Bulletin of the *Transilvania* University of Braşov
Series V: Economic Sciences • Vol. 8 (57) No. 1 - 2015

Analyzing and forecasting the European social climate

Liliana DUGULEANĂ[1], Constantin DUGULEANĂ[2]

Abstract: *The paper uses the results of the sample survey Eurobarometer, which has been requested by the European Commission. The social climate index is used to measure the level of perceptions of population by taking into account their personal situation and their perspective at national level. The paper makes an analysis of the evolution of social climate indices for the countries of European Union and offers information about the expectations of population of analyzed countries. The obtained results can be compared with the forecasting of Eurobarometer, on short term of one year and medium term of five years. Modelling the social climate index and its influence factors offers useful information about the efficiency of social protection and inclusion policies.*

Key-words: *social climate index, unemployment rate, corruption perception index, econometric model, forecasting.*

1. Introduction

The literature about the effects of economic crisis emphasized some convergence trends between the richer and poorer country members of European Union countries during the last decades, as recently mentioned in the report "Social cohesion in Europe after the crisis" (Dethlefsen, Emmanouilidis, Mitsos et al., 2014). The future of Europe is subject of important research projects financed by European Commission, interested about the main concerns of European citizen on long term, their hopes and fears and their choices and perceptions of the main issues of well-being in Europe (Quintana-Trias, 2010).

European social climate is a framework concept for characterizing the well-being of European citizens. Considering the social climate as a barometer of well-being in each country, the European social climate is more than a result of a simple aggregation operation of the national social climate indicators of EU countries. It enhances also the relationships between the EU countries and covers complex issues related on emigration phenomenon and social investments of European Union

[1] Transilvania University of Braşov, ldugul@unitbv.ro
[2] Transilvania University of Braşov, cduguleana@unitbv.ro

institutions. The subtle effect of sustainability principle appears as a basic explanation of the holistic approach of European social climate, as a key element for the future of European Union.

The literature on European social climate consists mainly on the reports of Eurobarometers (European Commission, Special Eurobarometers: 349, 2010; 370, 2011; 391, 2012; 408, 2013). The aspects envisaged by the Eurobarometers surveys considered the dimensions identified in the literature on the well-being in Europe.

The AUGUR project of the EU was the main instrument for funding research for the period 2007-2013 (Tancioni, 2013). The reports of the research projects established as important dimensions: *Well-being of society in future, Personal well-being, Health services – priorities for spending, Education – priorities for spending, Employment/ income – priorities for spending*, as mentioned by the reflection project "Well-being in 2030" (TNS Qual+, Eurobarometer Qualitative studies, 2011), undertaken in eight EU member states, in 2011: Estonia, Germany, Greece, France, Poland, Romania, Sweden and the UK.

For the *personal well-being,* the conclusions of the aggregate report emphazised the key factors as being the interrelated areas: health, education and employment. Employment offers access to health and education. Education is important for employment and "*a good health is fundamental to being able to function in society and thus is fundamental to well-being.*" (TNS Qual+, 2011).

In a conclusion of the report "Social cohesion in Europe after the crisis" (Dethlefsen, Emmanouilidis, Mitsos et al., 2014, p. 31), "health was pointed to as the most important element influencing the quality of life" based on the respondents' views in seven EU member states concerning the crisis and the future of Europe. Certain expected general directions were perceived, as: promotion of prevention behaviours, development of healthcare structures, extension of publicly funded treatments, and investment in medical research. The private healthcare system was perceived as being a discrimination of the poor (TNS Qual+, 2011).

Concerning the *employment / income – priorities for spending*, the report (TNS Qual+, 2011) offered the main directions: reducing unemployment, economic growth and increasing competitiveness.

The factors influencing the well-being are considered important in the same measure and they are interrelated; the changes to one impact on another (Pompili and Miccadei, 2010). The social well-being for European citizens is influenced mainly by the social inequality and economy (Wolleb and Daraio, 2013).

The economic growth may conduct to decreasing unemployment and may relax the social inequalities ensuring good healthcare and education. The view until year 2030 was obstructed by the actual economic crisis (TNS Qual+, 2011).

The social climate refers to the aspects of social well-being taking in consideration: health, education, recognition, social inclusion and employment and income equality *"as a condition for social cohesion and long-term development"* (Wolleb and Daraio, 2013).

2. Objectives

The main objectives of this study are to establish an approach of analysing the multidimensional qualitative concept of Social Climate in order to forecasting it at European level.

The scientific approach aims to validate the real value of Overall Social Climate Index (OSCI) to validate the obtained results of forecasting on short term of one year. The comparison with the Eurobarometer data validates the proposed econometric model and offers scenarios of OSCI evolution on medium term, until 2018. The obtained results may offer scientific bases for funds' allocation according with the European strategies for ensuring a better European social climate.

3. Material and methods

The first step of methodology was an analysis of the main features in the evolution of Overall Social Climate Index (OSCI) during 2009-2013.

In the second step, considering the appropriate quantitative indicators for the main qualitative aspects of SCI, the multivariate descriptive analyses revealed the same principal components: the socio-economic development and the labour market, both for 2012 and 2013. In the third step, the econometric models resulted from the explanatory approaches conducted to significant variables of the already identified components. In the fourth step, the econometric models were used to forecasting OSCI at European level.

The results of the descriptive and explanatory approaches have conducted to the principal components and the significant explanatory variables, which have explained the differences between the expectations of European population about the social climate.

4. Results and discussions

4.1. European population perceptions about social climate, during 2009-2013

After the financial and economic crisis began, in 2008, it became obviously the importance of studying the European population's attitude about the current and future situation both of personal life, in general, the perceptions at national level, and about social protection and inclusion. European Union, being concerned about the existing and future social climate in European countries, has financed Eurobarometer surveys starting with 2009.

