

The Stage of the Member States in Achieving the Social Objectives Proposed by *Europe 2020*

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Abstract

Global financial and economic crisis has produced an expansion in time and space of economic, political, social and cultural issues, emphasizing structural weaknesses of the economies of European Union (EU) countries and the gaps between them. In this sense, to correct this current state, European Union has developed a strategy - Europe 2020, in order to permit the overcoming of the crisis and the transformation of the European Union into a smart, sustainable and inclusive economy, able to provide an appropriate level of employment, social cohesion and productivity. Regarding socio-economic field, in order to achieve the strategy and its objectives, the European Commission has selected several indicators able to capture the structure, interdependencies and also time variations of different socio-economic phenomena of the European Union. For this reason, the present study should be considered of interest, due to the qualitative analysis I conducted on the state of social objectives of the Europe 2020 strategy in the Member States in relation to the targets set out in this strategy.

Keywords: *Europe 2020, social cohesion, relative indicators of social convergence, global index of social convergence*

JEL Classification: *E24, I21, I25, I32, O32*

Introduction

Global financial and economic crisis has shown that economic realities have outpaced political decisions, the latter being unable to provide a firm and coherent response to new situations arising in economic and social life. In Europe, fiscal deficits and rising debt caused by the need to control the crisis generated considerable pressure on the labor market and on the social sphere, the process of social cohesion strengthening being strongly weakened, delayed or even reversed.

In this respect, the Europe 2020 strategy, developed by the European Commission, aims at reducing social disparities, at recovering the European economy and at maintaining it at an adequate level for future development. The strategy aims to ensure smart and sustainable economic growth, social inclusion favourable, able to offer the opportunity to create new jobs and provide better living conditions. The degree of achieving the objectives of the strategy (concerning employment, research and innovation, climate change and energy, education and combating poverty) is the extent to which the strategy will be considered a success or a failure for the EU.

Thus, this study aims at achieving a qualitative analysis on the state of reaching the social objectives proposed by *Europe2020* (specifically those regarding employment, research and innovation, education and combating poverty) in the Member States of the European Union compared to the strategy targets.

Methodology

Applying a personal methodology, similar to a methodology used in a previous study (Glod, 2009) and using Eurostat data, I realised an assessment of a “global index of social convergence” in order to permit a better comparison of social indicators between the Member States of the European Union.

The qualitative classification used in this study describes the “parameters” for assessing social indicators compared with Europe 2020 targets, starting from the social indicators proposed by the EU, without trying their revision from the methodological point of view. Thus, based on information provided by Eurostat, I used a set of “relative indicators of social convergence” which I framed into scales of intensity (“strongly divergent”, “divergent”, “in the process of convergence”, “convergent and with the optimal trend”) in order to notice more easily any breaches of limits, as well as the hierarchy of EU states in the process of compliance with the targets proposed by the Union.

For this purpose, I have developed indicators of convergence for each social indicators proposed by Europe 2020, representing the difference between the values recorded by the Member States and the benchmarks provided by the mentioned strategy on the periods chosen for evaluation (2008-2011 or 2008-2010, depending on the availability of statistical data)¹. For evaluation I used Eurostat data for social indicators proposed by Europe 2020 strategy, which I have grouped in the table no.1 from Annex.

Worth mentioning that regarding the indicator concerning the *Reduction of population at risk of poverty or social exclusion (% of total population)*(see table no.1 from Annex), the target value was calculated as the percentage equivalent of the proposed target of each country in relation to the population of each country and to the variation of the population over time.

From the table no.1 from Annex, it can be seen that national targets varies significantly, both positive and negative (in the sense of a more ambitious or rather disappointing targets)

¹Specifically, the indicator on the employment rate will be $I_{ER} = x_{ik} - y_k$, where: x_{ik} is the employment rate and i referring to the country being assessed in the k period (in the period 2008 – 2011) and y_k is the reference value required by Europe 2020 for employment rate, more exactly 75% (expressed as a percentage).

The indicator concerning research and development spending as a percentage of GDP (GERD) is $I_{GERD} = m_{ik} - n_k$, where: m_{ik} is the gross domestic expenditure on R&D as % of GDP, where i refers to the country assessed in the k , period (2008-2010). n_k is the reference value according to the strategy, namely 3% of GDP, which covers the same period.

The indicator regarding the share of early school leavers expressed as a percentage or the dropout rate in undergraduate education is $I_{ESL} = s_{ik} - t_k$ reflects the differential between s_{ik} which is the indicator of early school leavers (where i refers to the country being assessed in k period, namely 2008-2011) and t_k (the reference value of 10%). The indicator of the share of persons included in tertiary education expressed as a percentage is $I_{TE} = u_{ik} - v_k$, where u_{ik} is the tertiary education rate of the i country in k period (years from 2008-2011) and v_k is the benchmark for the share of persons included in tertiary education under Europe 2020 strategy (40%). The indicator regarding the persons at the risk of poverty or social exclusion (% of total population), $I_{PRPSE} = f_{ik} - g_k$, reflects the difference between f_{ik} (where i refers to the country being assessed, and k to the period 2008-2011 or 2008-2010, where there are not data for 2011), more exactly the differential between the indicator of persons at risk of poverty or social exclusion (% of total population) and g_k (the reference value, expressed as annual change, representing the national equivalent as a percentage of the common target of the Union of 20000000 people).

compared to Union's target. This forces me to consider as reference, in order to calculate the degree of social convergence, only the target proposed by the Union on each social indicator. Moreover, choosing a unitary target, such as the one proposed by the EU 2020 strategy, gives me the possibility of comparability of the results across countries and implicitly the possibility of a hierarchy of social convergence in the countries analyzed.

