

Macroeconomics and Monetary Economics

Impact of Credit Restructuring on the Quality of Bank Asset Portfolio. A Cluster Analysis Approach

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Abstract: In this paper we proposed an analysis of the financial crisis impact on the procedures for management of loan portfolios in several banking systems. Despite ample liquidity injection programs implemented by major central banks and government actions, credit risk remains a key challenge of the current banking systems. On a medium term, the high percentage of bad loans has become a structural vulnerability. To maintain an acceptable quality of loan portfolios and not to damage the prudential and profitability indicators, credit institutions in EU member states have proceeded to apply various techniques for credit restructuring. The quantitative analysis carried out in the last part of the paper revealed a relatively moderate granularity of banking systems considered, in terms of capitalization, volume of bank reserves and net provisions, in response to the persistent trend of loan portfolio deterioration.

Keywords: financial crisis; credit portfolio; credit restructuring methods; cluster analysis

JEL Classification: E58; G01

1. Introduction

In the current economic conjuncture, to avoid enforcement of collateral, banks can resort to loan restructuring, for borrowers experiencing repayment problems. Restructuring is useful first, because enforcement involves additional costs, the legal process being always costly for both the bank and the debtor and, on the other hand, prices of assets brought as collateral are directly affected by housing market developments, which may lead to the inability to recover outstanding debts and interest payments by credit institutions which have granted the loan.

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In essence, the restructuring of loans involves altering the characteristics of the initial credit contract, in terms of interest rate, maturity or grace period relating to borrowers who have difficulties in reimbursing debt, in order to help them meet their timely payment obligations. As a result of the restructuring measures, the debtor must return to the normal parameters of repayment. Will be restructured only loans for which the debtor's financial analysis indicates that it has a present and future capacity of payment, enabling it to pay the rates according to the timetable of the restructured loan.

Application of credit restructuring schemes is made by each bank, in accordance with its internal rules and with the conditions and characteristics of the applicant client.

According to the Romanian Association of Banks (2009), through the process of loans restructuring banks assume a new risk, for which is required a rigorous analysis of the past customer's conduct and business, until the moment it requires the loan to be restructured, the payment capacity features (analysis of current contracts and cash flow), an economic and financial analysis and an assessment of client ability to repay debts already accumulated.

2. Credit Restructuring Techniques

Economic literature differentiates between the types of events that trigger the restructuring of loans:

a) the restructuring of ongoing loans, which do not record arrears or have a few days of delay, defined as the process by which there is a modification of the terms and conditions of the original contract, when there is suspicion of credit default risk. Events that fall under this type of restructuring are: borrowers anticipate difficulties in repaying and call for rescheduling the loan; borrowers with good payment history require the maturity extension due to robust economic reasons; the customer records a dire financial situation because it is overly indebted or has a temporary default. For the credit institution any loan restructuring, by the renegotiation of the monthly payments, is a way to assist customers in various industries, so as monthly payment obligations become sustainable. The main ways for conducting this type of restructuring are the rescheduling and refinancing of loans.

Rescheduling is an operation which extends the initial credit maturity, by changing the date for repayment of loan installments, due to borrower's inability to pay debt at the initial deadline. If the debtor has an outstanding debt at the date of rescheduling, it will be included in the loan balance. In addition, the grace period may be extended up to 12 months in which the borrower will pay interest only.

Through the refinancing option, the bank grants a new funding with the aim of taking over a loan granted by another bank, or closing an ongoing loan at the same bank, to benefit from another product's characteristics (cost, maturity, collateral) or closing an outstanding loan at the same bank and granting a new loan in order to amiable recover the arrear. This option allows the borrower to replace a currency-denominated debt with a loan expressed in domestic currency.

b) restructuring of nonperforming loans (troubled debt restructuring), consisting in the accumulation of loan payment arrears of over 90 days. This type of restructuring is applied in circumstances where there is macroeconomic environment deterioration or when there is a high degree of uncertainty in the debtor's activity, in terms of achieving the estimated cash flow. In such a situation it can become very difficult or even impossible for the bank to recover the amount lend, in accordance with the initial timetable, so that the bank should consider very carefully whether the amendment of the original terms of the contract could help the client in order to reimburse the contracted amount.

Restructuring of bad loans is a bank attempt to collect as much of the amount owed by the debtor, thereby reducing the losses from the lending activity. Restructuring arrangements include, mainly: the contract interest rate reduction or even elimination; carrying out over a given period only interest payments; principal reduction; extension of loan maturity; bringing new assets as collateral; change of the principal debtor or adding a co-debtor; change of the currency in the loan contract.

Green (2009) emphasizes the distinction between the two forms of restructuring: restructuring by simple modification of loan characteristics (loan modification) and restructuring of bad loans (troubled debt). In his opinion, the restructuring of bad loans is a concession made in favor of a debtor, which the bank would not normally appeal, if the debtor wouldn't be faced with financial or economic difficulties. The main feature of this type of restructuring consists in reducing interest rates or principal. Any other amendment to the original contractual terms, that do not involve changing the interest rate or principal level, enters in the category of the first type of restructuring.

In terms of the asset target group that is subject of restructuring measures, we distinguish three categories:

→ *corporate sector debt restructuring*, through two distinct approaches. The first approach is the voluntary negotiation of extrajudicial credit restructuring and consists in developing a restructuring plan accepted by the debtor and a consortium of lenders, such as to enable debtor's business continuity and the recovery of all or part of its debt. If restructuring fails, the alternative is the initiation of debtor's insolvency judicial procedure.

A second approach is specific to systemic crisis, characterized by a high level of corporate sector insolvency and difficult mediation between borrowers and lenders. In this case, the government has the central role in implementing the restructuring process. The main methods of intervention are:

- exercise of mediation by the government. An example is the London restructuring, which aims to identify a mediator, which may be a public or private institution, involved in judging the debtor-creditor relationship and states the possibility of state involvement in co financing the restructuring process.
- provision of guarantees or financial compensation by the government to creditors, in order to extend the maturity of corporate sector debt, grant grace periods, interest rates or exchange rate guarantees, capital injections.
- creation of special agencies (Asset Management Companies) to take over and manage the bad loans in a centralized manner (Global Financial Stability Report 2009, Laryea 2010). This solution is useful when a large number of companies are faced with problems of loan repayment, the loans characteristics are relatively homogenous or AMC's can provide expertise in the field of corporate sector debt restructuring, which is not available to banks. The advantages cover both companies, which receive assistance for business rehabilitation, avoiding the onset of insolvency proceedings, as well as banks. By transferring troubled assets to an AMC, banks may focus on banking activity, leaving to the agency the efforts to maximize the recovery of bad loans.

Laryea (2010) emphasizes that success, in the long term, of the corporate sector debt restructuring, can be ensured only if it is accompanied by operational restructuring, which is oriented on the structure and efficiency of corporate business, by closing non-viable business lines and restructuring of productive capacity.

→ *restructuring of household debt*. According to the Global Financial Stability Report (2009), restructuring of household debt is appropriate when the debt is denominated in foreign currencies, particularly loans secured by mortgages. If difficulties in the repayment obligations are severe and generalized, one option is the implementation of restructuring programs, which have two components: recapitalize viable financial institutions and restore the household repayment capacity, by renegotiating credit agreements.

Government intervention to facilitate the restructuring of household debt can be materialized into two broad approaches (Laeven, Laryea, 2009):

- establishing a predictable legal and institutional framework, in support of voluntary non-judicial restructurings;

- implement a household debt restructuring program sponsored by the government, which provides financial support (deleting debt, tax incentives, subsidized interest rates or exchange rate) for a particular credit type or debtor.

→ *restructuring of structured products*. If, for loans, banks can proceed with their restructuring, through negotiation with the debtors, in case of structured products legal rights to restructure the loans on behalf of which were issued are very low. Changing the credit contract is possible only if holders of securitized debt instruments issued will be paid based on the contractual provisions of the original loan.

In the process of restructuring the loans, special attention is granted to mortgage loans. For instance, in late 2008, the UK Treasury announced the launch of Homeowners Support Mortgage Scheme, whereby homeowners subject to a mortgage loan may defer the payment of a fraction of the loan rates, for a period not exceeding two years, by including those credit rates in the principal amount. Deferred payments were guaranteed by the Treasury. Eligible borrowers had to hold mortgages of no more than £ 400,000 and savings of up to 16,000 pounds and to record a decline in income.

In the U.S., in February 2009, the government launched a comprehensive program, called Making Home Affordable Program, consisting of two subprograms, one for refinancing (Home Affordable Refinance Program-HARP) and the other for restructuring, by changing the contractual characteristics (Home Affordable Modification Program - HAMP).

HAMP program is intended to reduce, to a tolerable level, the mortgage loans' monthly payments, for borrowers that: have obtained loans before 1 January 2009, are ownership - occupant of the purchased building, have an outstanding debt value of no more than \$ 729,750 (for a one person family), the monthly payment rates are over 31% of gross monthly income and financial difficulties are due to growth in monthly rates, contraction of income or medical problems. Borrowers who have lost their jobs or prove a total inability for payment are not eligible for restructuring. The program will run until 31 December 2012.

HARP program was designed for borrowers who are up to date with monthly mortgage payments, but were unable to obtain a traditional refinance program because the value of the real estate collateral diminished. Eligible borrowers must hold a mortgage owned or guaranteed by Fannie Mae or Freddie Mac, have recorded no more than 30 days of late payment last year, have the ability to make new payments and the mortgage does not exceed 125% of the property current market value. The program will expire on June 30, 2012. Currently, the Department for Housing and Urban Development is working on a program designed to provide financial assistance to debtors who have taken out a mortgage loan, but face with a decrease in revenue of at least 15%, as a direct result of

involuntary unemployment generated by unfavorable economic climate or serious illness. The program will be called the Emergency Homeowners' Loan Program - EHLP and will consist in granting of subordinated loans, without recourse, at a zero interest rate, in a maximum amount of \$ 50,000 for a maximum of 24 months, to each eligible borrower. Thus, the monthly payment will be set at 31% of gross monthly income recorded at the date of application for this program, but not less than \$ 25 per month. The remaining difference will be supported by EHLP program. Only those borrowers who register at least 3 months of late payments and have been notified by the lending bank on the intention to foreclose the mortgage will be eligible.

3. International Trends Recorded in the Restructuring of Loans

In a study by the National Bank of Hungary (Gergely Homolya 2010) for monitoring the restructuring of households' loans, it was found that housing loans have been at a rate of only 0-2%, while restructured vehicle financing loans fall within the range of 5-10%. In terms of home equity loans, a third of banks surveyed have made restructurings in proportion of 5-10%, while another third has restructured 10-20% of them. As a means of restructuring, banks have opted for their own programs, which provide temporary extension of the maturity and relaxation of monthly payments, by adjusting interest rates or fees charged. In the case of vehicle financing loans, the reduction of fees charged is more pronounced, compared with the other two forms of financing. According to the study, the factors that prompted the loans restructuring in the Hungarian banking sector are low, decreasing revenue, exchange rate volatility, unemployment, improving the quality of loan portfolio and economic climate.

