk premium were used after the development of the theory that treats the risk premium as a central factor – *the Capital Asset Pricing Model* – CAPM.

Goetzmann and Ibbotson (2005a) consider that the empirical estimation of the risk premium was done by Smith in 1924 for the US capital market because the availability of historical data for the financial assets but, also, because of the 1920 capital market crash. The development of the financial theory from the beginning of the 60s led to the increased interest to the improvement of the models of risk premium estimation. Later on, we shall make a short presentation of the use of the “risk premium” term and of the first attempts to empirically estimate it and we shall continue by presenting the influence factors of the risk premium.

Aldea (2008) shows that Frank H. Knight is the first to present the distinction among “*risk*” and “*uncertainty*” and their role in the economic theory in the book *Risk, Uncertainty and Profit* (1921). He states that the “risk” notion is analyzed using the situations when the decisions can give probabilities

to the random events they are confronted with. The “uncertainty” is the form opposite to risk and it represents a process that is reflected by those situations where the events cannot be given probabilities and there is no scientific base to calculate them. But, in his paper, Knight didn’t mention how the risk premium can be measured.

Goetzmann and Ibbotson (2005a) underline the role of Edgar Lawrence Smith that modified the paradigm regarding the stocks by recommending them as long run investments (in the book *Common stocks as long term investments*). Based on the data collected about stocks (prices and dividends) and bonds listed at New York and Boston stock exchanges during 1866-1923, Smith demonstrates that the stocks had larger returns than the bonds for the different intervals of the analyzed period of time. So, he introduced the concept of stocks being treated as medium and long-term investments.

John Burr Williams (1938, p. 67) was the first to define, model and estimate the risk premium. According to Williams, the traditional method used to determine the value of a risky asset was to always add a “risk premium”. He offers a table with interest rates for “past, present and future” that shows the risk-free rate as being the rate of the long-term state bond (4%), and the expected return of the “good stocks” (5.5%) (Williams, p. 387). Williams estimated the future risk premium using a dividend discount model and explained that the past (historical) estimations offers a good forecast for the future even if there are deviations from the present situations.

Goetzmann and Ibbotson (2005a) shows that the most detailed empirical analysis of the long term performance of the US capital market was realized by Alfred Cowles III in 1938, when he published *Common stocks indexes*. The author’s main purpose was to present the experience of the investors in this type of securities in US, during 1871-1937.

The empirical researches for the estimation of the stocks returns moved to another stage in the 60s, when the *Center for Research in Security Prices – CRSP* was created in Chicago, managed by Lawrence Fisher and James H. Lorie. They published their results about the US stocks returns in *Rates of Return on Investments in Common Stock: The Year-by-Year Record, 1926-65* (1964) and in a volume including the US state bonds in 1977. As Cowles, they based their analysis on the prices of the individual stocks and on the reinvestment of the dividends.

The 50s and 60s theoretical development of the Financial Economics increased the role of the empirical estimations of the rates of returns. In 1952, Harry Markowitz published his famous model of portfolio selection that made a connection between investments’ risk and return. Markowitz considered the historic averages, variances and the covariance of the individual stocks as

factors of his models and states that this method can be improved using sophisticated forecasting instruments. The Markovitz model (as it is used now) identifies an optimum portfolio of financial assets based on the standard deviation and the expected return of the stock using a tangent line (that starts from the risk-free rate – with a 0 variance) to the portfolio frontier giving the largest return for every level of standard deviation. The difference between the risk-free asset rate of return and the expected return of the portfolio situated in the tangent point is given by the risk premium. From Markovitz point of view, the dimension of a risk premium is an empirical issue.

The *Capital Asset Pricing Model* (CAPM) Sharpe-Lintner-Mossin was independently developed in the 60s, as part of the method to identify the optimum portfolio of risky assets from the Markowitz theory. In the CAPM, if the form of the utility function and the coefficient of the risk aversion are known, then the computation of the variance of the risky assets portfolio is enough to identify the difference between the portfolios of risky and risk-free assets.

An important characteristic of the Markovitz model and of CAPM is the theoretical background used to estimate the risk premium directly from the investors' preferences.

The influence factors of the risk premium

The main influence factors of the risk premium identified in the literature by Damodaran (2011) are:

The risk aversion – it is the first and the most important factor because, accordingly to the modern Finance Theory, if the investors are more risk averse then their risk premium will decrease while if their risk aversion will decrease, their risk premium will decrease, too. The risk aversion varies with the different type of investors, but the collective risk aversion is the one that determine the risk premium. Among the factors that determine the dimension of the risk aversion we can find the investors' age and their preferences for the present consumption.