The Results

After processing, I obtain the results presented below:

Table 1. The calculation of the indicators assessing the social convergence in comparison with Europe 2020 requirements

Indicators assessing the social convergence in comparison with Europe 2020		Indicator of employment rate (%)	Indicator of the share of research and development spending in GDP (%)	Indicator of the share of early school leavers (%)	Indicator of the share of persons included in tertiary education (%)	Indicator of the share of the population at risk of poverty and social exclusion (% of total population)
Country	Year	I _{ER}	I _{GERD}	I _{ESL}	I _{TE}	I _{PRPSE}
27 EU	2008	-4.7	-1.08	4.9	-9	19.48
	2009	-6	-0.99	4.4	-7.8	19.10
	2010	-6.4	-1	4.1	-6.5	19.41
	2011	-6.4	n.a.	3.5	-5.4	n.a.
17 EA	2008	-4.8	-1.04	6.5	-8.5	17.38
	2009	-6.2	-0.94	5.9	-7.7	17.20
	2010	-6.6	-0.94	5.5	-6.7	17.61
	2011	-6.5	n.a.	4.7	-6.3	n.a.
Belgium	2008	-7	-1.03	2	2.9	16.78
	2009	-7.9	-0.97	1.1	2	16.20
	2010	-7.4	-1.01	1.9	4.4	16.81
	2011	-7.7	n.a.	2.3	2.6	n.a.
Bulgaria	2008	-4.3	-2.53	4.8	-12.9	34.18
	2009	-6.2	-2.47	4.7	-12.1	42.20
	2010	-9.6	-2.4	3.9	-12.3	37.61
	2011	-11.1	n.a.	2.8	-12.7	n.a.
Czech Republic	2008	-2.6	-1.59	-4.4	-24.6	11.28
	2009	-4.1	-1.52	-4.6	-22.5	10.00
	2010	-4.6	-1.44	-5.1	-19.6	10.41
	2011	-4.1	n.a.	-5.1	-16.2	11.32
Denmark	2008	4.7	-0.15	2.5	-0.8	12.28
	2009	2.5	0.06	1.3	0.7	13.60
	2010	0.8	0.06	1	1.2	14.31
	2011	0.7	n.a.	-0.4	1.2	n.a.

Table 1 (cont.)

Germany	2008	-1	-0.31	1.8	-12.3	16.08
	2009	-0.8	-0.18	1.1	-10.6	16.00
	2010	-0.1	-0.18	1.9	-10.2	15.71
	2011	1.3	n.a.	1.5	-9.3	n.a.
Estonia	2008	2	-1.72	4	-5.9	17.78
	2009	-5.1	-1.57	3.9	-4.1	19.40
	2010	-8.3	-1.38	1.6	0	17.71
	2011	-4.6	n.a.	0.9	0.3	n.a.
Ireland	2008	-2.7	-1.55	1.3	6.1	19.68
	2009	-7.9	-1.26	1.6	8.9	21.70
	2010	-10	-1.21	1.4	9.9	25.91
	2011	-10.9	n.a.	0.6	9.4	n.a.
Greece	2008	-8.5	-3	4.8	-14.4	24.08
	2009	-9.2	-3	4.5	-13.5	23.60
	2010	-11	-3	3.7	-11.6	23.71
	2011	-15.1	n.a.	3.1	-11.1	n.a.
Spain	2008	-6.7	-1.65	21.9	-0.2	18.88
	2009	-11.3	-1.61	21.2	-0.6	19.40
	2010	-12.5	-1.61	18.4	0.6	21.51
	2011	-13.4	n.a.	16.5	0.6	n.a.
France	2008	-4.6	-0.88	1.5	1.2	14.58
	2009	-5.6	-0.74	2.2	3.2	14.50
	2010	-5.9	-0.74	2.6	3.5	15.21
	2011	-5.9	n.a.	2	3.4	n.a.
Italy	2008	-12	-1.79	9.7	-20.8	21.28
	2009	-13.3	-1.74	9.2	-21	20.70
	2010	-13.9	-1.74	8.8	-20.2	20.51
	2011	-13.8	n.a.	8.2	-19.7	n.a.
Cyprus	2008	1.5	-2.57	3.7	7.1	18.38
	2009	0.7	-2.51	1.7	4.7	18.90
	2010	0.4	-2.5	2.6	5.1	19.61
	2011	-1.2	n.a.	1.2	5.8	n.a.
Latvia	2008	0.8	-2.38	5.5	-13	29.78
	2009	-7.9	-2.54	3.9	-9.9	33.40
	2010	-10	-2.4	3.3	-7.7	34.11
	2011	-7.8	n.a.	1.8	-4.3	36.12

Table 1 (cont.)

