

SOCIAL INCLUSION DEVELOPMENTS - A EUROPEAN CROSS-COUNTRY PERSPECTIVE

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Abstract

Although social inclusion occupies a top position on the agenda of international bodies and national policymakers, both practitioners and academia find it challenging to comprehensively define and accurately measure this phenomenon. Our paper aims at exploring the features and the dynamics recorded by main determinants of social inclusion, through employing a bottom-up analytical approach. It has been followed the Eurostat's delineation of social inclusion indicators into three broad dimensions. The analysis has been conducted for the 28 European Union member states, at two key moments of time, to identify, based on the signals provided by each indicator, the countries recording most extreme values. Indicators recording big values suggest that those countries are exposed to higher degrees of social exclusion, as there are large imbalances between different categories of population regarding the monetary, educational or labor force issues. Indicators depicting small values provide a good signal, characteristic to a state of social inclusion. It has been performed a classification of countries into best and worst performers in terms of social inclusion. An important finding is that, in appreciating the degree of a country's social inclusion, the leading criterion is the monetary poverty. Indirectly, based on the mutually reinforcing relationship between social and financial inclusion, it can be argued that countries identified to depict a pattern of social inclusion are also deemed to perform well in the field of financial inclusion.

Keywords: social inclusion, financial inclusion, proxy indicators, correlation, descriptive statistics

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1. Social inclusion - importance and link with financial inclusion

The roots of the global concern related to creating favorable premises for achieving a state of social inclusion date back to the 1995 World Summit for Social Development which took place in Copenhagen. It was stated that a major priority in the achievement of reliable, sustainable social development is the social integration process which, in turn, is significantly determined by unemployment and poverty (UN, 2010). The recent years' developments, on the background of a severe financial and economic crisis, made it clear that social disparity not only persisted, but the gap between countries or between the individuals living in the same country increased, requiring a more concerted, active and timely intervention of national policymakers and international bodies.

In this respect, the European Commission has positioned fighting against poverty and social exclusion at the core of its Europe 2020 strategy for smart, sustainable and inclusive growth. It is acknowledged that, at present, EU countries are still far from reaching the target set through the 2020 strategy.

World Bank perceives social inclusion in a dual way, as an outcome of measures undertaken by policymakers and as a process for improving individuals' ability to integrate in society and to benefit from equal access to markets and services, of any nature.

United Nations (2010, p.1) define social inclusion "as the process by which societies combat poverty and social exclusion". Social exclusion is considered to be "the involuntary exclusion of individuals and groups from society's political, economic and societal processes, which prevents their full participation in the society in which they live".

When it comes about measuring the state of social inclusion in a given country, it is generally agreed that it is a difficult, challenging task both because in defining it one has to comprehensively identify all the dimensions that compose it and because each dimension has to be reliably and soundly measured by a set of relevant indicators.

In a report issued by European Commission (2008) it is argued that between financial exclusion and social exclusion is a part-whole relationship, the latter concept being more comprehensive and including the former, as it refers to individuals lacking access to basic

services, such as a permanent job, housing, education, health care. Financial exclusion is defined in this report as “a process whereby people encounter difficulties accessing and/or using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong” (p. 9).

Another report published by the Centre of International Political Studies (2013) and financed by the European Commission and the Italian Ministry of Interior outlines that financial exclusion is both an important cause and consequence of social exclusion.

There is a strong, self-fulfilling interrelation between the two concepts. Socially excluded people naturally confront themselves with financial exclusion, as they will be rejected by banking system due to their inability of proving sound creditworthiness or good quality collateral. On the other hand, financial exclusion reinforces the risk that, at certain moment in time, an individual faces with social exclusion due to low understanding of the features and use of financial products, or simply the inability of accessing them from both the perspective of a depositor or a borrower.

According to United Nations (2010, p. iii), “the failure of social integration would lead to social fragmentation and polarization, widening disparities and inequalities”. Further, these disequilibria reflected in different degrees of exclusion will be passed on the financial behavior of individuals. The result is the entrance into a vicious circle, as increasingly more access to basic financial services is perceived as a prerequisite for active “participation in the social and economic life of a modern society and, therefore, for social inclusion” (Centre of International Political Studies, 2013, p. 8).

