

On the Perception of Social Exclusion in the EU27: Concepts and Empirical Investigation

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Abstract European Union (EU) represents today one of the richest areas in the world, however situations of socio-economic deprivation and vulnerability still persist. These conditions are unacceptable in a modern society which aims to develop well-being and equal opportunities for all. To indicate these different forms of interdependent disadvantage in social, economic and institutional domains, the multidimensional and comprehensive concept of social exclusion has been recently introduced in literature and in EU discourse. After a brief review of the concept of social exclusion, our aim is to verify, through multilevel logistic regression models, how different individual characteristics – both socio-economic and relational – affect the perception of social exclusion, in a comparative perspective for the 27 EU countries.

Keywords: Social exclusion, Poverty, EU27, Random Intercept Models.

1 On defining social exclusion

The Lisbon Treaty designated 2010 to be the “European Year for Combating Poverty and Social Exclusion”, affirming the global relevance of this topic and the European Union’s commitment (European Union, 2007). The 2010 is now arrived, but although the European Union is one of the richest areas in the world, still 17% of European Union (EU) citizens have such limited resources that they cannot afford basic needs (EU Commission, 2009). European citizens are also affected by social exclusion: in 2006, about the 10% of the EU citizens declared to feel left out of society. Particularly, considering the enlarged Europe (EU27), the socio-economic situation is quite unbalanced, due to a contrast between the western countries and the countries with a more or less marked situation of social and economic vulnerability. Opinions and

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perceptions vary strongly between member states – e.g. perception of social exclusion ranges from 2.5% for Slovenia to 22.3% for Italy – and although the situation may not be as severe in some countries, it is nonetheless unacceptable. A key value of the EU is to encourage solidarity and to promote a society that sustains and develops quality of life, social well-being and equal opportunities for all.

The terms “social exclusion” and “poverty” are often used jointly in European discourse, since Eighties. Poverty and social exclusion represent two concepts strictly related and, to some extent, complementary, but they are not equal. While poverty is determined by a lack of material resources, social exclusion is the outcome of serious disparities in social, economic and institutional domains. Social exclusion is a wider and multidimensional concept (see e.g. Room, 1995; Hills *et al.*, 2002; Bhalla and Lapeyre, 2004) which entails different forms of interdependent disadvantage and unease, both relational and distributional. These situations, whether prolonged in time and in absence of intervention, may lead to a lack of integration of individuals from the mainstream society. Monetary and economic deprivation is merely a single even if noteworthy factor in social exclusion: whether poverty and difficulties to afford the basic goods one needs to live represent crucial factors in triggering situations of exclusion (Atkinson, 1998), a situation of poverty does not imply necessarily a situation of exclusion. We deem that the role of social relationships, participation in community life and the active citizenship are crucial in differentiating social exclusion from poverty, and in describing in a more comprehensive way the wellness of individuals. In this sense, the study and the measure of social exclusion require the exploitation also of subjective components. The link between social exclusion and poverty implies that the socio-economic condition of European citizens is rather complicated and variegated, and it cannot be adequately described completely by standard measures of poverty and one needs new tools to understand factors affecting social individual well-being.

In next section we exploit a Eurobarometer (EB) survey carried out in 2006 in EU in order to analyse how a wide range of social and economic individual characteristics may affect perception of social exclusion. The disposable sample refers to the 27 countries of European Union after the recent enlargement. This representative up-to-date survey has the advantage to cover also the new EU members states and to provide comparable information on social exclusion perception, on material living conditions and on social relationships.

2 An analysis of risk factors in social exclusion perception

2.1 *Individual and contextual indicators*

In this contribution, we focus on a subjective measure of social exclusion. Respondents were asked to what extent they agree or disagree (on a five level Likert scale) with the statement “I feel left out of society”. The responses to the EB question have been recoded considering together the categories “strongly agree”, “agree” on the one side,

and “neither agree nor disagree”, “disagree” and “strongly disagree” on the other side. In this way we dispose of a dichotomised indicator – perception to be excluded/not to be excluded – in order to apply a multi-level logistic regression model. Our purpose is to analyse this subjective measure of social exclusion with respect to some individual characteristics – both economic and relational, according to the multidimensional nature of this concept – and verify whether and to what extent EU population represents a homogeneous picture or it still presents inequalities in this regard.