Lithuania	2008	-3	-2.21	-2.6	-0.1	23.58
	2009	-7.8	-2.17	-1.3	0.6	25.50
	2010	-10.6	-2.21	-1.9	3.8	29.41
	2011	-7.8	n.a.	-2.1	5.4	29.42
Luxembourg	2008	-6.2	-1.43	3.4	-0.2	11.48
	2009	-4.6	-1.34	-2.3	6.6	13.80
	2010	-4.3	-1.37	-2.9	6.1	13.11
	2011	-4.9	n.a.	-3.8	8.2	n.a.
Hungary	2008	-13.1	-2	1.7	-17.6	24.18
	2009	-14.5	-1.83	1.2	-16.1	25.60
	2010	-14.6	-1.84	0.5	-14.3	25.91
	2011	-14.3	n.a.	1.2	-11.9	27.02
Malta	2008	-15.9	-2.44	28.1	-19.1	15.58
	2009	-16.2	-2.46	26.8	-19	16.20
	2010	-14.9	-2.37	26.9	-18.5	16.61
	2011	-13.5	n.a.	23.5	-18.9	n.a.
Netherlands	2008	3.9	-1.23	1.4	0.2	10.88
	2009	3.8	-1.18	0.9	0.5	11.10
	2010	1.8	-1.17	0	1.4	11.11
	2011	2	n.a.	-0.9	1.1	n.a.
Austria	2008	0.1	-0.33	0.1	-17.8	14.58
	2009	-0.3	-0.28	-1.3	-16.5	13.00
	2010	-0.1	-0.24	-1.7	-16.5	12.61
	2011	0.2	n.a.	-1.7	-16.2	12.92
Poland	2008	-10	-2.4	-5	-10.3	26.48
	2009	-10.1	-2.32	-4.7	-7.2	23.80
	2010	-10.4	-2.26	-4.6	-4.7	23.81
	2011	-10.2	n.a.	-4.4	-3.1	n.a.
Portugal	2008	-1.9	-1.5	25.4	-18.4	21.98
	2009	-3.8	-1.36	21.2	-18.9	20.90
	2010	-4.5	-1.41	18.7	-16.5	21.31
	2011	-5.9	n.a.	13.2	-13.9	n.a.
Romania	2008	-10.6	-2.42	5.9	-24	40.18
	2009	-11.5	-2.53	6.6	-23.2	39.10
	2010	-11.7	-2.53	8.4	-21.9	37.41
	2011	-12.2	n.a.	7.5	-19.6	36.32

Table 1 (cont.)

Slovenia	2008	-2	-1.35	-4.9	-9.1	14.48
	2009	-3.1	-1.14	-4.7	-8.4	13.10
	2010	-4.7	-0.89	-5	-5.2	14.31
	2011	-6.6		-5.8	-2.1	15.32
Slovakia	2008	-6.2	-2.53	-4	-24.2	16.58
	2009	-8.6	-2.52	-5.1	-22.4	15.60
	2010	-10.4	-2.37	-5.3	-17.9	16.61
	2011	-9.9	n.a.	-5	-16.6	n.a.
Finland	2008	0.8	0.7	-0.2	5.7	13.38
	2009	-1.5	0.92	-0.1	5.9	12.90
	2010	-2	0.87	0.3	5.7	12.91
	2011	-1.2	n.a.	-0.2	6	13.92
Sweden	2008	5.4	0.7	2.2	2	10.88
	2009	3.3	0.61	0.7	3.9	11.90
	2010	3.7	0.42	-0.3	5.8	11.01
	2011	5	n.a.	-3.4	7.5	12.12

Source: author's calculations using Eurostat data, n.a. meaning unavailable or non available data.

For the evaluation I propose, for each indicator of social convergence, a series of grids of framing and also the related notation: on a scale of 1 to 4, where 1 is “strongly divergent”, 2 is “divergent”, 3 is “in the process of convergence” and 4 means “convergent and with optimal trend”. In Table 2 I present in a synthetic manner the settled intervals and how to be assessed.

Table 2. The grids of framing for the assessment of social convergence indicators (I_{ER} , I_{GERD} , I_{ESL} , I_{TE} , I_{PRPSE})

The assessment of social convergence indicator of employment rate I_{ER} (%)	Strongly divergent	Divergent	In the process of convergence	Convergent and with optimal trend
Interval	[-20%,-10%)	[-10%,-5%)	[-5%,0%)	[0%,15%)
The assessment of social convergence indicator of the share of research and development spending (as a percentage of GDP) I_{GERD}	Strongly divergent	Divergent	In the process of convergence	Convergent and with optimal trend
Interval	[-3%,-2%)	[-2%,-1%)	[-1%,0%)	[0%,3%)
The assessment of social convergence indicator of the share of early school leavers I_{ESL} (%)	Strongly divergent	Divergent	In the process of convergence	Convergent and with optimal trend
Interval	[30%,15%)	[15%,5%)	[5%,0%)	[0%,-10%)
The assessment of social convergence indicator of the share of persons included in tertiary education I_{TE} (%)	Strongly divergent	Divergent	In the process of convergence	Convergent and with optimal trend
Interval	[-30%,-15%)	[-15%,-5%)	[-5%,0%)	[0%,15%)
The assessment of social convergence indicator of the share of the population at risk of poverty and social exclusion (% of total population) I_{PRPSE}	Strongly divergent	Divergent	In the process of convergence	Convergent and with optimal trend
Interval	[50%,30%)	[30%,15%)	[15%,10%)	[10%,0%)
Rating	1	2	3	4

Source: author's concept

Thus, for the assessment of *social convergence indicator regarding employment* I_{ER} , I have preferred an asymmetrical interval of 10% for strong divergence, of 5% for difference, of 5% for getting closer to convergence and of 15% for convergence and optimality, preferring to classify the indicator as being “in the process of convergence” and “convergent and with the optimal trend” in order to grasp the discrete aspects of getting closer to the Europe 2020 strategy requirements.

For the assessment of *social convergence indicator concerning the share of research and development spending (as a percentage of GDP)* I_{GERD} , I preferred the same type of classification, mentioning that the intervals regarding the divergence and “in the process of convergence” I have established in a symmetric manner of 1% and for convergence and optimality of 3%.