The five waves of surveys unfolded each year during the period 2009-2013, envisaged 15 aspects of the three directions: personal life, national picture and social protection and inclusion. Further analyses offered overviews and comparisons of the social climate in EU.

The respondents were asked to answer at two questions: one about the satisfaction related to their personal life and the second about judging the current situation related to fourteen social and economic aspects, in their personal circumstances and of national interest, within their countries. The answers of the two questions were given on a scale with four points from "very satisfied"/ "very good" to "not at all satisfied" / "very bad", as presented in Table 1.

Question 1: *Satisfaction with the life you lead*		Question 2: *Judgement of current situation in 14 areas*	
Very satisfied	10	Very good	10
Fairly satisfied	3,33	Rather good	3,33
Not very satisfied	-3,33	Rather bad	-3,33
Not at all satisfied	-10	Very bad	-10
Don't know	Not scored	Don't know	Not scored

Source: SOCIAL CLIMATE, summary, TNS Opinion & Social at the request of Directorate-General Employment, Social Affairs and Inclusion, Special Eurobarometer 408, October 2013, pp. 4

Table 1. *Scales for the Eurobarometers' questionnaire*

The social climate index is calculated as a mean of all answers of each respondent, for each question, for each country, and also for EU27 until 2012, and for EU28 in 2013, after Croatia joined EU at 1st July 2013. The evolution of overall social climate index during 2009-2013 is presented in Figure 1.

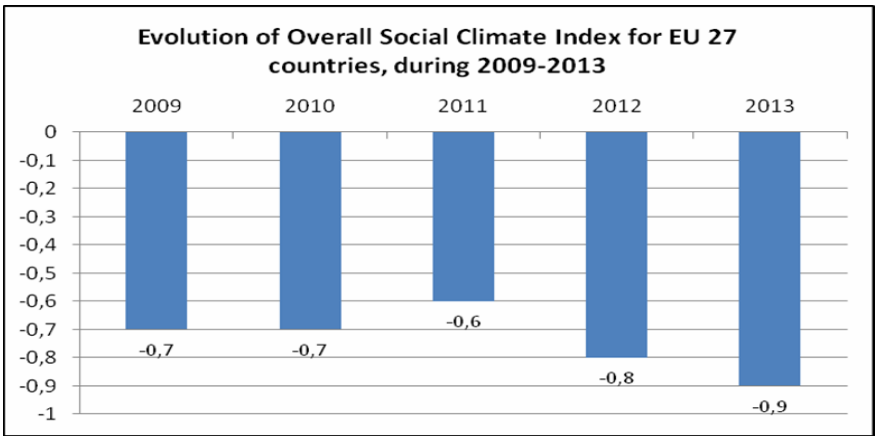

Fig. 1. *Evolution of OSCI in EU countries, during 2009-2013*

The values of overall social climate index for the current situation, even close to 0, are negative for the entire period. The slow increasing in 2011 was followed by a decrease of the social climate index, in 2012, which continued in 2013.

Figure 2 presents some components of overall social climate index, which can be grouped in two parts respecting the two main questions of the questionnaire.

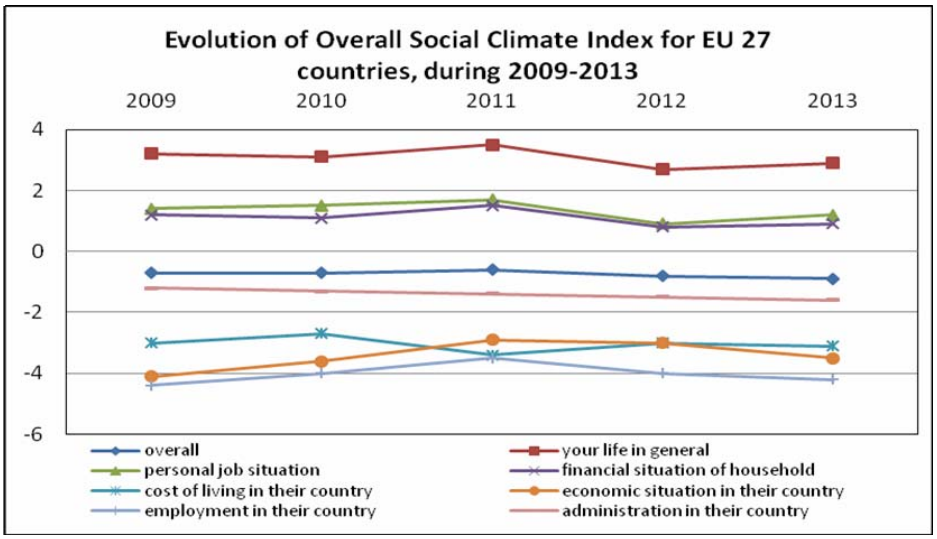

Fig. 2. *Evolution of some aspects of OSCI in EU countries, during 2009-2013*

The first part reflects the satisfaction about personal circumstances, like: life in general, personal job situation and financial situation of household. The second part refers to the satisfaction about the current situation in their country: cost of living, economic situation, employment and administration.

It is interesting to notice that all the aspects concerning the personal circumstances are positively appreciated by the European population and meantime, the satisfaction about all the aspects related to their country, is negatively evaluated.

The way how the public administration runs in their country is better evaluated than the other aspects like those about the economic situation, the employment and the cost of living. The explanation could be that some of respondents or members of their families are themselves employed in public administration. It is the only component who recorded a slowly constant decreasing from one year to another. All the other analyzed aspects had oscillating values during the five years. The interconnection between all the analyzed aspects of satisfaction at general level of perception makes the respondents to be less contented about the public administration, each passing year. The satisfaction about employment situation in their country is the lowest face to all other aspects and this

could also be a cause for the slowly decrease of satisfaction about the way the public administration runs in their country.