The *economic* dimension of social exclusion refers principally to monetary and financial aspects, and it relies directly to the concept of poverty. The socio-economic status of individuals is taken into account distinguishing into some components. The first indicator considers the income satisfaction perceived by individuals (satisfactory/not satisfactory); a second measure accounts for the material resources available to individuals through an indicator referring to the ownerships of some durables (below the average number of durables available in the country, on the average, above the average). Thirdly, we introduced an indicator of the highest level of education achieved (low, medium, high), and, finally, the typology of occupation (self-employed, manager, white collar, manual worker, house person, unemployed, retired, student).

The *relational* dimension concerns social relationships with family, friends, neighbours, local community, etc. Our hypothesis is that social contacts and strong relationships may represent an irreplaceable support to compensate possible economic difficulties, especially when they are transitional. To account for this dimension, in our analysis we considered firstly the household composition: married, unmarried living alone, unmarried living with other people. The second indicator refers to the help potentially available to individuals from their family, friends, neighbours or other, in some situations of need. The modalities used in the analysis oppose people who can rely on a great extent on help of someone, people who can rely on help just in some situations, and people who retain they cannot rely on these kinds of help.

The presence of a precarious health status may obstacle a full participation in social life and thus worsens the feeling of social exclusion. In order to verify this hypothesis, we introduced in the model an individual covariate representing the satisfaction of individuals about their health status (good/bad). One of the main concerns of modern societies is the risk of discrimination due to race, sexual orientation, or other opinions or behaviours. In order to investigate the relations between this element and social exclusion perception, we introduced in the analysis the responses given by respondents whether they feel to belong to a majority, a minority or any group in terms of race, religion or culture, in their country. Finally, the analysis has been controlled for the sex and the age of individuals.

Multilevel random intercept regression models enable to introduce covariates also at the second level, to partly “control” for the second level variability. In this regard, we distinguished countries on the basis of their type of welfare system: the Mediterranean European countries (Greece, Italy, Portugal, Spain, Malta and Cyprus); the Continental countries (Austria, Belgium, Germany, Luxembourg and France); Social-democratic countries (Finland, Denmark, the Netherlands and Sweden); the Liberal countries (United Kingdom and Ireland); and, finally, the Post-communist countries (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia). Although quite a difference remains within these groups, they approximate different ways to interpret redistribution mechanism and relationships between market, state and family, crucial elements in social exclusion analysis.

Moreover, exploiting Eurostat data, we introduced in the analysis the risk of poverty rate in each European country (computed as the percentage of people below 60% of median equivalised income after social transfers, and recoded in tertiles), to account for the economic situation at aggregate level and for inequalities among citizens. The third indicator is the national average of the expenditure for social exclusion benefits, as proxy of the social and protection system of the country.

Preliminary analysis suggested that social exclusion perception and risk factors triggering social exclusion situations may differ in different phases of life. In this sense, we decided to carry out separate analysis depending on the age of individuals: a first model includes individuals aged from 18 to 44, and a second one people aged 45 years old and more.

2.2 *Model specification*

Data have a simple group structure, defined as individuals living in 27 European Union countries. The adoption of a multilevel framework enables to describe the relationships among individual social exclusion perception (the “outcome” variable), their demographic and socio-economic characteristics, and their country of residence. Random effect models (Snijders and Bosker, 1999) allow dealing with the hierarchical structure in order to identify not just individual factors affecting social exclusion perception, but also factors affecting national differences in social exclusion situations.