A study published by the European System of Central Banks (2010) note that, from the candidate countries for accession to the EU, Croatia and Macedonia have not yet implemented programs for loans restructuring, and Turkey has restructured loans granted through credit cards (until May 2009 had been restructured 36.5% of credit card bad loans).

In a study of the Federal Reserve Board of Governors (2010), 50% of banks surveyed said that, in the first half of 2010, requests for maturity extension of commercial real estate loans have not significantly changed, while 42.9% of banks registered a slight increase. 95% of mortgages refinanced by Freddie Mac in the fourth quarter of 2010 have a fixed interest rate. Another interesting borrowers' option was to reduce the maturity of the refinanced loan, the main reason being the lower interest rate. Thus, 70% of borrowers who refinanced an initial loan on 20 years have chosen a maturity of 15 years and 32% of borrowers with loans for 30 years chose a smaller maturity, of 15 or 20 years.

In Russia, according to the Regulation and Supervision Department of the central bank, at the end of first quarter of 2010 the share of restructured credits of the 30 largest banks increased to 35.7%.

A study of the ECB (2010) conducted on a sample of 120 banks in the euro area has revealed that one of the factors that positively influence corporate sector demand for loans is their debt restructuring (changing the terms and conditions of loans in progress). In the third and fourth quarters of 2009, 50% of respondent banks reported it as having an important influence. In the third quarter of 2010 was recorded by only 17% of banks surveyed.

National Bank of Poland (2010), National Bank of Slovakia (2009) and Bank of England (2009) conducted a similar study in which more than half of surveyed banks reported the significant impact of the restructuring requests from companies to the rising demand for corporate sector loans.

In Romania, according to the Romanian Association of Banks, at the end of 2010 nearly 20% of the ongoing loan portfolio, granted both to households and companies, has undergone a restructuring scheme. To facilitate negotiations between individuals in financial difficulty or the debtor companies and creditors, the Ministry of Finance in collaboration with the National Bank of Romania, Ministry of Justice and Consumer Protection Authority, with technical assistance from the World Bank published in September 2010 two guidelines for the out of court restructuring of companies obligations and households' mortgage loans.

The auditing and consultancy company KPMG has presented, at the end of 2010, the results of a study on more than 50 banks in Central and Eastern Europe, active in the real estate sector. The objective of this barometer had been to evaluate the quality of real estate loan portfolio and banks' opportunities to manage exposures that record delays in reimbursement.

It can be noted that the largest share of real estate loans with repayment difficulties, both for residential and commercial purposes, are recorded in the Baltic countries (72%, of which 19% is severe damage and 53% minor damage), followed by Romania with about 55%, a group of countries with values ranging between 30-35% (Hungary, Croatia, Bulgaria) and another group with similar values (Slovakia, Poland, Czech Republic).

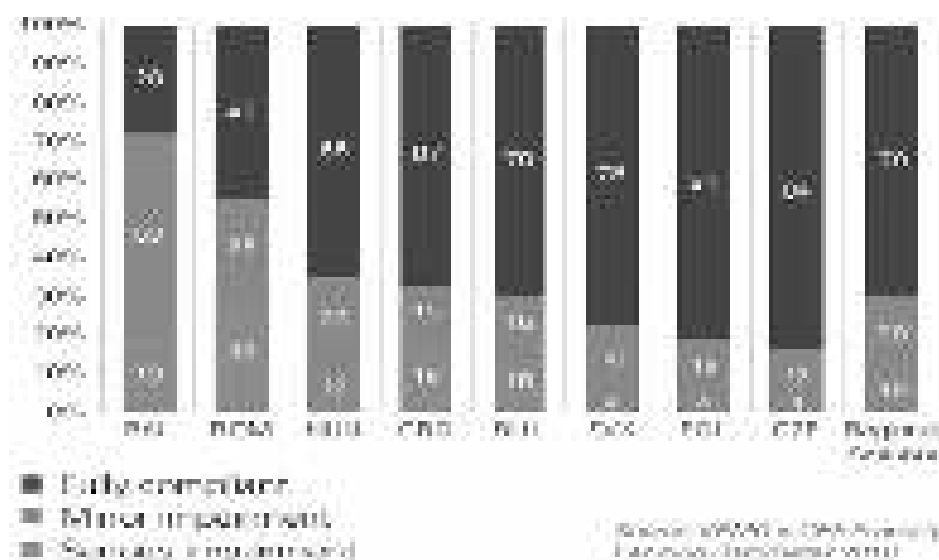


Figure 1. Impaired real estate loans

Another result of the study revealed that respondent banks believe that damaged exposures can be managed successfully by applying different restructuring techniques. On average, banks’ positive responses on the use of restructuring techniques for real estate loans were of 60% for the countries considered, with a maximum recorded by Poland (over 80%).

4. Empirical Analysis of Credit Portfolio Heterogeneity in Selected EU Countries

In the following, we have analyzed a representative sample of EU countries, to highlight the extent to which the loan portfolio quality improvement, through the implementation of restructuring techniques, is homogeneous in the countries considered.

In their monthly reports, central banks do not publish distinctly the amount of loans that have undergone restructuring schemes, therefore there isn’t a direct quantitative measure of this phenomenon in the banking systems. Hence, we included in the analysis several variables designed to provide an indirect overview on this issue. We considered net provisions’ value, net interest income and capital and reserves amount, aggregated for the entire banking system, in the year 2009. To avoid that the final results should be distorted, we adjusted the value of each variable taking into account the country size effect, by reporting their gross values

to the GDP level of each country. Data was taken from the OECD database, the bank profitability statistics section.

We have applied an exploratory type methodology, called Cluster Analysis, to gain an insight into those countries that meet similar characteristics, in terms of credit portfolio quality management. The core of Cluster Analysis is to identify similarities in the structure of variables, its purpose consisting in bringing together countries with similar characteristics into homogeneous groups called clusters. This method is not a typical statistical procedure, since it doesn't require the definition of an a priori hypothesis to be validated by calculation, but it identifies, on behalf of a series of algorithms, several homogeneous groups of countries, starting from the initial set of input variables.

The clustering algorithm is hierarchical, allowing the overcrowding, with priority, of countries that meet the highest degree of similarity (or smallest distance). The distance function between groups is calculated according to the Squared Euclidean distance, because it puts a greater emphasis on identifying countries that have extreme values for input variables. As a computational procedure, it represents the sum of squared geometric distances between countries in multidimensional space.

Squared Euclidean distance $(x,y) = \sum_i (x_i - y_i)^2$

A number of studies (Wolfson, Zagros, James 2004, Gutierrez, Sorensen 2006, Chung, Tijdens 2009) recommend this approach when it is intended to provide a greater weight to outliers. It should be noted that the squared Euclidean distance coefficient is a dissimilarity one. Therefore, the higher the value recorded, the more pronounced are the discrepancies among the countries considered.

The coefficients calculated will be the subject of another algorithm, called the Ward test, to facilitate mergers between groups with relatively similar characteristics. The result of this analysis is summarized in the form of a hierarchical tree (dendrogram), which illustrates the composition of each group and the distance between them.

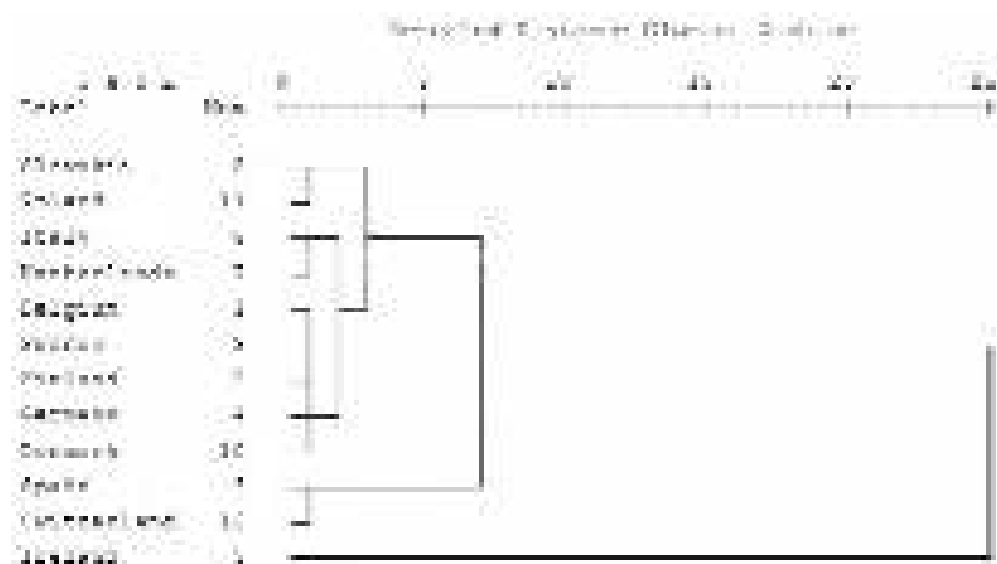


Figure 2. Dendrogram using Ward Method

It can be noticed the presence of three groups: one big group that gathers most of countries considered (Slovakia, Poland, Italy, Netherlands, Belgium, France, Finland, Germany and Denmark), which suggests, in the year 2009, a relative homogeneity in terms of capital adequacy for the purposes of managing credit risk; a group of two countries: Spain and Switzerland, and another one represented by a single country, namely Ireland, which records features substantially different from other EU countries.

This result is confirmed by reality. According to the Central Bank of Ireland, the Irish banking system was deeply affected by losses from the lending activity. In April 2011 has been launched the Financial Measures Programme, as part of the agreement with IMF, EC and the ECB, which aims to intensify efforts for banking system's stabilization, by asset sales measures, substantial increases in capital, reducing bank portfolio size to a sustainable level of the loan/deposit ratio.

5. Conclusions

In order that loan portfolios restructuring techniques be implemented and provide the desired result, monetary policy makers and government authorities must take steps to stabilize the economic and financial environment. It is, therefore, necessary to restore a certain predictability of interest rates, exchange rate, real asset prices, so that both debtors and creditors have a reference point when determining the terms of the new credit agreement.

Although, at present, the quality of loan portfolios in EU countries seems to have stabilized, it is not known the medium and long term impact of restructured loans. There is the risk that borrowers default again and restructured loans become nonperforming. Restructuring by modifying the original contract terms is seen as a way to save time, allowing the debtor to recover after his temporary financial difficulties. On the other hand, the restructuring of bad loans, represented by the impossibility of full repayment of the loan and interest on the original loan, is treated as a loss allocation process between the debtor and creditor.