The amplitude of the negative evaluations for current situation in their countries is greater than the positive amplitude of satisfaction at personal level. The values of overall social climate index, being a mean of all the analyzed aspects, both at personal level and at national, are negative. The positive values of the personal situation are attracted downwards by the negative values for satisfaction evaluation at national level. The overall social climate index is comprised between 0 and -1 for the entire period.

The Overall Social Climate Index can be a good indicator because it expresses the expectations of European population, which really influence the economic behaviour. Negative expectations have negative consequences on the economic development of their countries for the future period.

Because the human nature makes the people too critic with others than with themselves, their opinions can be completed with other analyses for aspects related to the national situations in their countries, having influences on personal level.

4.2. Multidimensional approach of the European social climate, in 2012

In order to characterize the social climate in European countries, there were chosen the some indicators for each country, in order to cover all the dimensions of satisfaction which can influence the overall social climate.

For the year 2012, the following indicators were used in SPSS software in order to offer an image of European social climate: the Human Development Index (HDI), GDP per capita ($2011 PPP) (GDP_c), education index (ed_idx), health index (hlth_idx), unemployment rate (%) (unempl), Harmonized Consumer Price Index (2005=100%) (HCPI), people at risk of poverty or social exclusion (% of total population) (pov_risk), Gini coefficient (Gini), people living in households with very low work intensity (% of total population) (low_work), total employment rate (%) (empl_rate), severely materially deprived people (% of total population) (sev_deprive) and early leavers from education (%) (leave_ed).

Using Principal Component Analysis (PCA) for the mentioned variables of the year 2012, the model with two components is found after three trials.

The first model explains close 69% of the entire variance of the EU27 countries. The rotated components show the coefficient correlation between each variable and the identified component. The variable belongs to that component, for which the correlation with this one is the highest. It means that the variable contributes to define that component with which it is more correlated.

The variables which are not correlated with any components are eliminated from the next PCA. A better model is obtained if there are kept only the variables correlated with the two components. The second model explains 87% of the whole variance between the European Union countries, in 2012 and even a better model is

obtained if the variable of severely materially deprived people is eliminated. The last model explains 88.64% of the units' variation in 2012. The first component explains close to 53% and the second component, close to 36%, so that both components explain a cumulated variance of about 89%. The two resulted components can be defined depending on the variables the most correlated with them, as they are presented in Figure 3.

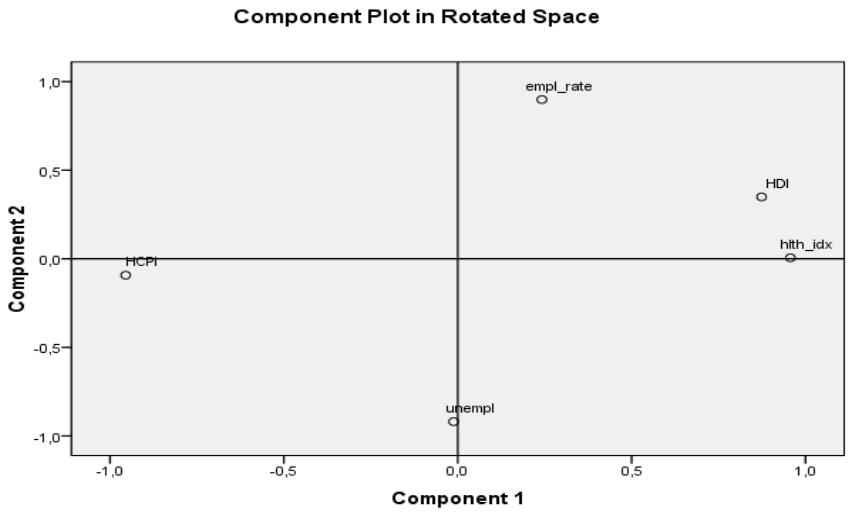

Fig. 3. *Circle of correlations, for 2012*

The first component has HDI and health index at one side, opposite to HCPI, meaning that the countries with high values of HDI, have good health care systems, but when the inflation is stable. Increasing of prices could imbalance the HDI and the expenditure for a healthy life. The component can be called that of *socio-economic human development*. The second axis opposes the total employment rate to the unemployment rate, and it can be easily called the *employment* component.

The two identified components: first component of *socio-economic development*, determined by HDI with its three dimensions: education, health and economic development per capita, amplified by the health index and having the increasing of prices at the opposite side, together with the component of employing process characterized by the axis of *employment – unemployment* – signify all that threaten individuals. The *social climate* in European Union can be defined by the dimensions of these components.

Keeping the last model, there can be represented the coordinates of the countries face to both components. Figure 4 is the graphic of individual units, shows

the positions of the European Union countries face to the two identified components. The positions of these countries show the social climate in Europe, in 2012.