Consequently, in the process towards reaching a steady state of social inclusion, strengthening financial inclusion is a key step. As Sarma and Pais (2008) outline, financial exclusion is a reflection of a broader problem affecting social exclusion. Indeed, the main indicators that proxy the state of social exclusion is also generating effects on the financial exclusion side, too. A high level of financial exclusion is associated by several studies with large levels of income inequality (Buckland and Guenther, 2005; Sarma and Pais, 2008; Park and Mercado, 2015), job insecurity or unemployment (Goodwin et al. 2000; European Commission 2008), vulnerable people such as low-income or elderly (Connolly and Hajaj, 2001; Barr, 2004).

Existing empirical research is neither broad nor conclusive regarding the direction of causality between the two concepts, although there is generally agreed the presence of a link between social and financial exclusion (Kempson et al, 2004; Corr, 2006; Anderloni and Carluccio, 2006; McKay and Collard, 2006).

Social exclusion is multifaceted, being determined by a complex mix of factors. In this paper we have followed the approach proposed by EC, which delineates the broad typology of determinant factors into three main components: educational, monetary and labor market factors. Each component is proxy by several indicators that became the starting point for our analytical approach. By relying on the generally accepted interrelated link between social and financial inclusion, the findings obtained will allow us to indirectly gain a perspective on financial inclusion developments within the two time periods considered and across the EU member states.

2. Methodology employed

It has been performed a comprehensive country-by-country analysis, covering all the 28 EU member states, at two moments of time: 2008, to gain a picture of social inclusion phenomena during the year that marked the onset of the financial crisis, and 2013 for a more recent picture. Data have been extracted from Eurostat database, the most recent data series being available until 2013. According to European Commission's classification, social inclusion can be proxy by means of: a) monetary poverty and living conditions; b) education and c) access to labor market. Each of these three broad dimensions can be quantitatively assessed by employing several indicators, which have been synthesized in Table 1 (see the Annex 1).

Before aggregating the signals provided by each of the nine indicators, it is of interest to analyze the statistical features depicted by individual indicators' data series. This descriptive approach allows us to establish the pattern of evolution or the dynamics recorded by one indicator both within the sample of nine indicators and across the two time periods considered. Tables 2 and 3 (see the Annex 1) depict the correlation matrix for each year, to notice the presence of a relationship between indicators, its strength and its direction (positive or negative).

Correlation coefficients close to zero depict no relationship between the variables, while a correlation of +/- 1 indicates perfect synchronization of their evolution. Coefficients in the range 0.9 - 0.7

show strong correlation, moderate correlation if they lie in the range 0.6 - 0.4 and a weak, maybe random correlation for levels smaller than 0.39.

For 2008 there is a strong correlation between inequality of income distribution and persistent-at-risk-of-poverty rate for 50-64 years(0.72), in-work at-risk-of-poverty rate and persistent-at-risk-of-poverty rate for 25-49 years 0.71) respectively inequality of income distribution (0.74). It means that there is a strong relationship between these variables in the sense that they vary together; however, it cannot be stated the causality direction but only the presence of a relationship. The correlation coefficients' sign is positive meaning that they move in the same direction: as one variable increases (decreases), the other with which it is correlated increase (decrease) as well. However, for most of the variables considered, the correlation relationship is low, questionable.

At end-2013 it is maintained the strong correlation between in-work at-risk-of-poverty rate and persistent-at-risk-of-poverty rate for 25-49 years (0.73) respectively inequality of income distribution (0.72). In respect of inequality of income distribution and persistent-at-risk-of-poverty rate for 50-64 years, the correlation recorded a slight decrease to 0.68, while the correlation between the former indicator and persistent-at-risk-of-poverty rate for 25-49 years increased with around 9 percentage points, until 0.76. This shift suggests that income gap raises more when disposable income obtained by people aged 25-49 falls below the risk-of-poverty threshold.

For at-risk-of-poverty-rate by highest level of education the strength of correlation changed: in 2008 it was moderately correlated with persistent-at-risk-of-poverty rate for 50-64 years and inequality of income distribution, while in 2013 it became weak.