The assessment of *social convergence indicator regarding the share of early school leavers (%)* I_{ESL} , was done also in an asymmetric manner, with wide intervals of 15%, 10% and 5% for “strongly divergent”, “divergent” and “in the process of convergence” and for convergence and optimality of 10%. Because early school leaving is a negative social aspect and supposing that the Europe 2020 proposed indicator would reach, theoretically, zero the difference in comparison with the Union’s goal (10%) would be negative; thus, in this case, we can speak of a perfect or optimal convergence.

For the *indicator concerning the share of persons included in tertiary education (%)* I_{TE} , it has been preferred a framing with asymmetrical intervals for both convergence and divergence, of 15%, 10%, 5% and 15% respectively. Thus, we can see even from the the grid of framing the state of the indicator, most countries falling in the negative part of it.

The indicator concerning the reduction of the population at risk of poverty or social exclusion (% of total population) I_{PRPSE} , was framed in divergence intervals of 20% and 15% respectively, while positive borders, i.e. “in the process of convergence” and “convergent and with the optimal trend”, in intervals only 5% and 10% respectively. I preferred wide asymmetrical intervals for divergence process because the values of actual poverty are well above the EU target for almost all EU countries.

There are not enough references in the literature for this sort of framing of Europe 2020 indicators, but I believe that the proposed values for the intervals are relevant and also discreet enough to capture some aspects of the sustainability of these social indicators. However, setting the scales of assessment more in “favor” of divergence than convergence, was done hoping to catch real unfavorable aspects of the indicators and less for the purposes of compliance with a symmetry between what would be “divergent” and “convergent”.

In all four years of analysis (or three in the absence of data for the indicator reflecting the research and development expenditures), it can be calculated a mean value of the convergence in comparison with Europe 2020 strategy regarding I_{ER} , I_{GERD} , I_{ESL} , I_{TE} and I_{PRPSE} . Also, it can be made an assessment of global convergence in each country of the European Union as a global index of social convergence (I_{GSC}), in each year and an average over the four years selected for analysis, in order to facilitate a multiannual assessment outlining the sustainability of the social convergence compared to the Strategy targets. This index is calculated as the arithmetic mean of the values (from 1 to 4) attached to each of the social convergence indicators.

There is presented the evaluation of each indicator and also a synthesis through an evaluation of a global index of social convergence, allowing us to develop a hierarchy in terms of social convergence in the EU. Thus, Table 3 presents the results.

Table 3. The assessment of social convergence indicators of employment rate I_{ER} , of research and development expenditures (as a percentage of GDP) I_{GERD} , of the share of early school leavers I_{ESL} , of the share of population in tertiary educational attainment I_{TE} , and of reduction of the population at risk of poverty and social exclusion (% of total population) I_{PRPSE} and of a global index of social convergence, I_{GSC}

The assessment of social convergence indicators, I_{ER} , I_{GERD} , I_{ESL} , I_{TE} and I_{PRPSE}		I_{ER}	I_{GERD}	I_{ESL}	I_{TE}	I_{PRPSE}	The assessment of a global social convergence index, I_{GSC} (Average value*)
27 EU	2008	3	2	3	2	2	2.4
	2009	2	3	3	2	2	2.4
	2010	2	3	3	2	2	2.4
	2011	2	n.a.	3	2	n.a.	2.3
	Average index *	2.3	2.7	3.0	2.0	2.0	2.4
17 EA	2008	3	2	2	2	2	2.2
	2009	2	3	2	2	2	2.2
	2010	2	3	2	2	2	2.2
	2011	2	n.a.	3	2	n.a.	2.3
	Average index *	2.3	2.7	2.3	2.0	2.0	2.2
Belgium	2008	2	2	3	4	2	2.6
	2009	2	3	3	4	2	2.8
	2010	2	2	3	4	2	2.6
	2011	2	n.a.	3	4	n.a.	3.0
	Average index *	2.0	2.3	3.0	4.0	2.0	2.7
Bulgaria	2008	3	1	3	2	1	2.0
	2009	2	1	3	2	1	1.8
	2010	2	1	3	2	1	1.8
	2011	1	n.a.	3	2	n.a.	2.0
	Average index *	2.0	1.0	3.0	2.0	1.0	1.8
Czech Republic	2008	3	2	4	1	3	2.6
	2009	3	2	4	1	4	2.8
	2010	3	2	4	1	3	2.6
	2011	3	n.a.	4	1	3	2.8
	Average index *	3.0	2.0	4.0	1.0	3.3	2.7
Denmark	2008	4	3	3	3	3	3.2
	2009	4	4	3	4	3	3.6
	2010	4	4	3	4	3	3.6
	2011	4	n.a.	4	4	n.a.	4.0
	Average index *	4.0	3.7	3.3	3.8	3.0	3.5
Germany	2008	3	3	3	2	2	2.6
	2009	3	3	3	2	2	2.6
	2010	3	3	3	2	2	2.6
	2011	4	n.a.	3	2	n.a.	3.0
	Average index *	3.3	3.0	3.0	2.0	2.0	2.7
Estonia	2008	4	2	3	2	2	2.6
	2009	2	2	3	3	2	2.4
	2010	2	2	3	4	2	2.6
	2011	3	n.a.	3	4	n.a.	3.3
	Average index *	2.8	2.0	3.0	3.3	2.0	2.6
Ireland	2008	3	2	3	4	2	2.8
	2009	2	2	3	4	2	2.6
	2010	2	2	3	4	2	2.6
	2011	1	n.a.	3	4	n.a.	2.7
	Average index *	2.0	2.0	3.0	4.0	2.0	2.6
Greece	2008	2	1	3	2	2	2.0
	2009	2	1	3	2	2	2.0
	2010	1	1	3	2	2	1.8
	2011	1	n.a.	3	2	n.a.	2.0
	Average index *	1.5	1.0	3.0	2.0	2.0	1.9

Table 3 (cont.)