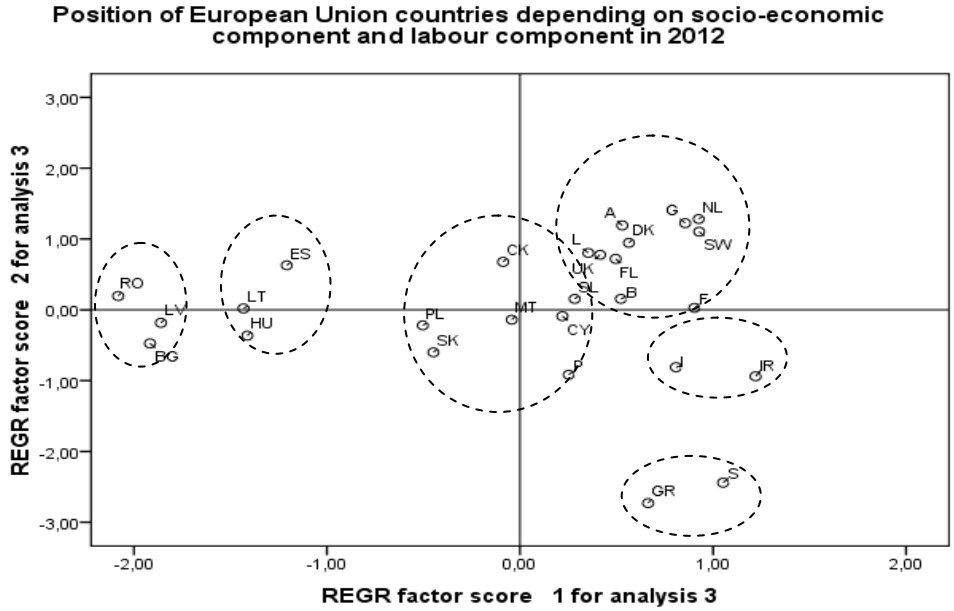

Fig. 4. *Analysis of social climate in European Union countries, in 2012*

Figure 4 presents some groups of countries in the four frames of the chart. The positions of countries faced to both components can offer information about the level of socio-economic climate depending on employing process.

Interpreting the positions of countries is related to the position of variables which determine the two components. Greater projection of an axis shows a greater importance of that component for a certain country. The countries placed to the positive side of a component, show the performance of its content and the countries situated at the other side, oppose them, showing rather the negative aspect of the component.

The group in the first frame comprises the countries with both positive coordinates, placed in an interval between the average level of first component plus one standard deviation. The HDI for these countries is greater than the average level and their health care systems represent an important element of HDI. Ireland has a greater projection on the first component, even better than Sweden, Germany, Netherlands and France. The countries from the first frame have greater employment rates than the EU average level.

The two groups of countries situated at the other side of the first component, both in the second and the third frames, consist of the first group with the countries: Estonia, Lithuania and Hungary – here placed at more than one negative standard deviation face to the average level, and the second group: Latvia, Bulgaria and Romania, characterized by low level of HDI and poor healthcare systems. The second group is placed at more than one even at two negative standard deviations face to the average level. Both groups are representative for HCPI, meaning the inflation increased in these countries, in 2012.

There is a central group of countries which is placed at the intersection of both axes, meaning that they are representative for average levels of the components. Malta is the country placed very close to this intersection.

Regarding the second component, the conclusion is that almost all the analyzed countries are placed at one standard deviation, face to the average level, in plus – for the first and second frames or in minus – for the countries in the third and fourth frames. There are some developed countries, better placed than the others, like: Netherlands, Germany, Austria, Denmark and Sweden.

There are also two countries: Spain and Greece, which having well values for the first component, but they recorded high unemployment rates in 2012. These two countries are placed between two and three standard deviations compared to the EU average level of employing degree.

4.3. Characterizing the social climate in European Union, in 2013

Making the same analysis of PCA, the same variables result in defining the social climate in 2013.

The obtained model considers the same two components which seem to be defined in the same way, as in 2012; it explains even better, the variation between the countries of EU28, including Croatia. The two components explain together 90% of all variation. The second component which is that of *employing process* gained in importance compared with previous year. In 2013, the first component kept the same weight of variation, more than 52% and second component explains more than 37%.

The variables which define the components, in their same order can be seen on the chart of correlations from Figure 5.

The chart of countries in 2013 is presented in Figure 6. No significant changes and slow movements of countries' positions can be seen in 2013 compared with 2012.