Households with very low work intensity proved no correlation in 2008 with persistent-at-risk-of-poverty rate for 25-49 years, inequality of income distribution and early leavers from education and training, while in 2013 it recorded a jump towards a moderate, positive correlation. This dynamics suggests that young adults gaining low wages and youth abandoning the education system are more prone to depict low work intensity features.

Long-term unemployment rate depicted weak correlation with persistent-at-risk-of-poverty rate for 25-49 years, severely materially deprived population, inequality of income distribution, in-work at risk

of poverty rate and households with very low work intensity at end-2008 but converted into moderate correlation in 2013.

To sum up, for 2013 data some indicators maintained their correlation strength, while others acquired a moderate pattern of synchronization.

Tables 4 and 5 (see the Annex 1) summarize several descriptive statistics, meant to give a picture on the data series properties.

Standard deviation is a very informative statistic as it points out the dispersion of a variable's values around its mean. The smaller its value, the closer to the central tendency is the range of values recorded by a given variable. The variables depicting a pattern of relative homogeneity within the data series or, in other words, few extreme values are inequality of income distribution (the lowest standard deviation, of only 1.13), long-term unemployment rate (1.42), households with very low work intensity (2.21), persistent-at-risk-of-poverty rate (25-49 years) (2.67), at-risk-of-poverty-rate, by highest level of education attained (2.75) and in-work at risk of poverty rate (2.76). At the opposite, the highest standard deviations have been recorded by severely materially deprived population (8.65), early leavers from education and training (7.79) and lifelong learning (7.36). The reason resides in the wide disparities across EU member states in terms of the indicators above mentioned.

Kurtosis describes the shape of a probability distribution, while skewness adds information related to its asymmetry. A kurtosis equal to 3 is specific to the normal distribution. All kurtosis statistics record positive values, meaning that all indicators have a leptokurtic distribution, with high peaks and fatter tails. Severely materially deprived population has the highest kurtosis; consequently, its distribution depicts the highest tails which is a clue for the presence of many extreme values.

Skewness is a statistic measuring a distribution's lack of symmetry. Zero skewness is a feature of normal distribution. All the indicators in our sample show asymmetry towards right tail, outlining hence the higher frequency of positive extreme values. Again, severely materially deprived population depicts the widest asymmetry, having the longest right-tail.

Jarque–Bera statistic acts as a goodness-of-fit measure to test jointly whether a dataset skewness and kurtosis depict the

features of a normal distribution. The smaller its value, the closer is the dataset from a normal distribution.

According to 2013 statistics, inequality of income distribution maintained the lowest standard deviation, of 1.06 while severely materially deprived population depicted the highest level (9.54). Lifelong learning witnessed a small increase of its standard deviation level while early leavers from education and training recorded a decrease from 2008 level. Long-term unemployment rate's standard deviation marked an increase from 1.42 in 2008 to 4.02 in 2013 signaling rising heterogeneity across EU member states and pressures on the labor market. As in 2008, the highest standard deviations have been recorded by the same three indicators, namely severely materially deprived population, early leavers from education and training and lifelong learning. The reason resides in the wide disparities across EU member states in terms of the indicators above mentioned, disparities that still persist five years later. The indicators for which standard deviation shows larger values are lying at the origin of main differences between countries, in terms of social inclusion criteria.

The highest kurtosis, of over 6, has been recorded by two indicators, namely severely materially deprived population and long-term unemployment rate. Their skewness values are also closely related, suggesting that at end 2013 they witnessed a broad range of extreme values, with a higher frequency of positive ones (right side asymmetry). However, for all the nine social inclusion indicators skewness depicted smaller values at end-2013 than at end-2008, pointing out a generalized attenuation of the lack of symmetry. Jarque-Bera statistic also compressed its values, for all the indicators in the sample.