Spain	2008	2	2	1	3	2	2.0
	2009	1	2	1	3	2	1.8
	2010	1	2	1	4	2	2.0
	2011	1	n.a.	1	4	n.a.	2.0
	Average index *	1.3	2.0	1.0	3.5	2.0	2.0
France	2008	3	3	3	4	3	3.2
	2009	2	3	3	4	3	3.0
	2010	2	3	3	4	2	2.8
	2011	2	n.a.	3	4	n.a.	3.0
	Average index *	2.3	3.0	3.0	4.0	2.7	3.0
Italy	2008	1	2	2	1	2	1.6
	2009	1	2	2	1	2	1.6
	2010	1	2	2	1	2	1.6
	2011	1	n.a.	2	1	n.a.	1.3
	Average index *	1.0	2.0	2.0	1.0	2.0	1.6
Cyprus	2008	4	1	3	4	2	2.8
	2009	4	1	3	4	2	2.8
	2010	4	1	3	4	2	2.8
	2011	3	n.a.	3	4	n.a.	3.3
	Average index *	3.8	1.0	3.0	4.0	2.0	2.8
Latvia	2008	4	1	2	2	2	2.2
	2009	2	1	3	2	1	1.8
	2010	2	1	3	2	1	1.8
	2011	2	n.a.	3	3	1	2.3
	Average index *	2.5	1.0	2.8	2.3	1.3	2.0
Lithuania	2008	3	1	4	3	2	2.6
	2009	2	1	4	4	2	2.6
	2010	1	1	4	4	2	2.4
	2011	2	n.a.	4	4	2	3.0
	Average index *	2.0	1.0	4.0	3.8	2.0	2.6
Luxembourg	2008	2	2	3	3	3	2.6
	2009	3	2	4	4	3	3.2
	2010	3	2	4	4	3	3.2
	2011	3	n.a.	4	4	n.a.	3.7
	Average index *	2.8	2.0	3.8	3.8	3.0	3.1
Hungary	2008	1	2	3	1	2	1.8
	2009	1	2	3	1	2	1.8
	2010	1	2	3	2	2	2.0
	2011	1	n.a.	3	2	2	2.0
	Average index *	1.0	2.0	3.0	1.5	2.0	1.9
Malta	2008	1	1	1	1	2	1.2
	2009	1	1	1	1	2	1.2
	2010	1	1	1	1	2	1.2
	2011	1	n.a.	1	1	n.a.	1.0
	Average index *	1.0	1.0	1.0	1.0	2.0	1.2
Netherlands	2008	4	2	3	4	3	3.2
	2009	4	2	3	4	3	3.2
	2010	4	2	4	4	3	3.4
	2011	4	n.a.	4	4	n.a.	4.0
	Average index *	4.0	2.0	3.5	4.0	3.0	3.3
Austria	2008	4	3	3	1	3	2.8
	2009	3	3	4	1	3	2.8
	2010	3	3	4	1	3	2.8
	2011	4	n.a.	4	1	3	3.0
	Average index *	3.5	3.0	3.8	1.0	3.0	2.9
Poland	2008	2	1	4	2	2	2.2
	2009	1	1	4	2	2	2.0
	2010	1	1	4	3	2	2.2
	2011	1	n.a.	4	3	n.a.	2.7
	Average index *	1.3	1.0	4.0	2.5	2.0	2.2

Table 3 (cont.)

Portugal	2008	3	2	1	1	2	1.8
	2009	3	2	1	1	2	1.8
	2010	3	2	1	1	2	1.8
	2011	2	n.a.	2	2	n.a.	2.0
	Average index *	2.8	2.0	1.3	1.3	2.0	1.9
Romania	2008	1	1	2	1	1	1.2
	2009	1	1	2	1	1	1.2
	2010	1	1	2	1	1	1.2
	2011	1	n.a.	2	1	1	1.3
	Average index *	1.0	1.0	2.0	1.0	1.0	1.2
Slovenia	2008	3	2	4	2	3	2.8
	2009	3	2	4	2	3	2.8
	2010	3	3	4	2	3	3.0
	2011	2	n.a.	4	3	2	2.8
	Average index *	2.8	2.3	4.0	2.3	2.8	2.8
Slovakia	2008	2	1	4	1	2	2.0
	2009	2	1	4	1	2	2.0
	2010	1	1	4	1	2	1.8
	2011	2	n.a.	4	1	n.a.	2.3
	Average index *	1.8	1.0	4.0	1.0	2.0	2.0
Finland	2008	4	4	4	4	3	3.8
	2009	3	4	4	4	3	3.6
	2010	3	4	3	4	3	3.4
	2011	3	n.a.	4	4	3	3.5
	Average index *	3.3	4.0	3.8	4.0	3.0	3.6
Sweden	2008	4	4	3	4	3	3.6
	2009	4	4	3	4	3	3.6
	2010	4	4	4	4	3	3.8
	2011	4	n.a.	4	4	3	3.8
	Average index *	4.0	4.0	3.5	4.0	3.0	3.7

Source: author's concept, n.a. represents non available data, * Average index is calculated for all the years of analysis for each indicator (4 or 3 years, considering the available data) and also the calculation of the global social convergence index, I_{GSC} on each year and as an average on the years of analysis is done by rounding to one decimal. Where there were no values, the average was calculated only for the period in which values were available (i.e. 2008-2010), for example in the case of I_{GERD} and I_{PRPSE} , in order not to "penalize" the assessment of these indicators due to lack of data.