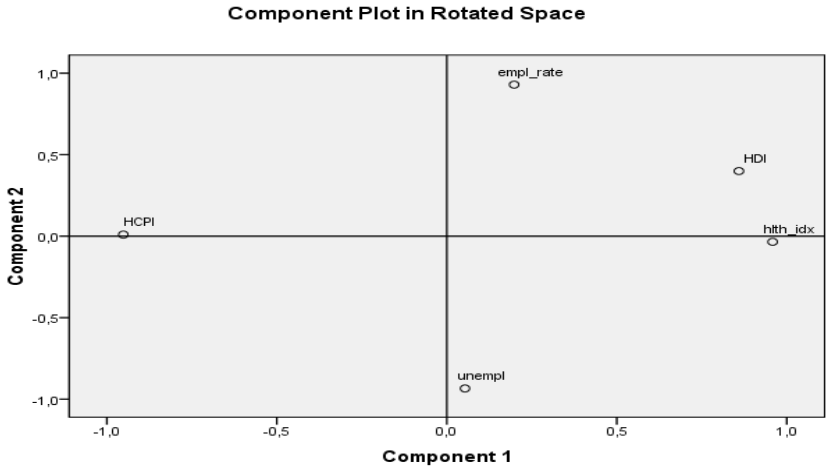

Fig. 5. *Circle of correlations, for 2013*

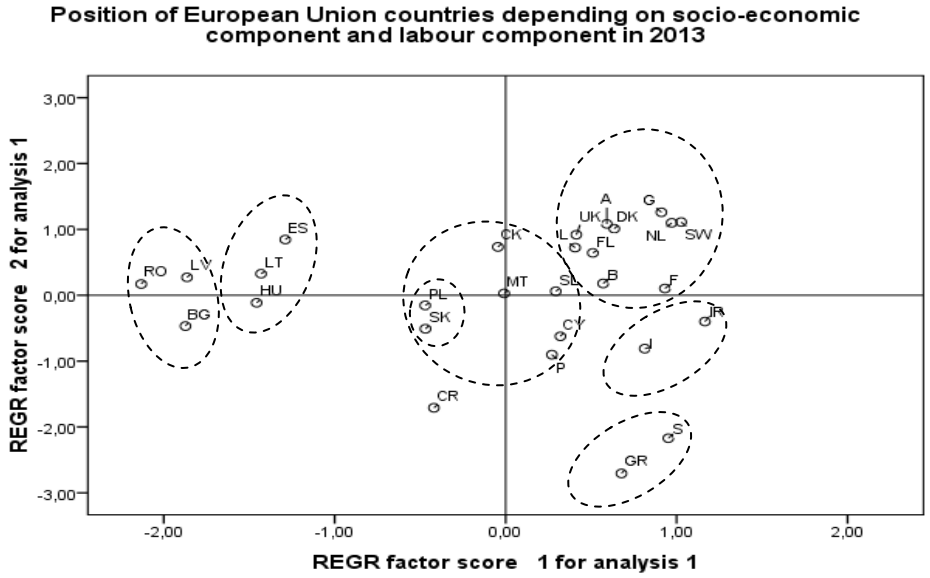

Fig. 6. *Social climate in European Union countries, in 2013*

The countries have kept their positions, meaning that the social climate cannot change dramatically from one year to another. Croatia positioned at the same level of socio-economic development as Poland and Slovakia, but with higher

unemployment. High HCPI and low value of HDI and health index placed Romania at the other end of the first component. Latvia had in 2013, an employment rate over the average level of the European Union countries. Ireland declined the unemployment in 2013; the developed countries from first frame seem to be closer between them, slowly above one standard deviation than the average of second component. Croatia entered in EU with high value of unemployment, which changed the average rate for EU 28, and some seemingly better positions are caused by this fact.

4.4. Econometric modelling of social climate index in European Union

The econometric modelling considered the perceptions of people from European Union countries in 2012, as interesting variable, expressed by the Overall Social Climate Index (OSCI) of evaluation for current situation (Special Eurobarometer 349 - 2010, Special Eurobarometer 370 - 2011 and Special Eurobarometer 391 - 2012) and as influence factors in 2012, being: the HDI (x_1), unemployment rate (x_2), HCPI (2005=100%) (x_3), people at risk of poverty or social exclusion (%) (x_4), Gini coefficient (x_5), people living in households with very low work intensity (%) (x_6), total employment rate (%) (x_7), early leavers from education (%) (x_8) and Corruption Perception Index (CPI) (x_9).

CPI is a measure for corruption in public administration as perceived by the people of each country. It is calculated since 2002, by Transparency International organization for 177 countries, as a value between 0 and 10. Since 2012 the methodology was changed and CPI is calculated on a scale 0 – 100; a higher value meaning a better perception of population for a low level of corruption. Due to this update of methodology the CPI scores before 2012 are not comparable with the CPI from 2012 and 2013
(http://countryeconomy.com/government/corruption-perceptions-index).

In the process of building the econometric model, mostly all variables were eliminated, ones because were too correlated between them, other because of lack of significance face to Social Climate Index (SCI).

The econometric model of SCI in 2012 contains only two significant variables: unemployment rate in 2012 and the CPI in 2012.

$$\hat{y} = -5.469 - 0{,}179\, x_2 + 0.103 x_9$$

(*t* Student ratio) (-4.19) (-3.84) (6.68)

The determination coefficient shows that the linear model explains 81.54% of the entire variation of SCI in 2012, for EU27 countries, depending on the unemployment rate and the CPI.

Building the econometric model of SCI for 2013, as dependent variable and the independent variables in 2013, being: HDI (x_1), education index (x_2)

(http://hdr.undp.org), health index (x_3) (http://hdr.undp.org/en), unemployment rate (%) (x_4), HCPI (2005=100%) (x_5), total employment rate (%) (x_6), coefficient of human inequality (x_7) (http://hdr.undp.org/en), income inequality (%) (x_8), CPI (x_9).

Income inequality is the ratio of the total income of the richest 20% of a country's population to the total income of the poorest 20%; it is also known as income quintile share ratio.

The econometric model of SCI in 2013 contains the same only two significant variables: unemployment rate in 2013 (x_4) and the CPI in 2013 (x_9).

$$\hat{y} = -5.096 - 0.170\,x_4 + 0.095x_9$$

(*t* Student ratio) (-4.59) (-4.62) (7.30)

The determination coefficient shows that the linear model explains 85.42% of the entire variation of SCI in 2013 of EU28 countries, depending on the unemployment rate and the CPI. It is interesting to notice that even the exogenous variables were different for the two analyzed years, because of disposable data, although the econometric models for each year had the same significant variables to influence the Social Climate Index (SCI).

In Table 2, the confidence intervals for each estimator, in both years, are covering in a high measure, so that even without testing the significance of difference between estimators there can be concluded that there are not different significances between the models in the two years.

Model coefficients	2012		2013	
	Lower 95%	Upper 95%	Lower 95%	Upper 95%
a_0	-8.161	-2.778	-7.382	-2.809
a_1	-0.275	-0.083	-0.246	-0.094
a_2	0.071	0.135	0.068	0.122

Table 2. *Confidence intervals for the estimators in the econometric models*

Comparing the values of SCI in 2013 with 2012, there were found 16 countries from EU27 with pessimistic perception, meaning that SCI values in 2013 were less than those expressed in 2012. Comparing the adjusted values of SCI in 2013 with the adjusted values of SCI in 2012, there was found the same number of 16 pessimistic countries from EU 27 in 2013, than in 2012.

The interpretation of both models is available for each year, and for the number of EU countries. The negative sign of the coefficient of the variable unemployment rate shows that at its increasing with 1%, SCI decrease in average with 0.17 points. The positive sign of the coefficient of CPI shows that for every increasing point – meaning a cleaner society – SCI is increasing in average with 0.1 points. The negative sign of intercept shows the actual negative perceptions of SCI,

its average level, without considering the influence of the two mentioned and considered variables: unemployment rate and CPI.