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Trends and Developments in Romania's Trade Balance in the Period 2006-2010

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Abstract: In the actual economical crisis, the balance of trade of Romania is a sensible chapter of the economical policy. The paper analyses the trends of exports and imports between Romania and the major partners, on global and also on groups of goods arriving at the conclusion that if Romania was on a good road till 2010, the actual tendency is to grow the deficit of the balance of trade.

Keywords: balance of trade; export; import

JEL Classification: F1; F16; F13

1 Introduction

Under the conditions of globalization, to develop the interdependences of the States of the World, the complexity of the world economy, witnessing to a diversification of the commodity trade. Factors which have influenced the development of trade relations, world economic circuit are primarily economic, and we refer here to the scientific and technical progress, the deepening of the international division of labour and, sometimes, these factors have dressed a shape policy also.

The economic flows that take place in the world economy reveals changes in the economic development of States, changes that underlie the structure and dynamics of the economic circuit. (Dumitrescu & Bal, 1999, p.337)

The international economic relations, representing a dynamic flow, mirrored physical changes and value of production of the country, with effects throughout the economy. In this context, the business of foreign trade (imports and exports) is an important component of analysis and appreciation of economic structures as

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purposeful, along with other components, macro-stabilization and building an effective economy.

For the Romanian economy, as otherwise, for any economy, whether developed or in transition, the foreign trade is an important vector of economic growth and improvement of productive structures. Since 1990, Romania travels the road, sometimes difficult process of transition to a market economy, its integration in an interdependent global economy. The restriction of trade relations with the former CAER member countries and the geographical orientation of the Romanian foreign trade towards the countries of the European Union, have resulted in the development of trade with the developed countries: Germany, France, Italy, Belgium, etc.

In 1990, the Romanian exports accounted for \$ 4 billion, the partner countries being mainly the former USSR, Yugoslavia and China and, in a less proportion, Germany, Italy etc. After nearly 21 years, the exports from Romania in Russia fell by almost 50% and the exports to competitive markets (Germany, Italy) have reached nearly 30%. The geographical reorientation of the Romanian foreign trade towards the European Union countries has led to an increase in its growth until 2006, representing a share of almost 70% on the export and 65% on the import.

The liberalization of markets, governed by free trade agreements, constitutes a factor for revival of foreign trade, in particular with the developed countries. Free trade agreements have contributed to the new impetus of exports and the development of trade. In the statement of Romania, from the data set analyzed, it is observed that all these have led to economic growth, but in the short term, the expectations being not the same at the long term, mainly because of the structure of exports and the factors influencing it. An important economic indicator for both the decision factors and operators, the main actors in the economy, which can guide the structure and dynamics of foreign trade, is the exchange rate.

In this paper, we tried to mark out, using statistical methods, the degree of interdependence between the exchange rate and the evolution of exports and imports in terms of appreciation or depreciation of the currency. The data collected relate to a period of 5 years, with a monthly frequency, i.e. January 2006-December 2010.

We also analyzed the trends of development of the export or import relative to the main geographical regions of the globe, but also for Romania's main partners.

Another aspect is that of the special structure of the balance of trade. Its trend analysis on main groups of goods reflects a relatively good direction (even if still somewhat fearful). A negative aspect is referred to the Romanian trade diversion of items manufactured from export to import, which will result in the loss of a significant number of jobs, particularly in the field of textile industry or the

footwear, with major social impact phenomenon in less-favoured regions of the country.

2 The Statistical Analysis

The analysis of the evolution of the balance of trade of Romania in the period January 2006-October 2010 (monthly data) reveals an upward trend in both exports and imports (with a trend more sharply on export) despite its sinuous character. After a marked fall in the period October 2008-January 2009, it is observed (Figure 1), an increase in the volume of trade in the period immediately after.

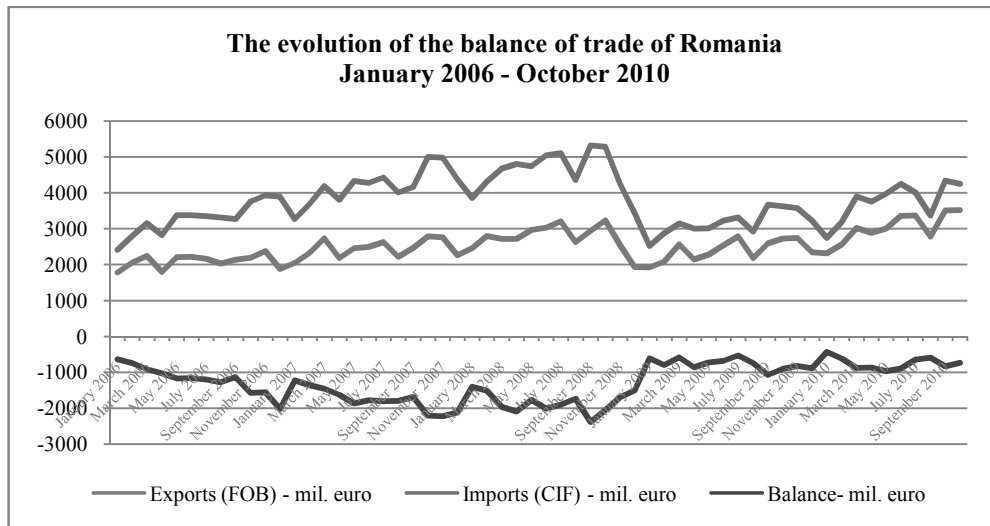


Figure 1

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

A comparative analysis of the development of Romanian exports and imports in relation to the exchange rate euro/leu, reveals a relatively close liaison between the two phenomena. Thus, by calculating the coefficient of correlation ρ between the two sets of data (x_i, y_i) where x_i – exchange rate euro/leu and y_i -exports FOB in mil. lei, after the formula:

$$\rho = \frac{n \sum_{i=1}^n x_i y_i - \sum_{i=1}^n x_i \sum_{i=1}^n y_i}{\sqrt{n \sum_{i=1}^n x_i^2 - \left(\sum_{i=1}^n x_i\right)^2} \sqrt{n \sum_{i=1}^n y_i^2 - \left(\sum_{i=1}^n y_i\right)^2}}$$

yields $\rho=0,62$, so a direct dependence of the level of exports of the leu/euro (Figure 2).

Similarly, by calculating the coefficient of correlation ρ between x_i – the exchange rate euro/leu and y_i - CIF value of imports in mil. euro, we have $\rho=-0,57$, so an inverse dependence of the level of imports of the exchange rate euro/leu (Figure 3).

The results obtained, confirm the theoretical expectations of stimulating exports with the devaluation of the national currency and the imports at its appreciation.

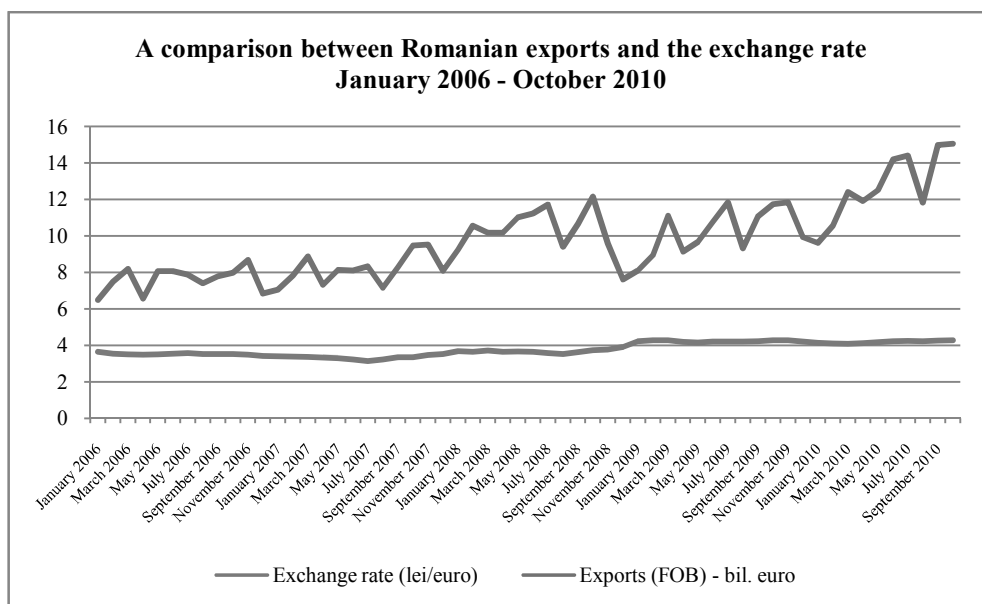


Figure 2

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

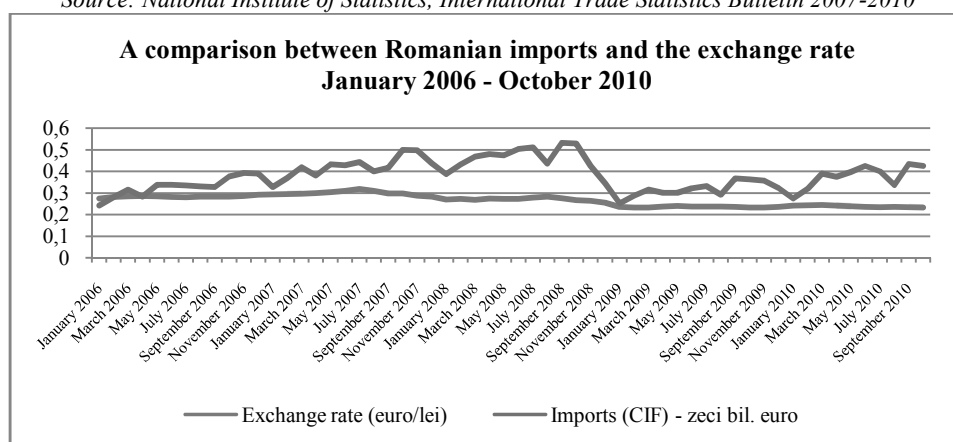


Figure 3

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

Relative to the Romanian export by geographical areas, the coefficients of correlation between the total value of exports and that corresponding to continents ranges from 0.99 in the case of Europe (which means that for an increase in the general export business of Romania, it should be oriented, in particular, towards the countries of Europe), 0.64 for Asia, 0.41 - Africa, 0.44 - America and 0.29 - Oceania. Note also that there is a significant correlation between exports to Asia and exports total of Romania and at the same time, a weak correlation between that corresponding to other continents.

Relative to imports, the coefficients of correlation between the total amount of their respective continents ranges from 0.99 in the case of Europe (which means that the import activity is prominent in the countries of Europe), at 0.73 for Asia, 0.21 - Africa, 0.74 - America and 0.39 - Oceania. As a result of these facts, we see that there is a significant correlation between imports from Asian countries or the USA and imports total of Romania, the correlation between African countries or those in Oceania and our country being insignificant.