3. Social inclusion – cross-country assessment and dynamics

To establish which of the three main criteria that proxy social inclusion are at the root of the heterogeneity between EU countries, being the determinant of households' status of socially inclusive or exclusive, we have performed an analytical research. Having as starting point the raw data series for each indicator, in each EU country, we marked both the smallest and the largest values and kept in the analysis only those countries that recorded best/worst performance for at least three indicators. Except lifelong learning, all

the indicators recording high values prove the presence of large imbalances between different categories of population in respect of monetary, educational or labor force issues. Consequently, those countries are exposed to higher degrees of social exclusion. On the contrary, indicators depicting small values (again except lifelong learning) are a signal of social inclusion. Low levels of lifelong learning indicate that people are not willing to continue their education or training, to improve and expand their skills and knowledge, while big values reflect a good attitude towards education. The biggest number of indicators pointing towards a positive, beneficial state a country holds, the more pronounced the degree of social inclusion.

In addition to the statistical features discussed above, it should be mentioned also the forward-looking nature of social inclusion indicators. Individuals who are reported in official statistics as being socially excluded for unemployment or absence/low level of income purposes are susceptible to maintain these features in the future, too. The same is valid for education indicators which indirectly measure the exposure to the risk of social exclusion in the later working life, due to early school leaving or refusal to update skills and knowledge through trainings (UN, 2010).

Tables 6 and 7 (see the Annex 1) summarize the results obtained and the countries' clustering in terms of the degree of social inclusion.

At end-2008 only 5 out of 28 EU countries depicted relatively persistent extreme values for at least three social inclusion indicators. In respect of the different social inclusion dimensions, most indicators are concentrated in the monetary poverty field, followed by education and labor market access. It means that, in 2008, monetary poverty exerted the largest influence on a country's overall status of social inclusion.

Denmark and Sweden were the best performers in terms of persistent-at-risk-of-poverty rate for 25-49 years, income distribution, lifelong learning and long-term unemployment. At the opposite are the countries with the highest exposure to social exclusion, namely Latvia, Portugal and Romania, table 6 illustrating those indicators with increased vulnerability.

Compared with the picture from end-2008, in 2013 it have been identified 12 EU countries that recorded extreme values for at least three out of nine social inclusion indicators. Again, the highest concentration of best and worst performers is in the area of indicators

that proxy monetary poverty. In addition, we notice the shift between labor market access and education criteria, the former gaining weight. Thus, in appreciating the degree of a country's social inclusion, the leading criterion is the monetary poverty followed by pressures on the labor market and education issues. Going a step further, the appearance of a favorable, beneficial value has been registered in only 25% of cases for monetary poverty criterion, in 62% of cases for education criterion and in 80% of cases for labor market access criterion. This suggests that countries in table 7 succeeded most at facilitating entrance on labor market as an active, well paid worker. Also, most countries succeeded to maintain individuals' interest in ongoing investment in their career, by fulfilling each stage of the public educational process, and in updating their skills, by enrolling for additional training. In respect of monetary poverty criterion, although it seems to hold the pivotal place when assessing a country's degree of social inclusion, it is also the hardest to be managed. Most countries show large vulnerabilities and record the lowest values from the entire sample of 28 EU countries.

The best values for their indicators and hence the highest degree of social inclusion has been recorded by Denmark, Finland, Sweden, followed closely by Czech Republic and Luxembourg. The highest exposure to social exclusion is signaled in Greece (5 out of 9 indicators), Latvia and Bulgaria. Greece and Latvia are the worst performers for each of the four indicators that proxy the monetary poverty dimension. Romania is the only country in the sample with mixed evolution, as it shows vulnerabilities for four indicators and favorable evolutions for two indicators.

4. Conclusions

The paper aimed at bringing together several indicators that cause the manifestation of social exclusion phenomenon, to centralize their influence and analyze their evolution in a cross-country framework. Although the factors leading to social exclusion are many and varied, a general tendency can be noticed: monetary poverty is the dimension holding the main importance in assessing the state of social inclusion or exclusion of a country. It is also the hardest to be mitigated, as most countries recorded high levels of the vulnerability indicators.

Taking a closer look at countries' evolutions, it can be observed that more countries entered on a social inclusion path in

2013, compared with 2008. The same is valid also for countries depicting major exposure to social exclusion.

The findings of our study are valuable because they may constitute the starting point for any analyses, with various degrees of comprehensiveness, time coverage and complexity, trying to determine the direction of change of social inclusion phenomenon and of its main determinant factors, in a comparative cross-country perspective. Indirect outcomes may be represented by assessing whether the measures undertaken for mitigating social exclusion gave beneficial results or how improved social inclusion might translate into better financial inclusion.