Concluding Remarks

Regarding *social convergence indicator for employment rate (%)*, I_{ER} , calculated as a four year (2008-2011) average, it can be noticed that in all four years of analysis in the top of the ranking are Denmark, Netherlands, Sweden, Cyprus and Austria, while "in the process of convergence" we can see Germany, Finland, Czech Republic, Estonia, Luxembourg, Portugal, Slovenia and Latvia. The average over all four years of the analysis shows that in a divergence process are countries like France, Belgium, Bulgaria, Ireland, Lithuania, Slovakia and Greece, while in a strong divergence process in relation to the EU target are European countries like Spain, Poland, Italy, Hungary, Malta and Romania. We can observe that our country is ranked last with regard to the employment rate, with the values of the indicator ranging between 63.3% and 64.4% for the period 2008-2011.

The *indicator of social convergence concerning the research and development expenditure (as a percentage of GDP)*, I_{GERD} , calculated as an average over the three years of analysis (2008-2010), shows that the most important investments in research and development are accomplished by countries such as Finland, Sweden and Denmark, and countries such as Germany, France and Austria are getting close to the requirements of the Europe 2020 strategy. Countries like Bulgaria, Greece, Cyprus, Latvia, Lithuania, Malta, Poland, Romania and Slovakia are at the periphery of this ranking, with a strong divergence trend as compared to the EU target.

The assessment of *social convergence indicator of the share of early school leavers (%)*, I_{ESL} , calculated as an average over the four years of analysis (2008-2011), reflects an adequate position in comparison with Europe 2020 target for the following countries: Czech Republic, Lithuania, Poland, Slovenia, Slovakia, Luxembourg, Austria, Finland, Netherlands, Sweden. In a convergence process we may notice countries like: Denmark, Belgium, Bulgaria, Germany, Estonia, Ireland, Greece and France, while in the process of divergence there are countries such as Italy and Romania. Portugal, Spain and Malta show a strong divergence trend, being furthest from the European target in respect to the early school leaving rate.

The *indicator of the share of persons included in tertiary education (%)*, I_{TE} was assessed as showing a strong convergence or an optimality trend in countries such as Belgium, Ireland, France, Cyprus, Netherlands, Finland, Sweden, Denmark, Lithuania, Luxembourg, Spain and countries such as Estonia and Poland have been assessed as being on a convergence trend concerning this indicator. Latvia, Slovenia, Bulgaria, Germany, Greece, Hungary show a divergence tendency, while countries such as Portugal, Czech Republic, Italy, Malta, Austria, Romania and Slovakia manifest a strong divergence in relation to Europe 2020 target.

The *indicator concerning the reduction of the population at risk of poverty or social exclusion (% of total population)*, I_{PRPSE} , calculated as a mean over four or three years, depending on data availability, is the most affected by the considerable difference between the real values of the indicator and the EU target, this lag framing countries, in the best scenario, only on the convergence trend, no country being able to manifest a strong convergence or optimality. Thus, countries such as Czech Republic, Denmark, Luxembourg, Netherlands, Austria, Finland, Sweden, Slovenia and France are in a process of convergence, while diverging from the Europe 2020 objective for this indicator are countries like Belgium, Germany, Estonia, Ireland, Greece, Spain, Italy, Cyprus, Lithuania, Hungary, Malta, Poland, Portugal, Slovakia. Latvia, Bulgaria and Romania carries the largest deviation from the strategy target.

The *global social convergence index*, I_{GSC} , calculated as an average over four years (2008-2011), places countries such as Sweden, Finland and Denmark in the top of social convergence ranking. In the convergence process, approaching of all the goals set out in Europe 2020 strategy, are countries like the Netherlands, Luxembourg, France, Austria, Slovenia, Cyprus, Belgium, Czech Republic, Germany, Estonia, Ireland, Lithuania. In a divergence process are countries such as Poland, Spain, Latvia, Slovakia, Greece, Hungary, Portugal, Bulgaria and Italy. Worth mentioning that in the European Union (27 countries) and the euro area (17 countries), the global social convergence index (I_{GSC}) is in the range of divergence, which reiterates the necessity of achieving to a greater extent the European Union's objectives concerning Europe 2020 strategy. Malta and Romania are on the last place in terms of global social convergence index (I_{GSC}), which would have to be, at least from the point of view of the Romanian authorities, a reason to reconsider the place and the role of social policy in Romania's public policies.

The results regarding social convergence in respect to the Europe 2020 strategy should not be removed from the current context, when it is expressed in national, regional and international plan rather disintegrative forces than integrative ones.

The novelty of the study consists in the elaboration of a methodology able to capture the social convergence in almost all EU countries (for example, we excluded from our analyzes United Kingdom due to the lack of necessary information), revealing rather shortcomings of this process.

Also, for a more relevant assessment, it should be taken into consideration the political, economic and social disturbances in the euro area and from the euro area to the new EU member states, which are also affected by regional developments.

