

6 Measuring social deprivation and social exclusion

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- ▶ While material deprivation decreases with age, social deprivation affects those aged 65+ much more often compared to those aged 50-64
 - ▶ Estonia, Israel and Italy are countries with highest proportion of the 50+ suffering high levels of both material and social deprivation
 - ▶ A two-dimensional measure of social exclusion shows strong correlation with poor health and with hearing and eyesight impairments. It is lower among the employed and those with income from retirement pensions
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6.1 The social dimension of deprivation

While material conditions of households have been a key concern for policy, effective policymaking aimed at improvements in the quality of life should consider broader aspects of welfare. In this chapter we provide evidence on the degree of social deprivation among the 50+ in Europe and combine it with the material deprivation index from chapter 5 in this volume to develop an indicator of social exclusion.

The construction of the “social deprivation index” follows the methodology presented in chapter 5 for material deprivation. Our measure of social deprivation uses a number of additional variables collected in SHARE Wave 5 and combines information on items related to participation in everyday life, social activities and the quality of the neighbourhood into a single index. We find that social and material deprivation are strongly correlated, though social deprivation is more severe among older individuals, while material deprivation seems to fall as people grow older. The index of social deprivation is then used jointly with the material deprivation index to identify those who suffer both material and social deprivation. Using the two indices we construct a severe deprivation indicator which is treated as a two-dimensional proxy for social exclusion. The risk of social exclusion is highest in Estonia, Israel and Italy and is higher for individuals who are in poor health and with hearing and eyesight impairments. The risk of social exclusion is lower for high-educated individuals and for those with income from employment or retirement pensions.

6.2 Developing a Social Deprivation Index

Although the literature is compliant about one of the main features of the concept of social exclusion, namely its multidimensional character, there is little consensus on the number or scale of those dimensions. Often, however, the relevant aspects of exclusion are divided along the lines of material and social dimensions. For the purpose of this study we look at social exclusion following Jehoel-Gijsbers and Vrooman (2008), who also study this problem in the context of older people. They propose a combination of distributional and relational dimensions of social exclusion thus covering both economic-structural and socio-cultural aspects of the concept. They identify a material and non-material distributional dimension of social exclusion and divide the relational aspect of the concept into integration with regard to social relations and norms and values adapted in the society. They thus distinguish:

- material deprivation which covers deficiency in basic material needs and unequal access to rights of social citizenship in the form of public services
- social deprivation which includes social isolation and lack of social support and normative integration which stands for behaviour inconsistent with legislation and regulations, limited compliance with basic social norms and values, reduced involvement in local community or society at large.

For the purpose of the analysis of social deprivation we select 15 items from the fifth wave of SHARE, each representing a possible deprivation domain in the social dimension. Eight out of 15 items have been collected at the household level. In these cases, as in the case of the material deprivation index, the household level information is used for both partners in the household. In Table 6.1 we present details of all 15 social deprivation items included in the analysis together with source variables from the SHARE study and the proportion of deprived individuals in the sample. Table 6.1 includes also a specific weight assigned to each item in the construction of the social deprivation index based, as in the case of the material deprivation index from chapter 5, on a life satisfaction regression. There is substantial variation in the degree to which people are classified as “deprived” among the chosen items. As we can see, while almost 91.6 per cent of respondents did not participate in any political or community-related organisation in the year prior to interview, only 1.6 per cent reported that they did not feel part of their neighbourhood.

Table 6.1: Social deprivation items (SDIs)

Social deprivation item	Description	Deprived	Hedonic weight*	SHARE source
SDI: room	Less than one room per person in HH.	2.84 % (0.166)	0.044	ho032, mn013
SDI: literacy	Poor reading or writing skills.	5.44 % (0.227)	0.077	cf001, cf002
SDI: IT skills	Poor computer skills or never used a computer.	45.56 % (0.498)	0.041	it003
SDI: feeling part	Not feeling part of the local area.	1.59 % (0.125)	0.104	hh022
SDI: vandalism	Vandalism in the local area.	4.43 % (0.206)	0.035	hh023
SDI: clean area	Local area not clean.	2.26 % (0.149)	0.053	hh024
SDI: help in area	No helpful people in local area.	2.93 % (0.169)	0.090	hh025
SDI: bank access	Difficult access to bank.	5.68 % (0.231)	0.005	hh027
SDI: shop access	Difficult access to grocery shop.	4.16 % (0.200)	0.041	hh028
SDI: pharmacy access	Difficult access to pharmacy.	4.82 % (0.214)	0.017	hh030
SDI: doctor	Waiting too long to see a doctor.	6.45 % (0.246)	0.088	hc115
SDI: course	Not attending any course in the past 12 months.	64.03 % (0.480)	0.055	ac035
SDI: organisation	Not taking part in any organisation in the past 12 months.	91.60 % (0.277)	0.037	ac035
SDI: trust	People cannot be trusted.	21.14 % (0.408)	0.076	ex026
SDI: isolation	Feeling left out of things.	20.97 % (0.407)	0.237	ac016

Notes: * - Hedonic weights constructed on the basis of a regression of the chosen items on the reported values of life satisfaction (see chapter 5 in this volume). Number of observations varies from 59,089 in case of 'SDI: help in area' to 64,966 in case of 'SDI: room'.