Using each model to estimate the social climate index at European Union level for 2012 and 2013, the obtained results are, as in Table 3:

Years	Econometric Models	Adjusted values, $\hat{y}$	SCI
2012	$\hat{y} = -5.469 - 0,179 * unempl_{2012} + 0.103CPI_{2012}$	-0.780	-0.8
2013	$\hat{y} = -5.096 - 0.170 * unempl_{2013} + 0.095CPI_{2013}$	-0.866	-0.9

Table 3. *Estimating the Social Climate Index in EU, in 2012 and 2013*

The calculated values of SCI at EU level were obtained using the unemployment rate of 10.4% in 2012 and 10.8% in 2013 and the average of CPIs of the 27 EU countries in 2012 and of 28 countries in 2013.

The two theoretical values of SCI have validated the obtained econometric models. The calculated rounded values with one decimal are equal with real values recorded by Eurostat and also presented in Figure 1. Both in 2012 and also in 2013, the calculated values are equal with -0.8, respectively -0.9.

In this way, there was established a type of model for characterizing the social climate, which was tested for two years, at EU level.

4.5. Forecasting the European social climate for 2014 and until 2018

Considering the previous econometric models, it is sufficient to forecast the unemployment rate, because the CPI is assuming to increase; so in the most unfavourable situation it can remain at the actual levels. CPI will be kept at the same level, as in 2013.

Trying to make forecasting for unemployment rate, it conducts to other econometric models. The indicators of investments by institutional sectors as share (%) of GDP: the Gross Fixed Capital Formation (GFCF) expressed as a percentage of GDP for the government and that for businesses for EU Euro Area (17 countries) - proved to be significant for explaining the variation of unemployment rates, in European Union, during the period 2000-2012.

Two scenarios for GFCF for Government investments and Business investments are presented in Figure 7, respectively in Figure 8.

The pessimistic model of Government investment, which explains 78.4% of the variation of these shares depending on time, is:

$$\hat{y} = 2.799 - 0.238t_i + 0.048t_i^2 - 0.002t_i^3.$$

The optimistic scenario considers an average of shares of GDP for Government investment during the period before the crisis 2000-2007, as seeing on Figure 7.

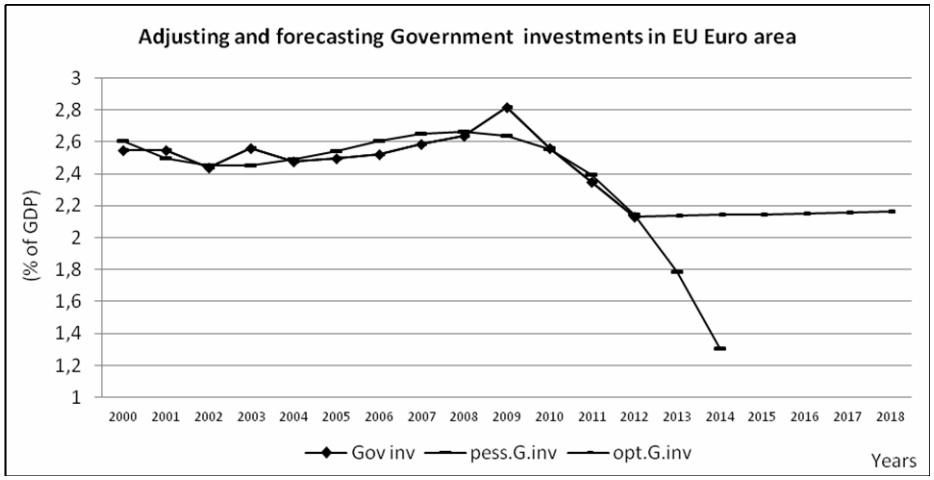

Fig. 7. *Pessimistic and optimistic scenarios of Government investment forecasting*

The pessimistic scenario for shares of Business investment depending on time and a dummy variable for the years of declining 2009 and 2010, is the econometric model: $\hat{y} = 13.330 - 1.166t_i + 0.206t_i^2 - 0.020t_i^3 - 1.319D_i$. ($R^2$=0.915). The optimistic scenario considers the average of shares of GDP for Business investment during the period previous the crisis 2000-2008, as seeing on Figure 8.

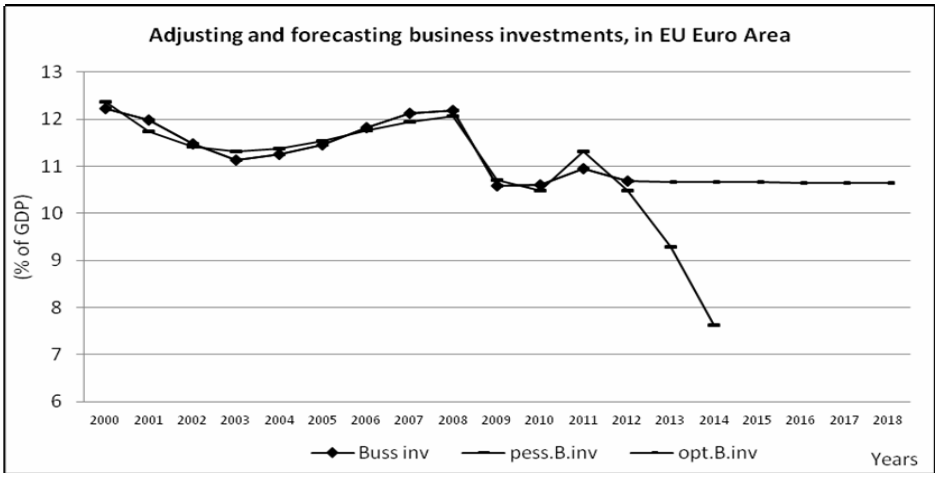

Fig. 8. *Pessimistic and optimistic scenarios of Business investment forecasting*

The econometric model of unemployment rates depending on the evolution of two analyzed indicators of investments either made by Government or in Business domain, also includes a dummy variable for considering the year 2006, 2007 and 2008, when the recorded unemployment rate declined: $\hat{y}_i = 21.026 - 2.098Gov_{inv} - 0.581Bus_{inv} - 1.139D_i$. Determination coefficient of 94.6% shows a very good model, having significant all the estimators and good to make forecasting of unemployment rates. Figure 9 shows the two scenarios of unemployment rates obtained using the econometric models with the future values of shares of Government and Business investment in GDP.