Considering the weightings in total exports to Romania, we determined the regression lines corresponding to each continent.

Thus, the share of exports to Europe have a tendency to change gives by the regression line: $y = 0.00002812x + 0.8787$ (where x – the month of reference with 1 - January 2007, and y – the total value of exports by region) which signifies a somewhat constant of approximately 88% of the total export, but with a slight downward trend overall growth. In particular, targeted for exports to the European Union, we have: $y = 0.00056613x + 0.7065$ which implies increasing their weighting in export activity. For Asia, we have: $y = 0.00000812x + 0.6823$ therefore a constancy more accentuated than in the case of Europe, an encoded form at about 7%. In the case of Africa, we have: $y = 0.0001865x + 0.0186$ and in the case of America: $y = -0.00021008x + 0.0319$ or Oceania - $y = 0.00002615x + 0.0020$. The general trend of export is therefore fall to the countries of the two American continents and also by the countries of the Oceania (here the export share very little with approximately 0.15%, so insignificant in the overall).

By performing the same analysis but on ten months (counted) of the year 2010, the findings are somewhat different. Thus, the exports to the countries of Europe have the line of regression: $y = -0.00276x + 0.89736$, European Union - $y = -0.00445x + 0.7502$, Asia - $y = 0.00284x + 0.05046$, Africa - $y = 0.00145x + 0.03386$, America - $y = 0.0015x + 0.01625$, Oceania - $y = 0.00003709x + 0.00085$ where x is the number of the month corresponding to the reference date of January 2010. It is noted in the analysis of these functions, a downward trend of exports to the countries of Europe and the European Union, in particular, increasing at the same time, exports to American countries (by which the share in total export of Romania is quite low).

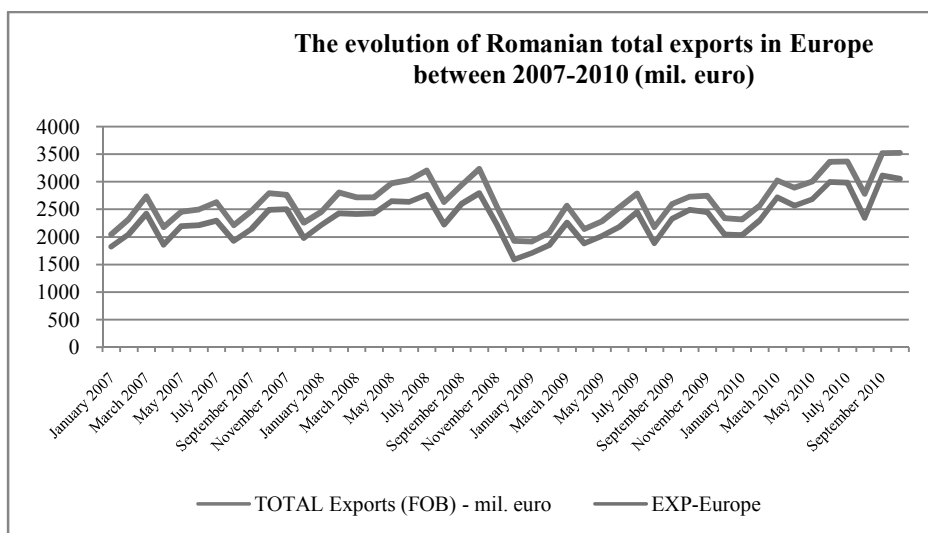


Figure 4

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

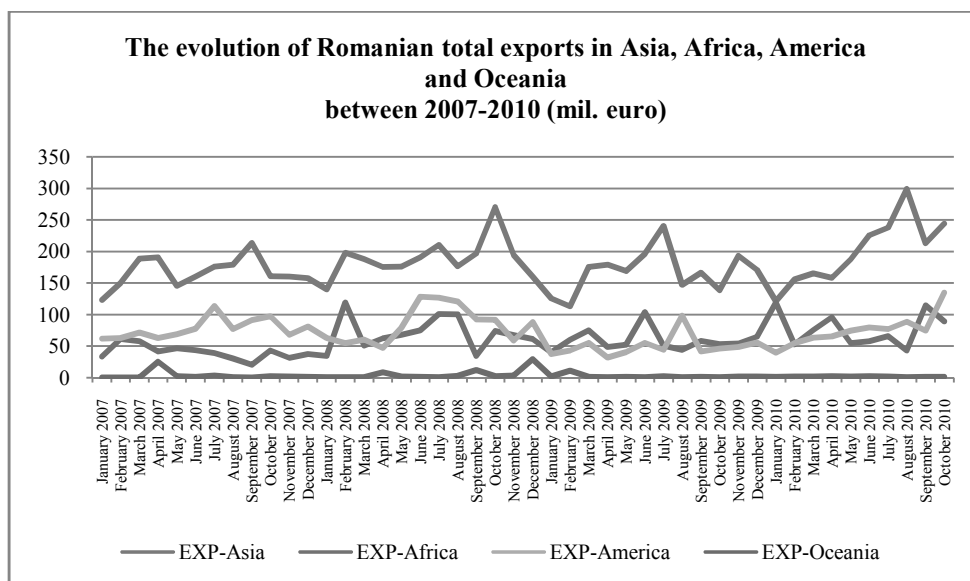


Figure 5

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

Doing similar to the situation of imports, we obtain that their relative share to Europe have a tendency to change due to the line of regression: $y = -0.00060748x + 0.8575$, which signifies a somewhat constant of about 84% of the

total import, but with a slight general trend towards decrease. In particular, for the imports targeted by the European Union, we have: $y=0.000558125x+0.6998$ – a trend of slight increase in their share in import activity. For Asia, we have: $y=0.0007646x+0.1039$ constancy at about 12%. In the case of Africa, we have: $y=0.00003723x+0.0049$ and in the case of America: $y=-0.000111x+0.0299$, Oceania - $y=-0.0000624x+0.0029$. The general trend of import is so depressing in the countries of the two American continents and also in countries of Oceania (imports having a very small proportion of approximately 0.15%, so insignificant in the overall).

The analysis on the ten months (counted) of the year 2010, reveals aspects similar somewhat. Thus, imports from the countries of Europe have the line of regression: $y=0.00269x+0.8281$, European Union - $y=0.0029x+0.7091$, Asia - $y=0.00217x+0.1394$, Africa - $y=0.00011x+0.0068$, America - $y=0.00025x+0.0240$, Oceania - $y=-0.0002x+0.0014$ (x represents the number of the month corresponding to the reference date - January 2010). It is observed, from the analysis of these functions a trend of increase in imports from the countries of Europe and the European Union, in particular, decreasing at the same time, imports from all other continents.

The comparative analysis of exports and imports reveals, on the one hand, the fact that after a period favourable dynamics of export activity (at the beginning of the period considered), last year it shows a downward trend in European Union countries, which are the main destination of exports. On the other hand, imports from this area shall maintain the trend of increasing what shows both an unjustified increase in the demand for goods from import and a non-use of raw materials for industrial processes.

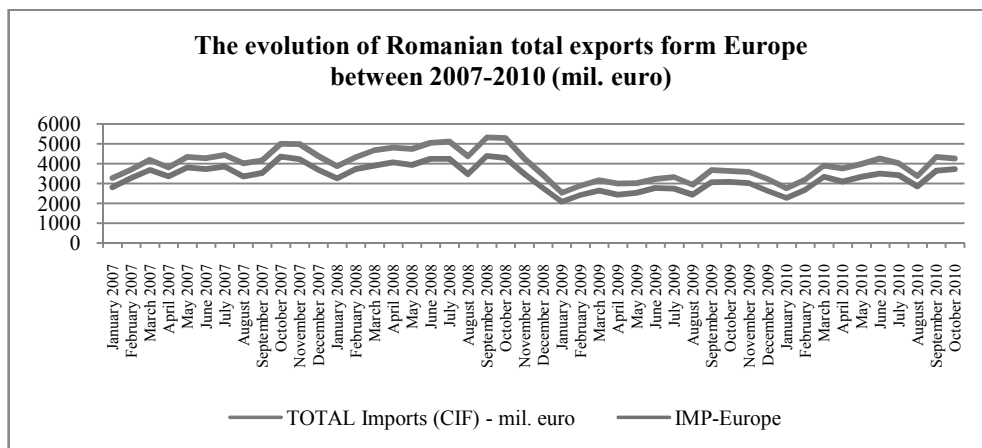


Figure 6

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

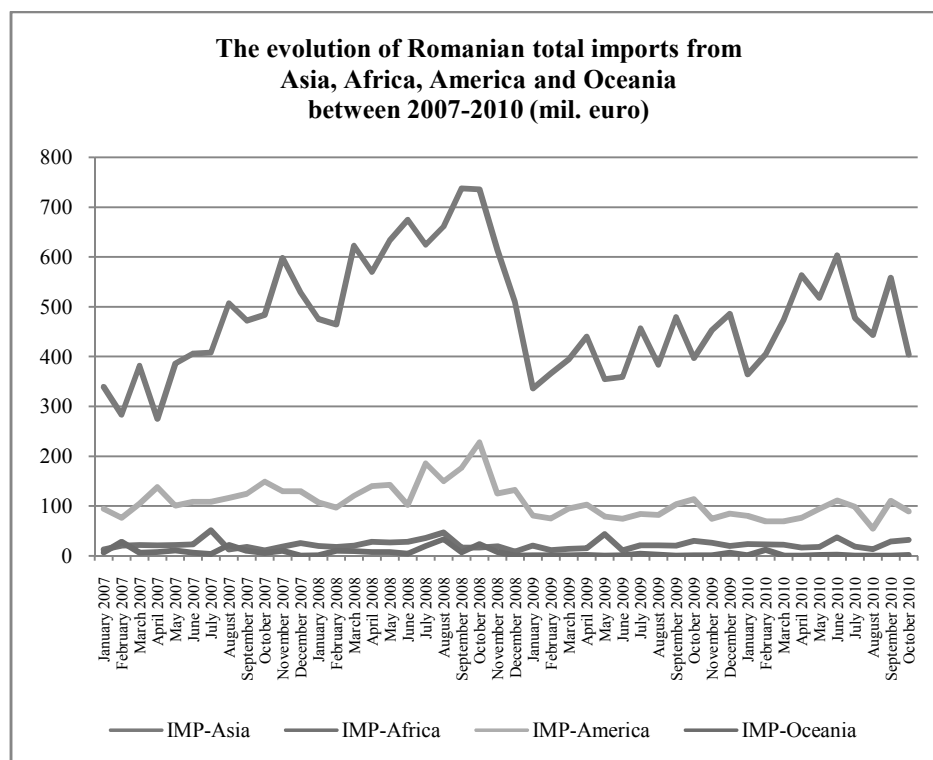


Figure 7

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

For the main countries, relative to the international trade of Romania, the regression analysis, relative to the first ten months of the year 2010, reveals a decreasing tendency to export in the case of Italy ($y=-0.0023x+0.1852$), Turkey ($y=-0.0007x+0.0763$), the United Kingdom ($y=-0.0008x+0.0466$), Austria ($y=-0.0003x+0.0278$), USA ($y=-0.0001x+0.0210$), China ($y=-0.00002x+0.0054$). If in the situation of exports to China, USA, Austria and the UK the situation is not alarming (because of the percents of these countries in the total export – about 4%), in the case of Turkey or Italy the situation is worrying, these countries representing about 7% and 17% respectively of total exports to Romania. Trends of increasing export manifests itself in the case of Germany ($y=0.0002x+0.1686$) with a total weight of approximately 17%, France ($y=0.00001x+0.0759$) - 7,5% of total exports, Hungary ($y=0.0008x+0.0501$) - 5,5% of total exports, Bulgaria ($y=0.0016x+0.0200$) - 3% of total exports and the Russian Federation ($y=0.0003x+0.0130$) - 1,5% of the total export. If in the case of Germany, the increasing trend is significant at a rate of 17% of the exports to Romania, in the situation of other countries, increasing trend is either too weak (France), or refer to the partners of the export quite poorly represented in total.