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Table 1. Indicators for social inclusion assessment

Category	Indicator	Denomination in text	Explanation
MONETARY POVERTY AND LIVING CONDITIONS	Persistent-at-risk-of-poverty rate (25-49 years)	Variable 1a (Var. 1a)	The indicator is defined as the share of persons with an equivalised disposable income below the risk-of-poverty threshold in the current year and in at least two of the preceding three years. The threshold is set at 60 % of the national median equivalised disposable income.
	Persistent-at-risk-of-poverty rate (50-64 years)	Variable 1b (Var. 1b)	
	Inequality of income distribution	Variable 2 (Var. 2)	The ratio of total income received by the 20 % of the population with the highest income (top quintile) to that received by the 20 % of the population with the lowest income (lowest quintile). Income must be understood as equivalised disposable income.
	Severely materially deprived people	Variable 3 (Var. 3)	Severely materially deprived persons have living conditions severely constrained by a lack of resources and they experience at least 4 out of 9 following deprivations items: cannot afford i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone.
EDUCATION	Early leavers from education and training	Variable 4 (Var. 4)	The indicator is defined as the percentage of the population aged 18-24 with at most lower secondary education and who were not in further education or training during the last four weeks preceding the survey.
	At-risk-of-poverty-rate, by highest level of education attained	Variable 5 (Var. 5)	This indicator is defined as the share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers).
	Lifelong learning	Variable 6 (Var. 6)	Lifelong learning refers to persons aged 25 to 64 who stated that they received education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding those who did not answer to the question 'participation in education and training'.
ACCESS TO LABOR MARKET	Households with very low work intensity	Variable 7 (Var. 7)	People living in households with very low work intensity are people aged 0-59 living in households where the adults work less than 20% of their total work potential during the past year.
	In-work at-risk-of-poverty-rate	Variable 8 (Var. 8)	The share of employed persons of 18 years or over with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers).
	Long-term unemployment rate	Variable 9 (Var. 9)	Long-term unemployed (12 months and more) comprise persons aged at least 15, who are not living in collective households, who will be without work during the next two weeks, who would be available to start work within the next two weeks and who are seeking work

Source: definitions from Eurostat

Table 2. Correlation matrix for 2008 year-end indicators

	Var.1a	Var.1b	Var.2	Var.3	Var.4	Var.5	Var.6	Var.7	Var.8	Var.9
Var.1a	1									
Var.1b	0,60	1								
Var.2	0,36	0,23	1							
Var.3	0,67	0,72	0,51	1						
Var.4	0,41	0,28	-0,06	0,46	1					
Var.5	-0,06	0,49	-0,10	0,45	0,05	1				
Var.6	-0,66	-0,36	-0,57	-0,40	-0,14	0,24	1			
Var.7	0,02	-0,11	0,05	-0,09	0,02	-0,12	-0,01	1		
Var.8	0,71	0,55	0,22	0,74	0,39	0,31	-0,36	-0,22	1	
Var.9	0,36	0,05	0,30	0,06	0,11	-0,35	-0,63	0,23	0,13	1

Source: authors, based on Eviews computations

Table 3. Correlation matrix for 2013 year-end indicators

	Var.1a	Var.1b	Var.2	Var.3	Var.4	Var.5	Var.6	Var.7	Var.8	Var.9
Var.1a	1									
Var.1b	0,59	1								
Var.2	0,50	0,28	1							
Var.3	0,76	0,68	0,60	1						
Var.4	0,47	0,23	0,14	0,43	1					
Var.5	0,08	0,29	-0,29	0,20	-0,02	1				
Var.6	-0,65	-0,49	-0,64	-0,43	-0,17	0,30	1			
Var.7	0,48	0,16	0,37	0,55	0,52	0,16	-0,21	1		
Var.8	0,73	0,62	0,23	0,72	0,22	0,25	-0,39	0,27	1	
Var.9	0,63	0,35	0,42	0,63	0,36	-0,02	-0,52	0,63	0,55	1