After the estimation of the so-called null model, in order to check the existence of a certain degree of intra-regional variation, we estimated the complete full hierarchical model, including both first and second level covariates (respectively X_{hij} and Z_{mj}) in such a way to interpret the variability associated to the national context. Considering the logit transformation of the probability $P(y_{ij}=1)$ that a person i from country j perceives to be socially excluded, formally the complete hierarchical model is:

$$\text{logit}\{P(y_{ij}=1)\} = \gamma + \sum_{h=1}^H \beta_h X_{hij} + \sum_{m=1}^M \beta_m^g Z_{mj} + U_j$$

where γ is the intercept that gives the average value of the logit transformation of the probability for the entire population. The second level random components U_j , with $U_j \sim N(0, \tau^2)$, represents the residual random effects of every country on the response variable, “net” of the individual characteristics X_{hij} . Substantially they represent the deviation from the average value for country j after controlling for the covariates. In a sense, the random intercept represents the combined effect of all omitted group-specific covariates that cause some homogeneity between individuals.

2.3 *Who feel more socially excluded?*

In this section we discuss the results of the multilevel logistic regression models estimated both for young and adult/elderly people (odd ratios are presented in Table 1).

Referring to the two domains of social exclusion, Table 1 shows that the most important factors in worsening the risk of social exclusion are the evaluation of one's own standard of living and the unemployment status. For both indicators, this risk is even more relevant for people aged 45 or more, other things being equal. In the youngest age group, the odd ratio to perceive a situation of social exclusion is respectively 2 and 2.5 for the standard of living and the unemployment status, with respect to values equal to 2.4 and 3.6 in the elderly group: it is clear that the lack of employment and the economic difficulties are more critical for adult people, both from the economic and the psychological point of view. In addition, house persons register a disadvantaged situation (the O.R. is about 1.9 for the two age groups), as well as retired people (OR equal to 1.9). For the oldest respondents the self-employed occupation increases the odd to perceive social exclusion.

Perception of social exclusion decreases for well-off persons. Particularly, an amount of goods lesser than the national average increases the risk of social exclusion, while a higher amount reduces it. This effect is more relevant for younger people, who have the 70% higher risk to feel excluded, against the 25% for older ones. Note that for young people a lack of durables is more relevant than income satisfaction in determining social exclusion perception.

In line with our expectations, people reporting bad health status have a higher risk to feel excluded, and the magnitude of this effect is remarkably higher for young people (OR equal to 2.2 vs. 1.8). We may interpret this result considering that the impact of bad health on fully participation in community and public life, in social relationships, as well as in labour market, is more harmful and disappointing for younger people, while it represents a more accepted condition, and to some extent considered as inevitable, in later life.

Consider now the two indicators referring to the relational dimension. Among them, the most important effect is played by the lack of help in case of need. With respect to a young person who can rely on a great extent on other in case of need (high level of help), the reduction of help (help in some situations) implies a 30% higher risk. For adult and aged people the ORs associated to the gradient of help availability are respectively 1.5 and 2.1. For elderly people the consciousness to have someone to rely on in case of need is thus more relevant in reducing the risk of exclusion, than for young people. Married people feel more socially included than unmarried one, above all with respect people living alone. In this case the risk is slightly higher for 18-44 age group (OR equal to 1.4 vs. of 1.2). For the singles living with other persons and aged 45 and more the effect is quite low.

An increase in the level of education achieved reduces the risk of exclusion, for both groups of age. The effect of a high level of education, with respect a medium one, is not significant for elderly people, probably since their average level is generally medium-low. Referring to the demographic covariates, there are no gender differences in the social exclusion perception, while older people feel better than others. Finally, let us spend some words about the latest individual covariate used in the model, the perception to belong to a minority group. As showed in Table 1, this element represents the most strong effect for people aged 18-44: in this case, the risk to feel left out of society is almost 4 times higher with respect to a person belonging to any group. The magnitude of the effect is just a little smaller (OR 3.1) for the older age group, and in this case the membership to a majority group is statistically significant (at the 10% significance level) in reducing the risk of exclusion.