Romania imports from partner countries, reveals in the last ten months of the analysed year 2010, a downward trend in the situation of Italy ($y=-0.0027x+0.1172$), Germany ($y=-0.0012x+0.1072$), France ($y=-0.0006x+0.0482$), Turkey ($y=-0.0010x+0.0482$), the United Kingdom ($y=-0.0008x+0.0294$), Austria ($y=-0.0004x+0.0176$), USA ($y=-0.0002x+0.0133$), China ($y=-0.00005x+0.0034$) and an increase only in the case of Hungary ($y=0.00005x+0.0319$), Bulgaria ($y=0.0007x+0.0130$) or the Russian Federation ($y=0.00004x+0.0082$).

Analyzing comparatively, it follows a joyful situation about the balance of trade with Germany and France (an increase in exports and a decrease in imports). In the case of Italy, Turkey, United Kingdom, Austria, USA or China, is distinguished by both a decrease in exports and imports, with rhythms but approximately equal, so maintaining a relative level of the balance of trade. In the case of Hungary, the pace of increase in exports (0.07%) exceeds the net of imports (0.005% monthly) what is a really gratifying. The same fact is noted also in the case of Bulgaria (growth rate of exports of 0.15%-monthly and 0.07% -monthly increase in imports) or of the Russian Federation (0.02%-exports vis a vis 0.004%-imports). On the other hand, the share of these latter countries in the trade balances of Romania (a maximum of 3%) is not a reason for a great satisfaction.

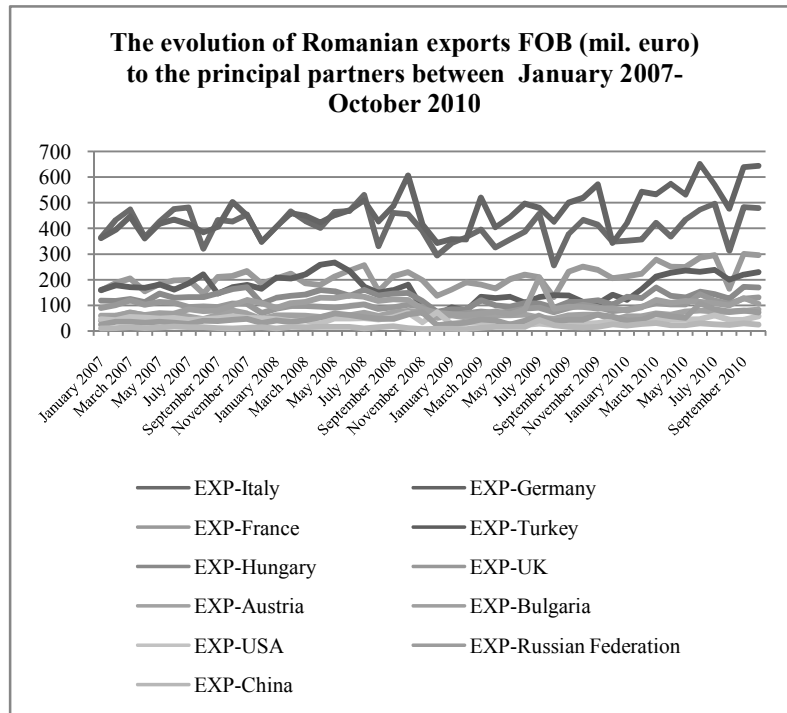


Figure 8

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

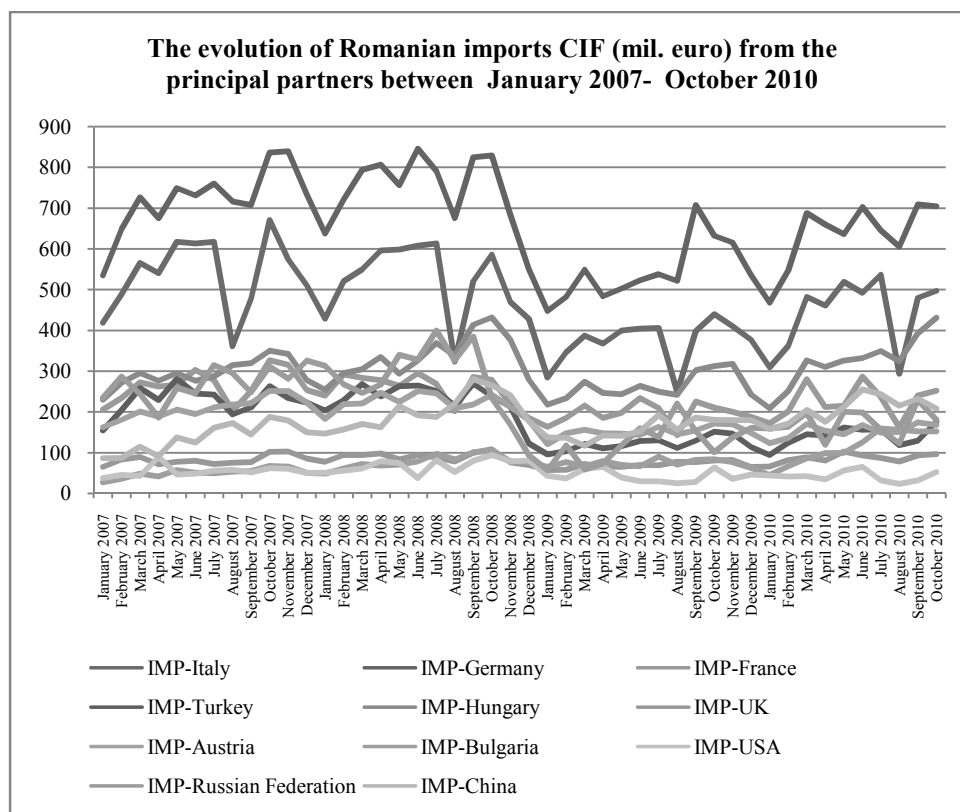


Figure 9

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

The analysis of exports and imports by groups of products reveals a trend upward to export foodstuffs and live animals ($y=2.2969x+21.3376$), but also to imports from the same products ($y=2.0943x+164.0176$). The slope of the regression of export being greater than the relative import, we have a joyful development perspective. The product group "beverages and tobacco" at an ascending slope of the trend of export ($y=0.7485x+1.8983$) corresponds a trend of reduction of imports ($y=0.0600x+29.4713$). The category "Raw Materials, excluding fuel" reveals an equation of the regression line $y=1.4876x+103.1365$ – export and $y=0.2785x+92.3903$ – import – positive developments in the trade balance. A marked fall in both export ($y=-1.2325x+228.6533$) and import ($y=-2.1745x+497.4952$) is recorded in chapter "mineral fuels, lubricants and related materials", but the further decrease of the imports is good for reducing deficit kicks off the balance of trade in relation to this product category.

An increase in exports ($y=0.1259x+3.1594$) to "oils, fats and waxes of animal and plant origin" is, unfortunately, moved forward by a considerable increase in imports ($y=0.2004x+7.5011$) which will result in an amplification of the negative balance of trade balance.

The same situation occurs in the category "chemical products and related products" where a regression function $y=0.7275x+123.2699$ – export, corresponds to $y=2.7924x+367.6026$ – import.

A happy situation is to "processed products classified mainly raw material" and "machinery and transport equipment" where, at the regression of rising export ($y=0.3146x+470.2569$, $y=12.9981x+558.7709$) correspond to decreasing import regression ($y=-0.7869x+878.5844$ and $y=0.4308x+1378.3740$ respectively) so a recovery trend of negative balance of trade as they are recorded at present.

A particularly damaging is the "miscellaneous manufactured articles" where export regression is $y=-1.7013x+556.4549$ and the import $y=0.9204x+318.0411$. It is known that a large proportion of the population of the female sex work exactly in this sector (industry of textiles or footwear), or the reduction of exports, with simultaneous acceleration of imports will lead, in perspective, the reduction of a large number of jobs.