The economic risk – the risk premium is smaller for the predictable economies, with interest rates and economic growth with low volatility. Lettau, Ludwigson and Wachter (2007) proved the connection among the US risk premium changes and the changes in volatility of the real economy. Brandt and Wang (2003) proved the existence of a relation between the risk premium level and the uncertainty of the inflation rate, considering there is a low or very low correlation between the risk premium and the current level of inflation.

The quality information – the quality of the information send by the listed companies as well as their quantity influence the level of risk premium

estimated by the investors. Yee (2006) defines the quality of the profits by the volatility of the future profits and states that the risk premium must increase (decrease) at the same time with the decrease (increase) of the quality of the profits.

Liquidity – if the investors accept large discounts compared to the estimated value of the investments or if they pay large costs for closing positions, then they will pay less for the stock at the present moment and they will ask for a larger risk premium. There is an opinion that states that the capital markets are wide and deep and, so, the effect of the liquidity on the aggregate risk premiums must be low.

The risk of a catastrophe event – a catastrophe refers to several events that have a low frequency and which lead into a significantly decreased wealth for an investor. It is very important that the risk premium must reflect the risk of a catastrophe event when we invest in a certain stock, although the event of a catastrophe has a low probability. The 2008 crisis on the financial and real estate markets is a new argument that favors the analysis of the elements that lead to a catastrophe.

The behavioral/irrational component

Two aspects of the analysis of the risk premium are presented in the context of the behavioral finance:

The illusion of money – Damodaran mentioned that Modigliani and Cohn (1979) showed that the low values estimated for the stocks during the 70s were due to the way that the investors interpreted the inflation. On one hand, the investors used larger discount rates that reflected the larger inflation rates, but they used previous growth rates (smaller because of a smaller inflation rate) in order to estimate future incomes. So, the result of asset pricing was small and the risk premium was high. The Modigliani-Cohn model shows that the risk premium will increase during periods when the inflation is higher than target and will decrease when the inflation is smaller than the target.

Narrowing frame analysis – it refers to the fact that, in the classical portfolio analysis, the risk of an investment is evaluated based on the risk that is added to the current portfolio by the financial asset. The modern economists consider that the investors evaluate each investment, which leads to the over-estimation of the risk premium, Benartzi and Thaler (1995).

Model of risk premium estimations and the experts' opinion

Fernandez (2006) identifies four different concepts of the risk premium: the historical risk premium (HEP) which refers to the historical market return and to the bonds' returns; the expected risk premium (EEP) which represents the difference between the market expected return and the bonds' returns; the

expected risk premium (REP) used to compute the cost of shareholders equity represented by the excess-return of the market portfolio computed to the risk-free rate; the implicit risk premium (IEP) which is the risk premium required after an asset pricing model is used, assuming that the market price is the correct one. HEP has the same level for all investors and its level can be computed while REP, EEP and IEP are different based on the investors' type and are not observable.

Fernandez (2006) shows that IEP has a main hypothesis the idea of the existence of the homogenous expectations among investors about the expected growth rate (g) and he shows that there are several pairs (IEP, g) that satisfy the current prices. He considers that different investors have different values for REP and that it is possible to determine the REP for all the market, because it doesn't exist.

In Goetzmann and Ibbotson (2005a) articles, we can see that there are several methods to estimate an expected risk premium used for forecasting. The first method is to extrapolate the historical risk premiums as it is done by Ibbotson and Siquefield (1976) in *Stocks, bonds, bills and inflation: Year-by-year historical returns (1926-1974)*. The capital market returns were computed as total returns based on the S&P 500, which didn't include dividends up to that moment. The authors also used data about state bonds from the CRSP, the index of the corporate bonds based on the bonds' return and inflation rates. The presentation of the total annual returns for the analyzed period of time was included in the paper which was made unique because it explicitly measured the historical risk premium not only for stocks but also included the maturity premium, the default premium and the real interest rate. These historical premiums were used (both in theory as in practice) as the risk premium for CAPM, but in other models also.

Later on, in 1976, Ibbotson and Siquefield showed how the historical data can be used to simulate the probabilities distributions of the future returns. They started to compute the return curve from the specified moment, together with the structure of the forward implicit interest rate. They added different historical risk premiums – using *bootstrapping methods* – that reflect the structure of the correlation among groups of assets. They also used the historical risk premium geometrically measured for the previous half of century (of 6.3%) for the US bonds and an insignificant number of long-term bonds that included the *maturity risk premiums*.