Table 1: Results of logistic multilevel regression models: OR for the social exclusion perception

Variables	Categories	PEOPLE AGED 18-44		PEOPLE AGED 45 OR MORE	
		OR	s.e.	OR	s.e.
sex	male	1		1	
	female	1.076	0.09	0.972	0.06
age (classes)	18-24	1.022	0.12	---	
	25-34	1		---	
	35-44	1.104	0.09	---	
	45-54	---		1	
	55-64	---		0.809	0.07 **
	>65	---		0.602	0.06 **
health	good	1		1	
	bad	2.231	0.23 **	1.780	0.11 **
education	low	1.312	0.19 *	1.072	0.08
	medium	1		1	
	high	0.801	0.08 **	0.787	0.07 **
standard of living	satisfactory	1		1	
	not satisfactory	2.000	0.17 **	2.395	0.16 **
occupation	self-employed	1.039	0.18	1.478	0.27 **
	manager	0.770	0.14	0.729	0.15
	white collar	1		1	
	manual worker	1.114	0.14	0.991	0.16
	house person	1.878	0.28 **	1.960	0.34 **
	unemployed	2.479	0.34 **	3.602	0.61 **
	retired	---		1.943	0.30 **
	student	0.615	0.25	---	
durables' property	below country average	1.788	0.17 **	1.247	0.10 **
	on country average	1		1	
	above country average	0.885	0.08	0.841	0.08 *
household composition	married	1		1	
	unmarried living alone	1.339	0.16 **	1.217	0.09 **
	unmarried living with others	1.203	0.11 **	1.172	0.11 *
availability of help	low help	1.716	0.41 **	2.103	0.25 **
	medium level of help	1		1	
	high help	1.036	0.14	1.452	0.12 **
belonging group	majority group	1.041	0.10	0.885	0.06 *
	minority group	3.983	0.43 **	3.038	0.28 **
	any group	1		1	
COUNTRY COVARIATES					
type of welfare system	continental countries	5.989	3.59 **	3.061	1.56 **
	mediterranean countries	1		1	
	social democratic count.	3.387	1.90 **	3.433	1.72 **
	liberal countries	0.860	0.36	2.399	0.93 **
	post communist countries	0.987	0.27	1.832	0.48 **
% of people at risk of poverty	1st tertile (10-12%)	2.232	1.17	1.251	0.56
	2nd tertile (13-15%)	1		1	
	3rd tertile (16-18%)	3.803	2.03 **	1.781	0.79
Benefits for social exclusion (Euro/hab)		0.997	0.00 *	0.997	0.00 *
Country level		0.205	(s.e.) 0.066	0.192	(s.e.) 0.060
ICC		0.059	(s.e.) 0.018	0.055	(s.e.) 0.016

Estimated coefficients significant at 5% significance level (**) and at 10% significance level (*).

In multilevel regression models we may capture the role of different levels of determinants on social exclusion perception. The estimated hierarchical models after controlling for country covariates present a significant country-level variance (equal to 0.45 in the model for people aged 18-44, and to 0.44 for people aged 45 or more). The estimated intra-class correlation coefficient, that is percentage of total unexplained variation in social exclusion perception among European citizens due to the different country of residence, amounts respectively to 5.9% and 5.5% for the two age groups.

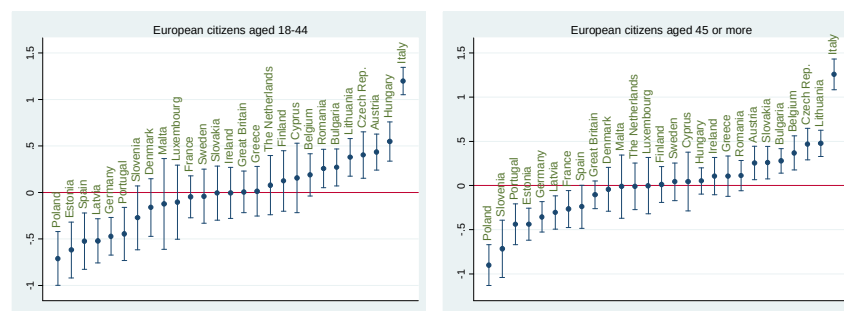
Considering as category of reference the Mediterranean countries, the other identified groups of countries register a higher risk of social exclusion, other things