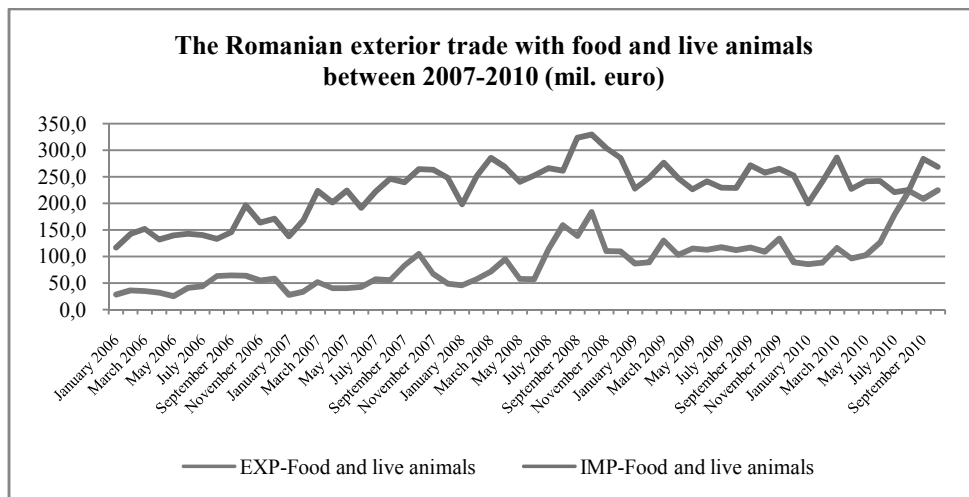


Figure 10

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

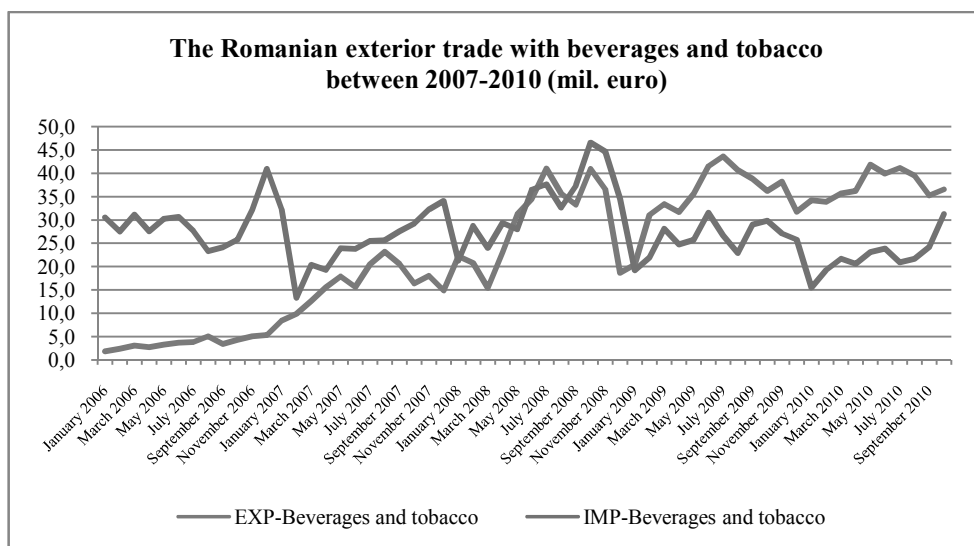


Figure 11

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

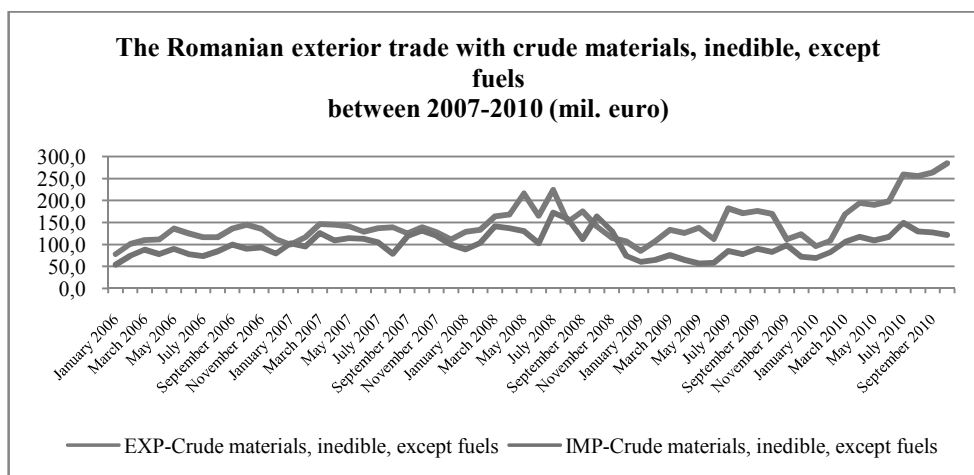


Figure 12

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

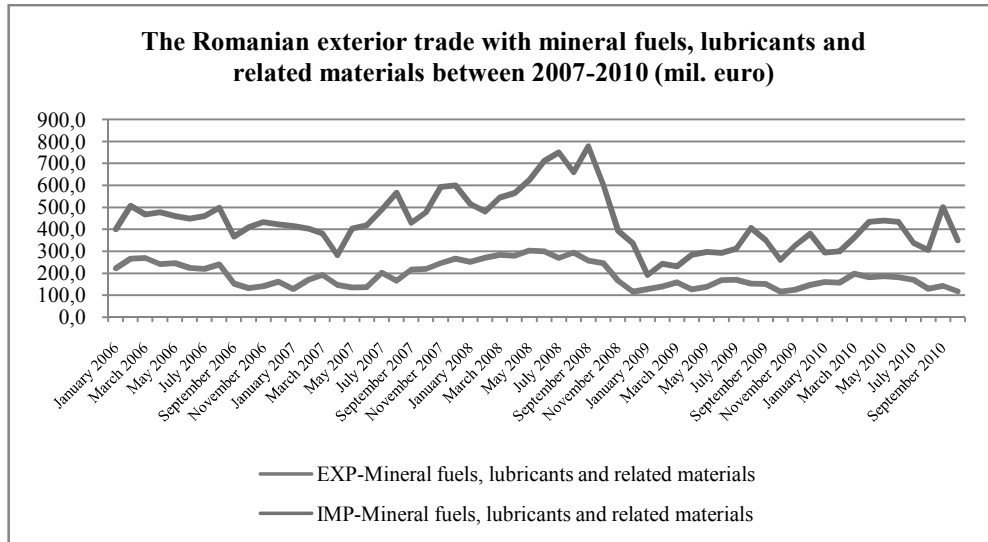


Figure 13

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

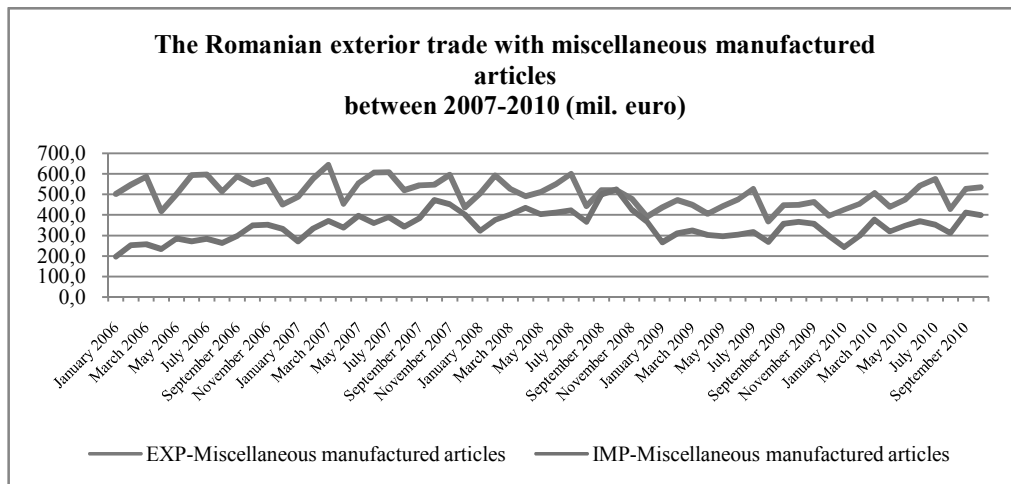


Figure 14

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

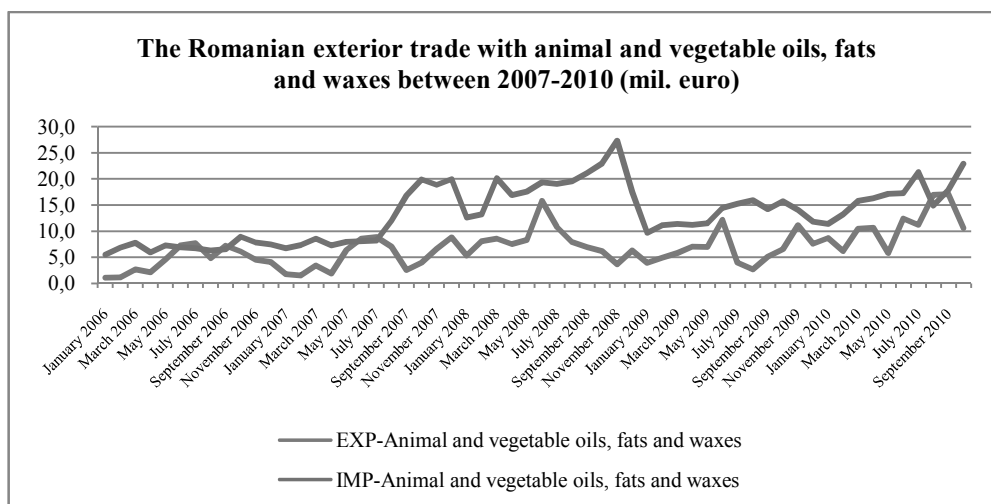


Figure 15

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

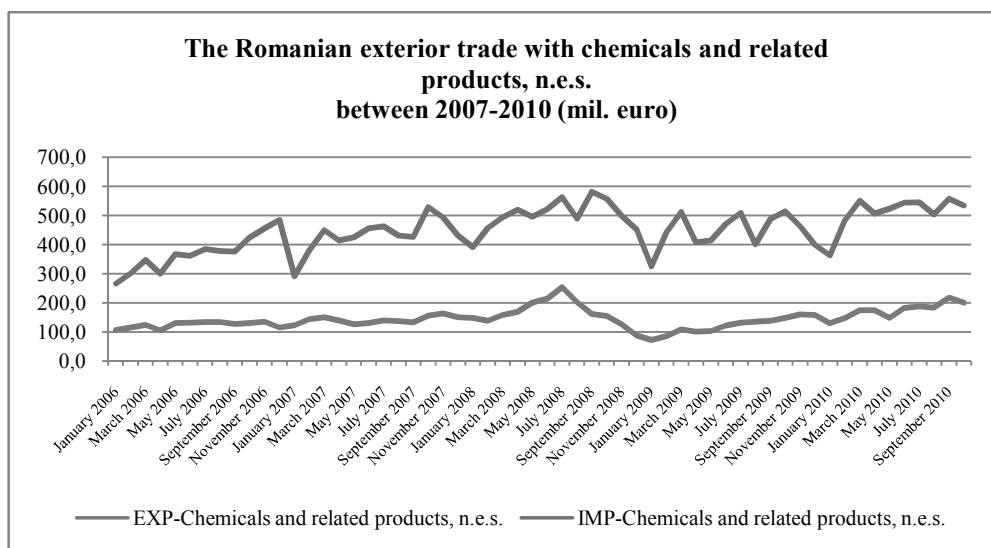


Figure 16

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

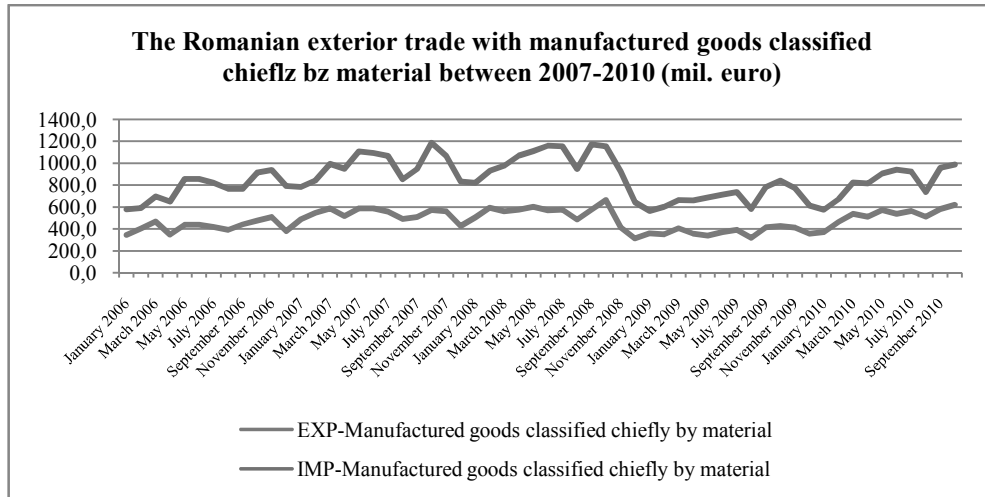


Figure 17

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

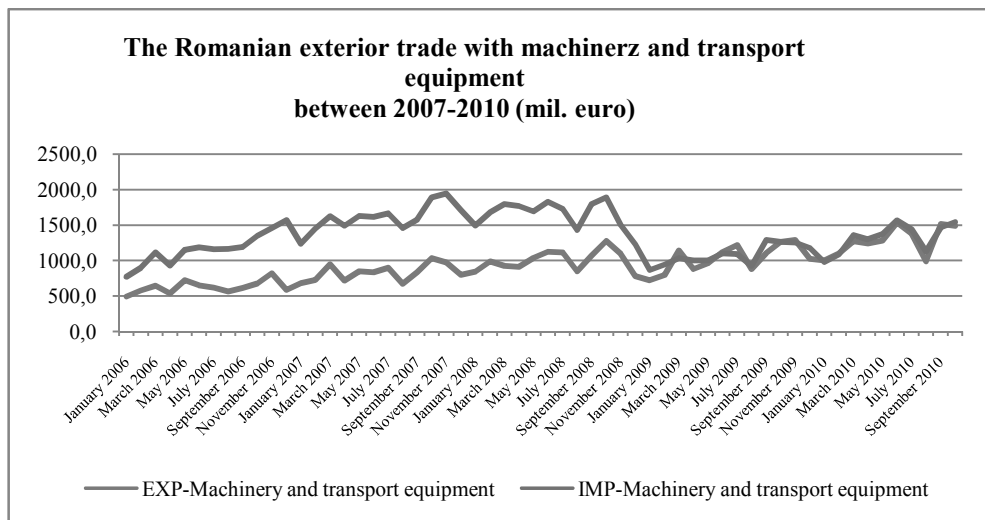


Figure 18

Source: National Institute of Statistics, International Trade Statistics Bulletin 2007-2010

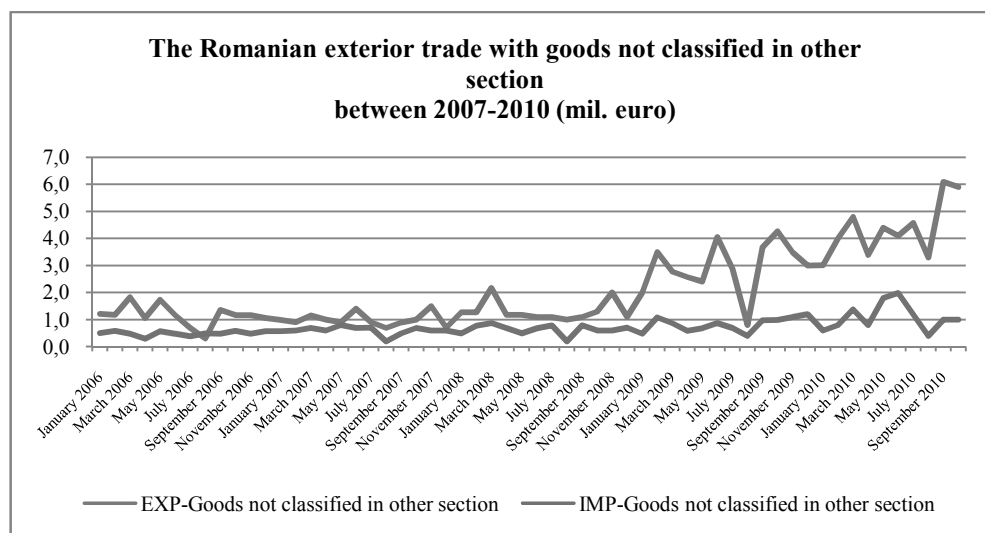


Figure 19

Source: National Institute of Statistics, *International Trade Statistics Bulletin 2007-2010*

3 Conclusions

The analysis of the evolution of the balance of trade of Romania in the period January 2006 to October 2010 reveals a number of aspects that deserve to be taken into account by the decisions factors.

If Romania's monetary policy is quite good (see exchange rate relations – the volume of goods exported or imported), the orientation of foreign trade activity in the last period, does not appear under best kicks off. Thus, despite the fact that the European Union and, in general, Europe, are the main trade partners of Romania (72%-share in total - EU exports and 71% in the total import, respectively) the general trend is the decline of exports to these areas and for increased imports.

Relative to the balance of trade with main partners, it is observed a downward trend of exports to Italy and Turkey (with 17% and 7% respectively, of the total) and an increase in the case of Germany (about 0.02% monthly). Also, exports to Hungary and Bulgaria registered an upward trend, unfortunately they own small weights in total exports. Import activity knew an enough serious decline, obviously the economic crisis but, overall, compensates for exports at the same destinations.

On product groups, we can observe a start righting of their balance of trade in most, even though quite shy, only worrying phenomenon is the overthrow of the situation in the framework of articles manufactured where import trend becomes

predominant in relation to the export involving major social phenomena, such as increased unemployment among women.

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Romanian Health System: Lessons Still to Learn

Puiu Ionut Fătulescu¹

Abstract: Objective: Even if the Romanian Health System has registered some notable improvements over the last 20 years, this article aims to prove that it still has certain areas to reform in order to assure the right amount of healthcare a system should provide. Hypothesis: The hypothesis on which this article relies on is that the system is not yet characterised by results, competition, and efficiency. Methodology: To sustain the hypothesis, different socio-economic arguments have been brought. Also indicators for the European average and Romanian health system have been compared, to emphasize the current state-of-facts and time series of Romanian indicators have been analyzed in different contexts to extract a more objective result of changes in values. Results: Even though the Romanian Health System has known different types of reforms ever since the fall of the communism, the system still denotes a lack of success in providing proper healthcare for all its citizens.

Keywords: expenditures; efficiency; indicators

JEL Classification: I10; I18; I11

Introduction

The health sector has been a very important area of each state ever since the dawn of mankind, being exposed to perpetual modifications and adaptations imposed by medical discoveries, technological progress, social and economic changes, etc. Due to the actual socio-economic context of the European Union, even if each nation has the liberty of choosing its public health policies according to its national needs and traditions, the Union as a whole shares common values, with the final purpose of providing high quality services to all the members of the community.

In this article, the author will underline the importance of re-evaluating the indicators of the Romanian health system in order to align it with the European