At the same time, the need for international economic performance imposes an additional pressure of powerful states or of emerging countries on Europe in general and on euro area in particular, which is often reflected by faster solutions that often exceed the social sphere. In this sense, should be exercised a cautious attitude in assessing social convergence indicators in the European Union and in imposing very strict criteria, which will not be immediately followed by many EU countries but rather gradually over time.

However, we can notice that in social area, the Europe 2020 strategy is a valuable reference for all countries of European Union and it should be a central element of all public policies of EU and of national states, in an attempt to maintain and develop this area of world in a sustainable manner in the future. The success of the strategy depends on the involvement of institutions and leaders of European Union countries, in a coherent and coordinated manner, requiring also the contribution of civil society and of social partners from member states.

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Annex

Table 1. Social indicators proposed by the Europe 2020

COUNTRY	YEAR	Employment rate (%)		Research and Development (in % of GDP)*		Share of early school leavers (%)		The share of the population in tertiary education (%)		Reduction of population at risk of poverty or social exclusion (% of total population)**	
		Value	Reference value	Value	Reference value	Value	Reference value	Value	Reference value	Value	Reference value
27 EU	2008	70.3	75	1.92	3	14.9	10	31	40	23.5	4.02
	2009	69		2.01		14.4		32.2		23.1	
	2010	68.6		2		14.1		33.5		23.4	
	2011	68.6		n.a.		13.5		34.6		n.a.	
17 EA	2008	70.2	n.a.	1.96	n.a.	16.5	n.a.	31.5	n.a.	21.4	n.a.
	2009	68.8		2.06		15.9		32.3		21.2	
	2010	68.4		2.06		15.5		33.3		21.6	
	2011	68.5		n.a.		14.7		33.7		n.a.	
Belgium	2008	68	73.2	1.97	3	12	9,5	42.9	47	20.8	3.56
	2009	67.1		2.03		11.1		42		20.2	
	2010	67.6		1.99		11.9		44.4		20.8	
	2011	67.3		n.a.		12.3		42.6		n.a.	
Bulgaria	2008	70.7	76	0.47	1.5	14.8	11	27.1	36	38.2	3.40
	2009	68.8		0.53		14.7		27.9		46.2	
	2010	65.4		0.6		13.9		27.7		41.6	
	2011	63.9		n.a.		12.8		27.3		n.a.	

Annex - Table 1 (cont.)

Czech Republic	2008	72.4	75	1.41		5.6	5,5	15.4	32	15.3	0.29
	2009	70.9		1.48		5.4		17.5		14	0.29
	2010	70.4		1.56		4.9		20.4		14.4	0.29
	2011	70.9		n.a.		4.9		23.8		15.3	0.29
Denmark	2008	79.7	80	2.85	3	12.5	9,9	39.2	40	16.3	0.40
	2009	77.5		3.06		11.3		40.7		17.6	0.40
	2010	75.8		3.06		11		41.2		18.3	0.40
	2011	75.7		n.a.		9.6		41.2		n.a.	0.40
Germany	2008	74	77	2.69	3	11.8	9,9	27.7	42	20.1	n.a.
	2009	74.2		2.82		11.1		29.4		20	n.a.
	2010	74.9		2.82		11.9		29.8		19.7	n.a.
	2011	76.3		n.a.		11.5		30.7		n.a.	n.a.
Estonia	2008	77	76	1.28	3	14	9,5	34.1	40	21.8	n.a.
	2009	69.9		1.43		13.9		35.9		23.4	n.a.
	2010	66.7		1.62		11.6		40		21.7	n.a.
	2011	70.4		n.a.		10.9		40.3		n.a.	n.a.
Ireland	2008	72.3	69	1.45		11.3	8	46.1	60	23.7	4.23
	2009	67.1		1.74		11.6		48.9		25.7	4.18
	2010	65		1.79		11.4		49.9		29.9	4.16
	2011	64.1		n.a.		10.6		49.4		n.a.	4.07
Greece	2008	66.5	70	n.a.		14.8	9,7	25.6	32	28.1	4.01
	2009	65.8		n.a.		14.5		26.5		27.6	4.00
	2010	64		n.a.		13.7		28.4		27.7	3.98
	2011	59.9		n.a.		13.1		28.9		n.a.	3.98
Spain	2008	68.3	74	1.35	3	31.9	15	39.8	44	22.9	3.09
	2009	63.7		1.39		31.2		39.4		23.4	3.05
	2010	62.5		1.39		28.4		40.6		25.5	3.04
	2011	61.6		n.a.		26.5		40.6		n.a.	3.03
France	2008	70.4	75	2.12	3	11.5	9,5	41.2	50	18.6	2.50
	2009	69.4		2.26		12.2		43.2		18.5	2.49
	2010	69.1		2.26		12.6		43.5		19.2	2.47
	2011	69.1		n.a.		12		43.4		n.a.	2.46
Italy	2008	63	67	1.21	1.53	19.7	15	19.2	26	25.3	3.69
	2009	61.7		1.26		19.2		19		24.7	3.66
	2010	61.1		1.26		18.8		19.8		24.5	3.65
	2011	61.2		n.a.		18.2		20.3		n.a.	3.63
Cyprus	2008	76.5	75	0.43	0.5	13.7	10	47.1	46	22.4	3.42
	2009	75.7		0.49		11.7		44.7		22.9	3.39
	2010	75.4		0.5		12.6		45.1		23.6	3.30
	2011	73.8		n.a.		11.2		45.8		n.a.	3.22
Latvia	2008	75.8	73	0.62	1.5	15.5	13,4	27	34	33.8	5.33
	2009	67.1		0.46		13.9		30.1		37.4	5.35
	2010	65		0.6		13.3		32.3		38.1	5.38
	2011	67.2		n.a.		11.8		35.7		40.1	5.83
Lithuania	2008	72	72.8	0.79	1.9	7.4	8,9	39.9	40	27.6	5.05
	2009	67.2		0.83		8.7		40.6		29.5	5.07
	2010	64.4		0.79		8.1		43.8		33.4	5.11
	2011	67.2		n.a.		7.9		45.4		33.4	5.57
Luxembourg	2008	68.8	73	1.57	2.3	13.4	9,9	39.8	40	15.5	n.a.
	2009	70.4		1.66		7.7		46.6		17.8	n.a.
	2010	70.7		1.63		7.1		46.1		17.1	n.a.
	2011	70.1		n.a.		6.2		48.2		n.a.	n.a.
Hungary	2008	61.9	75	1	1.8	11.7	10	22.4	30,3	28.2	4.48
	2009	60.5		1.17		11.2		23.9		29.6	4.49
	2010	60.4		1.16		10.5		25.7		29.9	4.49
	2011	60.7		n.a.		11.2		28.1		31	4.51
Malta	2008	59.1	62.9	0.56	0.67	38.1	29	20.9	33	19.6	1.60
	2009	58.8		0.54		36.8		21		20.2	1.59
	2010	60.1		0.63		36.9		21.5		20.6	1.58
	2011	61.5		n.a.		33.5		21.1		n.a.	1.58