being equal. For the Continental countries the risk is about 6 times higher whether we consider young people, and 3 times higher for elderly one. To live in a social democratic countries increase the risk of exclusion of more than 3 times. Living in a so-called Liberal or in a Post-communist country has no significant effect on the social exclusion perception for 18-44 age group (even if in this case, the effect would reduce the risk), while it doubles the risk for adult and elderly people (OR equal respectively to 2.4 and 1.8 for the two groups of people). Both for adult and elderly, the higher are the amount of benefits that the State gives on average to citizens in order to contrast poverty and social exclusion, the less is the proportion of socially excluded people (significance at 10% level). For young people, the national level of poverty also matters: social exclusion perception is more widespread in countries with a high percentage of people at risk of poverty.

Country differences can be analyzed by looking at the random effects of the model. The Empirical Bayes (EB) residuals U_j summarize all the factors at national level that have not been observed: countries with high negative residuals reveal a risk of exclusion smaller than expected given the values of their contextual covariates. Vice versa, high positive residuals imply the presence of unobserved contextual factors that increase the risk of exclusion. For the complete full model discussed in previous section, the Empirical Bayes residuals at national level are presented in Figure 1. These results offer a synthetic way to compare the impact of the differences existing among territorial units with regard many aspects. In fact, geographic level synthesizes many factors, that we tried to approximate introducing in the model some selected contextual covariates, but a certain degree of heterogeneity still remains.

It being understood some discrepancies in the two age groups, social exclusion is less frequent than expected in Poland, Estonia, Latvia, as well as in Portugal, Germany and Spain. In the opposite situation, we found most of East European countries, namely Romania, Bulgaria, Lithuania, Czech Republic and Hungary, besides Austria and Italy. For these countries, the perception of social exclusion reported by individuals is higher than expected on the basis of their covariates, such as the welfare system, the poverty rate and the level of social benefits. Concerning the situation of Italy, one registers the highest EB residuals, implying that in this country there is a frequency of people who perceive to be socially excluded higher than expected given the values of contextual covariates. It represents an atypical situation that would be worth to investigate further, but a question arises: Italian people are actually more socially excluded than other Europeans citizens, or they simply complain more than others?

Figure 1: Country empirical Bayes (EB) residual U_j from the fitted models



3 Concluding remarks

The risk to feel left out of society varies greatly among individuals, and also among countries. Starting from individual level aspects, we found that, overall, the most relevant factors affecting social exclusion perception pertain to the economic sphere of life. Among them, it is the lack of employment which impacts worst, followed by an economic situation that not enable to make ends meet. Bearing in mind the two-fold character of unemployment in life of people – income production and sphere of life in which people can realize themselves – it is clear the crucial role of this factor in combating poverty and social exclusion. Relational factors, although having a noteworthy effect, are nowadays less relevant in terms of magnitude with respects the economic ones. Relational aspects may attenuate some adverse situations, mostly when they are temporary, but it is the lack of an economic stability which stands out to be the most important element. Moreover, most of the estimated effects were found to significantly differ between young and elderly people, thus entailing the need to drive policies and support citizens in a differentiated manner.

We also proved the persistence of important differences across EU27 countries in the domain of social exclusion. Variability among countries in social exclusion perception still remains after controlling for individual covariates, raising the hypothesis that it exists also a *country* effect, which is not completely explained by usual macro-level indicators. We can thus assume that also other aspects, such as psychological and cultural characteristics of people living in the different countries are into play, even if they are not ever easy to detect, measure and interpret. For example, some countries, even presenting economic deprivation, vulnerability and social inequalities, show a better situation in terms of social exclusion and integration, other things being equal. Other factors at country level, like social participation, involvement in social and public activities, active citizenship, and so on, would need further analysis. In this sense, we hope for a major effort towards data availability – from the geographic, temporal and substantial points of view – in order to allow a meaningful and concrete monitoring of European regional differences in social exclusion situations.

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