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standards and to prepare the system for future challenges, mostly caused by changes of the social indicators (size of population, average life expectancy, aging population, etc.). To support this idea, a series of arguments will be brought: the first one will bring evidence of the existent discrepancies between the Romanian health system and the European average, the second one will demonstrate the low degree of efficiency of the Romanian health system and the third one will prove the incapacity of the actual health system of preventing future socio-economic changes. The methods this article relies on are descriptive statistics, comparing data collected from the European Statistical Office on some of the most important health indicators with the values of the same Romanian indicators. Subsequent the introductory part, a short presentation of the Romanian health system will follow, succeeded by the third part, when the arguments mentioned in the previous paragraph will be discussed. The article will end with a section of conclusions and limitations.

Short Presentation of the Romanian Health System

The Romanian Health System (RHS) is regulated by the 145/1997 Law, with its later completions and stipulations, law which marks the abortion of the state financed model by the introduction of health social care, after the Bismark's model, introduced in Germany, at the end of the 19th century. However, RHS has, from many points of view, the same working mechanism from the years before the revolution and, even if the 95/2006 law had as objective the strengthening and clarification of the National Health Care House's (NHCH) responsibilities, later successive modifications transformed NHCH into a bureaucratic institution, subordinated to the Ministry of Public Health and the Ministry of Public Finances.

Regarding the health budget financing, the main source is the Unique Stock of Health Social Care, with over 70% of the total¹, along with other funds from the state budget, local budgets, external credits, own incomes, donations, sponsorships or non-reimbursable external funds. The Stock's constitution is made by mutual contribution employee (5.5% from the brut income) and employer (5.2% from the salaries stock) or 10.7% from their income for the freelancers who choose to be self-assured. The health budget for 2010 has raised up to 4%, compared to 3.17% in 2009, even though the public budget has had a contraction of 10% and the Vice Tax introduced in 2006 for enhancing health's budget, has been redistributed towards other sectors. This phenomenon can be ascribed to what Portafke (2010) asserts in his article, that governments tend to allocate a greater percentage of the GDP to health only in pre-elections years, while for common years, governments spend less for health. Furthermore, Stahl (2009) concludes in his article that health is not sufficiently recognized in the EU's policy process, proving that the

¹ 75% in 2007.

maximum percentage of health-related topics in the studied reports has been 39% for health systems and 29% for human health.

RHS's Indicators are below the European Average

RHS presents major inefficiencies comparing to the European health systems. This phenomenon can be observed through a simple review of the main health indicators for the European average against the Romanian ones. Thus, analyzing the percentage of GDP allocated in 2008¹ for public health by the member states of the EU, it can be remarked that Romania holds the last place, having allocated only 4.7% of the GDP, slightly over half of the European average of 8.18% and with 0.6% behind the next state, Estonia. Also, when speaking about health expenses per capita, Romania is still holding the last place, the Romanian Government having spent only 441 USD/per capita, 7.19 times less than EU's average of 3169.462 USD/per capita and 19.48 times less than Luxembourg, the country with the highest health public expense per capita of 8592 USD. Furthermore, average life expectancy is another indicator that clearly emphasizes the differences between Romania and the EU average. Thus, in 2009², from the 25 countries, members of the EU who have published their data³, Romania was the 21st according to men's average life expectancy (69.83 years), being closer to the end of the classification (Lithuania – 67.51 years) than the European average (74.96 years). For women's average life expectancy, Romania was the last, with an average of 77.39 years, after being overtaken by Bulgaria, with an average of 77.4 years, having 4.19 years below the European average of 81.58 years. As a state of facts, both men and women indicators for Romania, have registered increases for the last 11 years, as it is shown in table 1. Analyzing the data from table 1, it can be observed that the 1999 existing 5.2 years difference between the average life expectancy of the Romanian women and the EU27 average decreased over the 11 years with only 1.1 years, thing that underlines the low efficiency of the RHS. This thing is also indicated by the average life expectancy of Romanian men compared to the European average over the time series, case in which, out of the 5.5 years difference between the two averages in 1999, Romania reduces the difference with only 0.6 years, to 4.9 years in 2009.