Source: authors, based on Eviews computations

Table 4. Descriptive statistics for 2008 year-end indicators

	Var.1a	Var.1b	Var.2	Var.3	Var.4	Var.5	Var.6	Var.7	Var.8	Var.9
Mean	6,66	7,55	8,95	4,70	13,86	6,09	10,15	7,62	7,67	2,31
Maximum	11,3	17,2	41,2	7,3	34,9	13,3	29,9	12	14,3	6,7
Minimum	2,6	0,5	0,7	3,4	5	2,3	1,4	4,5	3,6	0,5
Std. Dev.	2,67	3,85	8,65	1,13	7,79	2,75	7,36	2,21	2,76	1,42
Skewness	0,11	0,85	2,31	0,61	1,36	0,64	1,18	0,59	0,63	1,20
Kurtosis	1,89	3,87	9,11	2,33	4,35	3,09	3,54	2,45	2,58	4,75
Jarque-Bera	1,28	3,61	58,75	1,92	9,26	1,66	5,85	1,69	1,75	8,87
Probability	0,53	0,16	0,00	0,38	0,01	0,44	0,05	0,43	0,42	0,01

Source: authors, based on Eviews computations.

Table 5. Descriptive statistics for 2013 year-end indicators

	Var.1a	Var.1b	Var.2	Var.3	Var.4	Var.5	Var.6	Var.7	Var.8	Var.9
Mean	8,02	8,08	10,73	4,77	10,42	6,54	11,27	10,26	7,78	5,20
Maximum	14,2	13,7	43	6,6	23,6	12,3	31,4	18,2	13,1	18,5
Minimum	3	1,9	1,4	3,4	3,9	1,8	1,7	6,6	3,7	1,3
Std. Dev.	2,81	3,07	9,54	1,06	4,89	2,60	7,89	3,04	2,52	4,02
Skewness	0,26	0,02	1,82	0,46	1,24	0,11	1,08	0,87	0,08	1,77
Kurtosis	2,56	2,45	6,41	1,82	3,92	2,54	3,48	3,05	2,26	6,13
Jarque-Bera	0,48	0,31	25,96	2,32	7,25	0,28	5,12	3,15	0,60	23,25
Probability	0,79	0,85	0,00	0,31	0,03	0,87	0,08	0,21	0,74	0,00

Source: authors, based on Eviews computations

Table 6. Social inclusion indicators, by country, in 2008

Country	MONETARY POVERTY			EDUCATION			LABOR MARKET ACCESS			
	Persistent-at-risk-of-poverty rate		Severely materially deprived population	Inequality of income distribution	Early leavers from education and training	At-risk-of-poverty-rate, by highest level of education attained	Lifelong learning	Households with very low work intensity	In-work at risk of poverty rate	Long-term unemployment rate
	from 25 to 49 years	from 50 to 64 years								
Denmark	√			√			√			√
Latvia		×		×		×			×	
Portugal	×				×				×	
Romania			×	×		√	×		×	
Sweden	√	√		√			√			√

Source: authors, based on data retrieved by Eurostat.

Legend: √ = Low levels of distress indicators, signaling a state of social inclusion; × = High levels of distress indicators, signaling large exposure to social exclusion

Table 7. Social inclusion indicators, by country, in 2013

Country	MONETARY POVERTY			EDUCATION			LABOR MARKET ACCESS			
	Persistent-at-risk-of-poverty rate		Severely materially deprived population	Inequality of income distribution	Early leavers from education and training	At-risk-of-poverty-rate, by highest level of education attained	Lifelong learning	Households with very low work intensity	In-work at risk of poverty rate	Long-term unemployment rate
	from 25 to 49 years	from 50 to 64 years								
Bulgaria	x		x	x			x			
Denmark	√	√					√			√
Greece	x	x	x	x						x
Latvia	x	x	x	x						
Romania			x	x		√	x	√	x	
Finland				√			√		√	√
Sweden			√	√			√			√
Czech Republic				√		√		√		
Spain	x			x	x					
Lithuania	x	x		x						
Luxembourg			√					√		√
Portugal	x	x		x						

Source: authors, based on data retrieved by Eurostat.

Legend: √ = Low levels of distress indicators, signaling a state of social inclusion; x = High levels of distress indicators, signaling large exposure to social exclusion