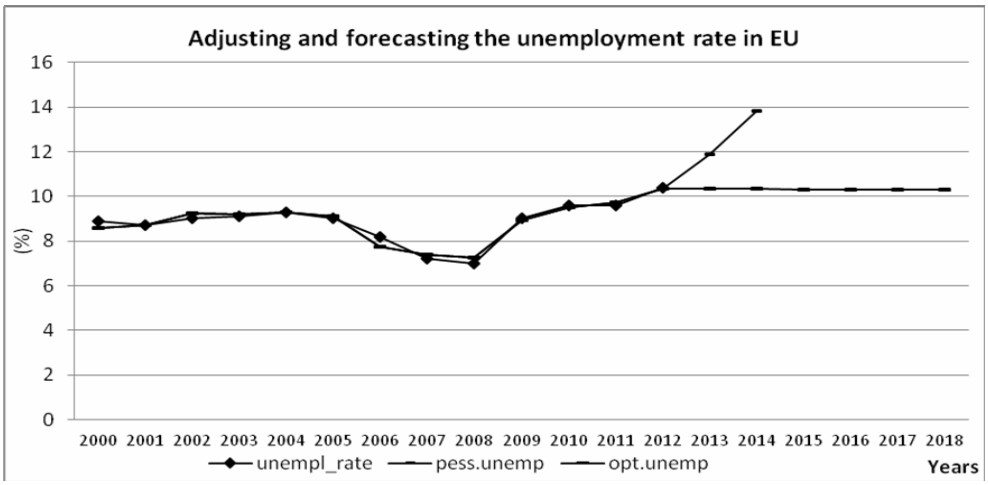

Fig. 9. *Pessimistic and optimistic scenarios of EU unemployment rates forecasting*

After determining the future values of EU unemployment rate, the econometric model of the Social Climate Index can be used. From the two equations of year 2012 and 2013, presented in Table 3, the third equation can be obtained by calculating its coefficients as average of the corresponding estimates of the mentioned two models, as can be seen in Table 4.

Years	Unemployment rate (%)		CPI	$SCI_t = -5.282 - 0.174Unemp_t + 0.099CPI_t$	
	Optimistic	Pessimistic		Optimistic	Pessimistic
2012	10.3	10.3	63.67	-0.8	**-0.8**
2013	10.34	10.8	63.71	-0.8	**-0.9**
2014	10.33	13.8	63.71	**-0.8**	**-1.4**
2015	10.33	16.4	63.71	**-0.8**	**-1.8**
2016	10.32	19.6	63.71	**-0.8**	**-2.4**
2017	10.31	23.5	63.71	**-0.8**	**-3.1**
2018	10.31	28.2	63.71	**-0.8**	**-3.9**

Table 4. *The two scenarios of SCI on short and medium term*

The values of SCI, calculated for 2012 and 2013, already validate the pessimistic scenario. The future values of SCI in EU are also presented on the chart in Figure 10.

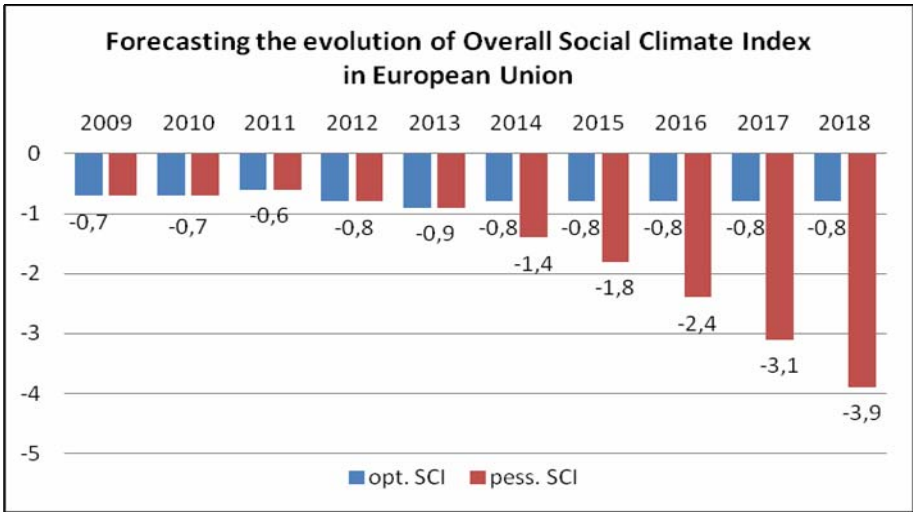

Fig. 10. *Pessimistic and optimistic scenarios of Social Climate in EU*

The optimistic scenario will keep constant value -0.8. If the pessimistic scenario of SCI will happened, the main aspects will be related to the economic situation in their country, the employment and the cost of living – elements of SCI, already situated at la lower limit of the intervals, for the period 2009-2013, presented in Figure 2.