¹ <http://www.who.int/nha/country/rou/en/>

² <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tps00025&language=en>

³ At the writing date of the article Italy and the United Kingdom have not had the data published but, considering that for 2008, these countries' data was close to the European average, it is considered that the lack of information for 2009 cannot significantly affect the study.

Table 1. The evolution of Romanians' Life Expectancy between 1999 and 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Romania-Women	74.2	74.8	74.9	74.7	75	75.5	75.7	76.2	76.9	77.22	77.39
Romania-Men	67.1	67.7	67.5	67.4	67.7	68.2	68.7	69.2	69.7	69.71	69.83
EU27-Women	79.4	79.6	80	79.9	79.9	80.5	80.5	81	81.1	82.37	81.3
UE27- Men	72.6	73	73.3	73.1	73.3	73.8	74	74.4	74.5	76.37	74.6

Source: Eurostat, Public Health Tables, Health's Structural Indicators.

Another indicator, very important for the analysis, is the infantile mortality rates. Thus, even though Romania has the greatest percentage of the entire Union, 11‰ in 2008 and 10 ‰ in 2009¹, and one percentage point behind the next state, Bulgaria (9‰ in 2009), the values of the indicator have decreased with more than 50% comparing to 1998 (20.5‰) and so did the discrepancies compared to the European average, Romania being with 5.8‰ above the European average, compared with 12.5‰ in 1998.

The evident differences between RHS and the average of the EU emphasize the need of setting up certain programs to ensure both short and long-term improvements in the values of the main indicators, and to continue the substantial improvements made towards aligning with the European average, improvements that are specific for developing countries (Jackson T. et al., 2007), even if the decisions of the European Union themselves don't seem to take into consideration the health systems (Clarke A. et al, 2007).

RHS Needs Improvement

The efficiency of a health system can be analyzed from many points of view. Either talking about the human factor, equipment, investments made in the health care system, main health indicators or the functioning of the system as a whole, Romania was facing in 2009 a series of problems in assuring a competitive and efficient health system. For example, examining the number of doctors and the number of signed contracts with the health services providers in the 2004-2009 period², it can be observed that, even though the number of doctors grew continuously, from 46936 in 2006 to 50415 in 2009³, the number of signed contracts registered a very weak fluctuation, ending the period at a lower point than

¹ <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tps00027>

² National Health Care House, (2010). Activity Report on 2009.

³ Romanian National Institute of Statistics, Romania in cifre, 2010.

the start year, from 1328 in 2004 to 1314 in 2009. According to the available data, even though at a first view the increase in the number of doctors can be regarded as an increase of efficiency of the system, a more detailed analysis would show the negative impact of the increase transmuted into a pressure on the health budget, due to the small and almost constant percentage distributed from the state budget, given the fact that RHS is still preponderant public and the medical staff salaries are paid from the allocated budget. In other words, for a real increase of the efficiency, the allocated budget should have increased as well, to sustain both public expenses for health care and salaries, not to transfer funds towards doctor's incomes, leaving the system without available resources for pharmaceuticals, equipment and other important expenses. Also, the almost inexistent fluctuation of the number of signed contracts with different clinical services providers denotes the weak capacity to attract investments, fact that also affects the efficiency of the system.

RHS reflects low efficiency from the equipment point of view too, the number of ambulances having diminished with 25.85% from 1990 to 2008¹, the number of public hospitals with 2.57% in the 2000-2008, from 439 to 425, but the most obvious changes have taken place for the polyclinics, who registered a 291.3% decrease in only eight years, from 90 in 2000 to 23 in 2008. Nevertheless, the total of hospital beds reduced with 49.8% from 1990 to 2008, fact that underlines, apart from the inefficiency of the system, its incapacity to properly use the resources, especially under the aging population circumstances. If to the previous information it is added the random distribution and consumption of resources between regions, the necessity of reforming the system becomes obvious.

To hallmark the importance of revising the system as a result of the low level of efficiency some additional health indicators will be provided. For example, if for some diseases, like food poisoning, the number of new cases remained approximately constant or registered small increases, from 8.2 new cases in 1990 to 8.3 new cases in 2008, for others the figures changed considerably, like for tuberculosis, whose number of new cases has grown from 64.6 new cases at the beginning of the period to 87.3 new cases at the end of it. A worrying modification over the period has been recorded by the endocrine, nutrition and metabolism diseases, which have increased 6.69 times between 1992 and 2008, from 86 to 575 new cases.

RHS is Inapt to Prevent Future Socio-Economical Changes

For a system to be considered efficient, its capacity to adapt to continuous socio-economical changes must be analyzed. Looking at 2011 facts from this point of

¹ Romanian National Institute of Statistics, 2009 Yearbook, Chapter 7- Health

view, RHS appears to be rigid, proving to be unprepared for future known demographic changes and even less prepared for unpredictable changes, indifferent of their nature. For example, even if in 2010 there were 17.46 million assured, only 6.73 million of them were contributing to the health care fund, while the rest were exempted on different grounds, with most of the tax-payers in the 20-45 years age segment on July 1st 2009. Also, it is worth mentioning that Romania has been having a negative fertility ever since the 1989 Revolution, when the abortion law passed in the Parliament. However for those who were born in year after the abortion has been forbidden, health expenditures will increase considerably as they pass the 65 years point (Payne G. et al., 2007).

The effect of the aging population will be an additional pressure on the health budget, the moment those who were at the 40 years level in 2009 will move towards the upper limit of Romania's age pyramid, needing medical services, pressure even greater given the fact that human resources effectives will diminish as a consequence of the negative fertility and the number of doctors as a consequence¹. However, given the fact self-assessed health status tends to improve as the unemployment rate decreases (Ahs A. Et al., 2005), under the caeteris paribus clause, a decrease of the population will lead to an improvement of the self-assessed health status.

Another threat for the RHS will be the lack of specialized medical staff, caused on one hand by the retirement of most doctors, meaning those doctors who, in 2008 were contained in the 40-45 years segment, containing the biggest effective of population and by the high rate of emigration of the medical staff on the other hand.

Conclusions, Recommendations, Limitations

This essay pointed out some of the deficiencies of the current RHS. The 2009 stage public policies hardens and burdens the functioning of the health system, both by bureaucracy and inconsistency in adopted laws and decisions. In the first part of the paper has been underlined that the health budget has been diminish for two consecutive years, even though the allocated percentage has already been below the European average, and below the aimed percentage. Future public policies should be based on national and regional macro-economic indicators to assure a higher efficiency of the system and the reduction of the existing discrepancies between Romania and the others EU members. Future laws could be an inspired from the American Health system, as Clarke et al. (2010) emphasize in their article which concludes that for an enhanced efficiency, European systems should adapt the American methods. Also, it has been proved that an increase in the total health

¹ Romanian National Institute of Statistics, *2010 Romania in numbers*.

expenditure growth rate of 1% leads to 0.06%-0.1% increase of the GDP per capita, most of the effect being produced by the public expenditure (Beraldo S. et al., 2009) thing that would mean that, besides diminishing the existing difference between allocated percentages in Romania and the European average, the Romanian economy would register an overall increase. Also, a proper percentage of GDP would allow bigger salaries for doctors and medical staff, thing that would diminish the informal payment, typical for all Balkan countries (Bredenkamp C. et al, 2010), (Tambor M. et al., 2010) and would permit a cash flow meant for making the healthcare system both a better provider and purchaser of information systems, improvement that needs to be done (Ingram D. Et al., 2006). Another aspect of the problem that should not be neglected is that health care expenditures are direct correlated with self-assessed health status, an increase in allocated percentage of the GDP leading to an improvement of the self-assessed health status (Rivera B. 2001).

Furthermore, the second part of the article presents the failure of the existing laws, demonstrating that the system needs to be completely re-evaluated. As an example, the redistribution of the Vice-Tax towards other sectors affected significantly the health budget, an effect that has tried to compensate by the introduction of the "Clawback" system, which assumes that the pharmaceutical producers must pay 10%-11% from their incomes for the health budget, but who threatens to drive away the possible or existing producers. Nevertheless, building hospitals without allocating special funds to supply the needed equipment reduces dramatically the output of the investments and also blocks important sums in unusable buildings. Also it should be continued to reform the system towards an ambulatory system, especially that home-treatment has been proven to be useful for old people, reducing the deficiencies of the activities of daily life. (Meng H. et al., 2009) especially that an improvement of 20.7% in the number of pharmacists has been registered during the last years¹, from 9932 in 2006 to 11988 in 2009.

The third argument brought to sustain the idea, came as a completion for the first two, proving the necessity to reform the medical system in order to prevent the changes of the socio-economic factors and to attenuate or prevent the impact of any unforeseen factor. Aging population, negative growth, are indicators who will exert a great pressure on the health budget in the absence of a solid legal frame, designed to equilibrate the assured-payer balance, especially that, with the increase of life expectancy, the period of morbidity enhances and the out-of pocket health expenditures also increase (Schoenberg N. et al., 2007). In other words, the government has to be prepared for future growing expenses, given the fact that health care expenses increase with closeness to death, aging being the main reason for higher long-term care expenditures (Yang et al., 2003), (Seshamani et al., 2004) and worse self-assessed health status (Rivera B., 2001), otherwise risking to lose

¹ Romanian National Institute of Statistics, Romania in cifre, 2010.

patients against the private sector when the public system is under financed, which undermines the guaranteed free access to health services (Siskou et al., 2008). Furthermore, the RHS should consider that each country has a specific in researching areas depending on socio-economical factors (McCarthy M. Et al., 2007), and it should stimulate and focus on those areas of national interest, like the countries' best medical practices or worst maladies, bearing in mind that there is very difficult to compare national research on health systems given the fact that they combine different types of provision and financing (Gerdtam et al., 1992). Also, studies showed that the development of new technologies add up to 2% to the percentage of allocated GDP percentage (Rabinovich M. et al., 2007), another important aspect.

It is obvious that the article has met its objective to underline the need of re-evaluating health public policies to ensure its competitiveness at international level and an efficient and qualitative at national level. Also, an objective description of the RHS has been made, pointing out the current most important areas of that need improvement. Possible critiques for the articles may come from the lack to provide exact data about the RHS needs. Thus, if indicators like the salaries of nurses of doctors are illustrative without being correlated with others, some specific factors like the number of hospital beds would be clearer if a needed number of beds would be known. Also, even though the natural growth, although unfavourable when the 0-20 years segment at 1st of July 2007 will have entered on the labour market, because the small number of persons will mean a smaller budget, on short term can be considered a positive aspect as pupils and students are exonerated from paying health care contribution.

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