The second method represents the use of the models of stock demand based on the investors' risk aversion, like in Mehra and Prescott (1985). Accordingly to Ibbotson, Siegel and Diermeier (1984), the investors' demand is

influenced not only by the systematic risk, but also by the liquidity, the tax system and the specific risk.

The third method is based on the analysis of the type of return offered by the corporate sector. Diermeier, Ibbotson and Siegel (1984) and, later on, Ibbotson and Chen (2003) use this approach. They explore the increase in cash flow and of the incomes generated by companies. These forecasting tend to be smaller than the historical risk premiums basically because a part of the total capital market returns comes from the increase of the price/net income per share ratio (P/E). The increase of the P/E indicator cannot continue indefinitely and might be removed from the expected risk premium.

In their paper on risk premium as a puzzle, Mehra și Prescott (1985) show that the historical risk premium in US – measured as the excess return of the stocks to the US bonds' returns (considered to be risk-free assets) – was much larger than the risk premium would be expected to be accordingly to the modern Finance. Using the neoclassical financial economics paradigms together with the estimations of means, variance and auto-correlation of the annual consumption increase in the US economy and, also, using the possible estimations of the risk aversion coefficient and the time preference, the authors stated that the stocks should offer an annual risk premium of at most 0.35% compared to the bonds' rate or return. By extending the parameters, they reached the conclusion that the risk premium should not be greater than 1% (Mehra, Prescott, 2003). This idea is opposite to the estimation of the average annual historical risk premium of 6.2%. The following years showed that the risk premium increased even more so that, during 1979-2005, the average annual risk premium compared to the US bonds' was of 8.1%. So, the risk premium becomes a quantitative puzzle that has two solutions: the standard models are wrong or the historical risk premium is misleading and we should really expect a smaller future premium.

In the attempt to solve this puzzle using the first approach, the researchers concentrated on the alternatives of the hypothesis about preferences, including the risk aversion; the incomplete markets and the shocks on the incomes that cannot be insured; the probability distributions modified to accept rare events; market imperfections such as borrowing restrictions and transactions costs; models of limited participations on the consumers on the capital market and explanations that use the behavior theories. Even if some of the models have the potential to solve the puzzle as in Crochane (1997), the most promising of them implies deep modifications of the standard models and that almost each success story requires a large amount of risk aversion.

This leads us to a second possible solution of the puzzle, which states that the historical premium might be misleading. The risk premium might be misleading because of two reasons:

- *Luck*

Perhaps the American investors had just luck and the XX century represented the “triumph of the optimists” (Dimson, Marsh, Staunton, 2002). Crochane (1997) stated that it might have been „100 years of luck” contrary to the well-known joke, according to which the soviet agriculture was the result of “100 years of bad luck”.

- *choosing the country for which the estimation is done*

However, the past performance of the individual stocks doesn't offer a lot of information as regards the future returns. If there is a selection error *ex post* based on a previous success, the average historical rate of return will provide an erroneous over-valuation of the forecasted future returns. This is one of the reason for which the risk premium estimation is, usually, based on the performance of the entire market, including successful and unsuccessful stocks.

Nevertheless, the lack of data limited the research on long term stocks returns listed in other countries. Most of the research papers trying to solve the risk premium puzzle is focused on empirical studies on United States. Thus, considering that United States is not a typical country, the above mentioned research could start from wrong hypothesis regarding the past.

Cleijne and Ruijgrok (2004) stated that three types of risk should be rewarded in case of renewable energy resources investment projects, such as: operational risk, market risk and regulation risk. The authors said that in Holland the regulation risk had been translated in a significant risk premium for investment projects in wind energy and biomass, compared to risk premium for operational and market risk. The level of risk premiums differs from country to country, sources, generation, and the length period for which we estimate risk premium.

Moreover, a significant influence on the size of risk premium comes from the government intervention and the type of support provided to investors (i.e.: subsidies, taxes exemption) in order to benefit from running the renewable energy resources.

Conclusions

This literature review of the researches in risk premium estimation highlights the problems facing those who seek to identify the correct estimation model, and those who want to apply it. An estimation of equity risk premium for Romania is quite difficult because of a relative short history of the capital

market, low liquidity and persons who can make things to happen. Moreover, the difficulty is even higher in case of risk premium estimation for renewable energy projects, considering the lack of a consistent pursue of a long term strategy for energy sector. In these circumstances, it may prove more useful to adjust cash flows projected for such investment projects by taking into account the probable risks and simulate their impact on the projects' value.

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