Annex - Table 1 (cont.)

Netherlands	2008	78.9	80	1.77	2.5	11.4	7,9	40.2	40	14.9	0.61
	2009	78.8		1.82		10.9		40.5		15.1	0.61
	2010	76.8		1.83		10		41.4		15.1	0.60
	2011	77		n.a.		9.1		41.1		n.a.	0.60
Austria	2008	75.1	77	2.67	3.76	10.1	9,5	22.2	38	18.6	2.82
	2009	74.7		2.72		8.7		23.5		17	2.81
	2010	74.9		2.76		8.3		23.5		16.6	2.81
	2011	75.2		n.a.		8.3		23.8		16.9	2.80
Poland	2008	65	71	0.6	1.7	5	4,5	29.7	45	30.5	3.94
	2009	64.9		0.68		5.3		32.8		27.8	3.93
	2010	64.6		0.74		5.4		35.3		27.8	3.93
	2011	64.8		n.a.		5.6		36.9		n.a.	3.89
Portugal	2008	73.1	75	1.5	2.7	35.4	10	21.6	40	26	1.88
	2009	71.2		1.64		31.2		21.1		24.9	1.88
	2010	70.5		1.59		28.7		23.5		25.3	1.88
	2011	69.1		n.a.		23.2		26.1		n.a.	1.89
Romania	2008	64.4	70	0.58	2	15.9	11,3	16	26,7	44.2	2.69
	2009	63.5		0.47		16.6		16.8		43.1	2.70
	2010	63.3		0.47		18.4		18.1		41.4	2.70
	2011	62.8		n.a.		17.5		20.4		40.3	2.71
Slovenia	2008	73	75	1.65	3	5.1	5	30.9	40	18.5	1.99
	2009	71.9		1.86		5.3		31.6		17.1	1.97
	2010	70.3		2.11		5		34.8		18.3	1.95
	2011	68.4		n.a.		4.2		37.9		19.3	1.95
Slovakia	2008	68.8	72	0.47	1	6	6	15.8	40	20.6	3.15
	2009	66.4		0.48		4.9		17.6		19.6	3.14
	2010	64.6		0.63		4.7		22.1		20.6	3.13
	2011	65.1		n.a.		5		23.4		n.a.	3.15
Finland	2008	75.8	78	3.7	4	9.8	8	45.7	42	17.4	2.83
	2009	73.5		3.92		9.9		45.9		16.9	2.82
	2010	73		3.87		10.3		45.7		16.9	2.80
	2011	73.8		n.a.		9.8		46		17.9	2.79
Sweden	2008	80.4	80	3.7	4	12.2	9,9	42	40	14.9	n.a.
	2009	78.3		3.61		10.7		43.9		15.9	n.a.
	2010	78.7		3.42		9.7		45.8		15	n.a.
	2011	80		n.a.		6.6		47.5		16.1	n.a.
EU headline target (in %)	2008		75		3		10		40		4.02
	2009										4.00
	2010										3.99
	2011										3.98

Source: author's concept, using Eurostat data, n.a. meaning non available data; *available until 2010, **national objectives are expressed in number of people under Europa2020 strategy, meaning the reduction of the population at risk of poverty or social exclusion with the mentioned figures. Thus, at the euro area level the results can not be calculated due to differences in national methodologies, in Czech Republic case the objective aims to keep the number of people at risk of poverty or social exclusion at 2008 level (15.3% of total population), bringing the efforts of reducing it by 30,000 people, in Germany the objective aims at reducing the long-term unemployed with 330,000 persons, in the case of Estonia the reduction of the exposure to the risk of poverty rate after social transfers should reach 15%, in Spain case, although I calculated the annual percentage corresponding to the equivalent of 1400000 people, the target of this country is between 1400000 and 1500000 people, in France case, national target states the reduction in time by one third of the rate of exposure to the risk of poverty for the period 2007 - 2012 or by 1.6 million people, in the case of Luxembourg, there is not any objective at this criterion and in the case of Sweden, the national target aims at reducing the percentage of women and men who are not active, of long-term unemployed or of workers on long-term sick leave well below 14% by 2020.