5. Conclusions

The perceptions of European population about their personal situation and about the national situation in 14 areas in their country are measured starting with 2009, by the Overall Social Climate Index, SCI. The human behaviour is slowly changing. This is proven by the evolution of some of the perceived aspects of SCI in EU countries, during 2009-2013. The extreme values of SCI were between -0.6 in 2011 and -0.9 in 2013, showing "rather bad" judgment of current situation in their countries and rather "not very satisfied" with their personal situation.

The national situation is generally lower evaluated, than the personal situation. It is also a human characteristic to perceive the personal situation better than the overall situation; being an aspect of hope and optimistic behaviour.

The analysis of countries' positions depending on some indicators chosen in order to characterize the overall social climate, determine two principal components:

that of socio-economic development and the labour market. For the two analyzed years 2012 and 2013, the two identified components have explained the variation between the EU countries, showing that their positions are quite the same; small changes are not significant.

The econometric models of SCI in 2012 and 2013 clearly led to the same result, that the unemployment rate and Corruption Perception Index are the main factors which influence the perceptions of European population about the social climate. The theoretical values obtained were equal with the obtained values by Eurobarometer.

The component of employment/unemployment is that which differentiates the socio-economic development between the EU countries. This idea was successfully proved by the results of econometric modelling of SCI. For making forecasting of SCI, it is sufficient to forecast the unemployment rate, because CPI remains constant, in the most unfavourable situation.

The influence factors of unemployment rate in each EU country are the investments made by government and in business medium. Using the econometric methods there are obtained the future values of Government and Business investments as shares in GDP, offering two scenarios of pessimistic and optimistic approach. Using them within the econometric model of unemployment rate, there are obtained its future values for both scenarios.

The forecast of SCI uses the future values of unemployment rate and the existing CPI in 2013, to offer the two scenarios. The intervals for future values of SCI are determined by the lower limit of pessimistic scenario and the upper limit could be the optimistic scenario.

The conclusion is very clearly defined in this paper: the social climate in EU countries depends by the national policies of labour market and the investments policies both at national level and also at EU level. The EU financing programmes could contribute to efficiently using the resources with direct consequences on the overall social climate.

6. References

Dethlefsen K., J. A. Emmanouilidis, A. Mitsos et al. 2014. *Social cohesion in Europe after the crisis*. Available at: http://www.newsocialcohesion.eu/wpcontent/uploads/2014/02/Social_Cohesion_in_Europe_after_the_Crisis.pdf. Accessed on: 27 August 2014.

Quintana-Trias, Octavi. 2010. *The future of Europe*. Available at: http://www.augurproject.eu/ IMG/ pdf/ 13-Octavi_Quintana-Trias_The_future_of_Europe.pdf. Accessed on: 26 August 2014.

Pompili, Marco and Carlo Miccadei. 2010. Well - *Being in the Global Economy: Concepts, Measures and Data Sources. Report AUGUR Challenges for*

Europe in the world in 2030. Project no. SSH-CT-2009-244565, Collaborative Project, SP1-Cooperation, Background Paper (WP7). Available at: http://www.augurproject.eu/IMG/pdf/1-_Well_being_First_ Deliverable_ Rev-1_March_2011.pdf. Accessed on: 26 August 2014.

Tancioni, Massimiliano. 2013. *European Well-Being Scenarios based on an Econometric Model*. *Report AUGUR Challenges for Europe in the world in 2030.* Project no. SSH-CT-2009-244565, Collaborative Project, SP1-Cooperation, Background Paper (WP7). Available at: http://www.augurproject.eu/IMG/pdf/Massimiliano_Tancioni_European_well being_scenarios_based_on_an_econometric_model_AUGUR_WP7.pdf. Accessed on: 26 August 2014.

Wolleb, Guglielmo and Alessandro Daraio. 2013. *Dimensions of Well-Being in Europe: Issues and Scenarios*. Available at: http://www.augurproject.eu/IMG/pdf/G-_Wolleb_A-_Daraio_Dimensions_of_wellbeing_in_Europe_Issues_and_ scenarios_ AUGUR_WP7.pdf. Accessed on: 26 August 2014.

GfK Polonia. 2014. *A Quantitative Study Conducted in Bulgaria, the Czech Republic, Finland, Germany, Greece, Poland and Spain*. New Sources of Cohesion in Europe. Available at: http://www.newsocialcohesion.eu/. Accessed on: 26 August 2014.

European Commission. Special Eurobarometer 349 (2010). Special Eurobarometer 370 (2011). Special Eurobarometer 391 (2012). Special Eurobarometer 408 (2013). Available at: http://ec.europa.eu/public_opinion/index_en.htm. Accessed on: 26 August 2014.

World Bank. 2014. *World Development Indicators database*. Washington D.C. Available at: http://data.worldbank.org. Accessed on: 7 May 2014.

TNS Qual+. 2011. *Well-being in 2030*, Aggregate report. Available at: http://ec.europa.eu/public_opinion/archives/quali/wellbeing_aggregate_en.pdf Accessed on: 30 May 2014.

European Commission. (2013) *Well being and living conditions.* Available at: http://www.augurproject.eu/spip.php?article7. Accessed on: 26 August 2014.

http://countryeconomy.com/government/corruption-perceptions-index. Accessed on: 26 August 2014.

http://hdr.undp.org, http://hdr.undp.org/en/data. Accessed on: 26 August 2014.

http://ec.europa.eu/social/main.jsp?catId=1039&langId=en. Accessed on: 26 August 2014.

http://epp.eurostat.ec.europa.eu/portal/page/portal/gdp_and_beyond/quality_of_life/ context. Accessed on: 26 August 2014.

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Living_standard_statistic s. Accessed on: 26 August 2014.

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Unemployment_statis tics. Accessed on: 26 August 2014.