Source: Authors' calculations using SHARE Wave 5 release 0 data, weighted with individual weights

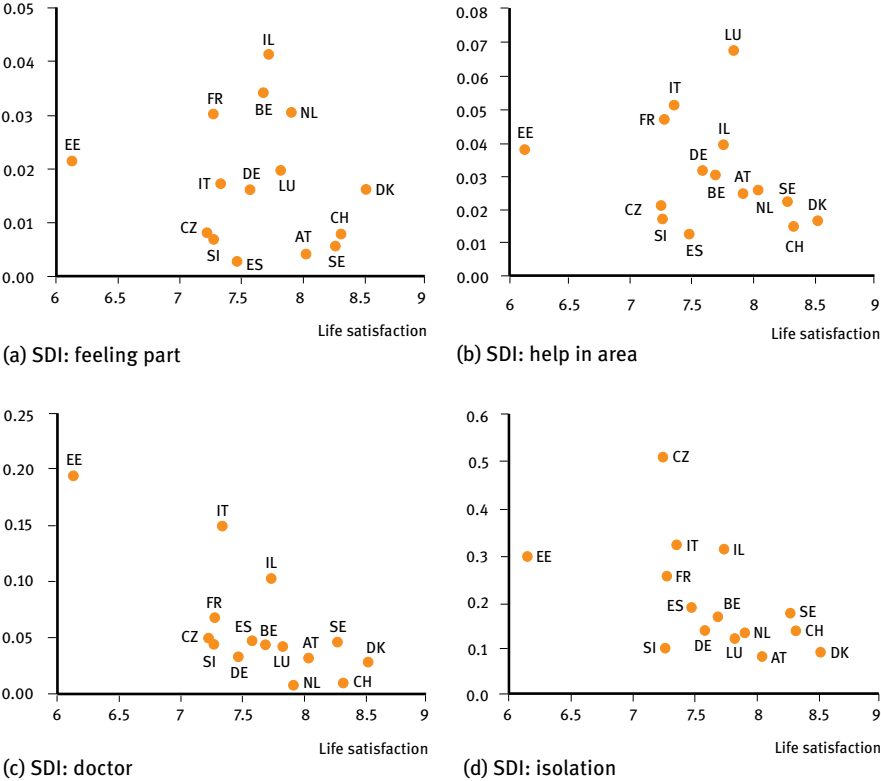


Figure 6.1: Selected social deprivation items (SDI) and life satisfaction across countries
Notes: Number of observations: (a) 57,722; (b) 56,830; (c) 61,897; (d) 61,735.
Source: Authors' calculations using SHARE Wave 5 release 0 data, weighted with individual weights

In the process of selecting the items to be used in the development of our measure of social deprivation we first examined cross correlation between the items to verify that the selected variables reflect a common underlying concept. For this purpose we used the polychoric correlation method (Kolenikov & Angeles 2009), which allows measuring the correlation between two categorical variables treated as outcomes of correlated latent variables. The cross correlation coefficients were either positive or insignificantly different from zero, which supports the choice of our set of items for inclusion in the index.

In order to combine different social deprivation items into a single index (Chakravarty & D'Ambrosio 2006) the weight of each of them has been determined in inverse relation to its correlation with life satisfaction. This method,

based on the so called hedonic weights, is introduced and described in more detail in chapters 4 and 5 in this volume (see also: Haisken-DeNew & Sinning 2010, Cavapozzi et al. 2013). The most important elements of the index, i.e. those with highest weights are (see Table 6.1): feeling left out of things (weight = 0.24), not feeling part of the neighbourhood (weight = 0.10), having no helpful people in the local area (weight = 0.09) and waiting too long to see a doctor (weight = 0.09). In Figure 6.1 we present the correlation of these four items at country level with country-specific average values of life satisfaction. The correlation between life satisfaction and all items included in the index is negative, but in some cases – such as in the case of, for example, not feeling part of the local area – it appears relatively weak. As far as country variation is concerned, Estonia's example stands out with the lowest mean life satisfaction, yet with levels of social deprivation, as reflected in the selected items, at relatively low or average values. In particular the proportion of respondents with poor reading and writing skills in Estonia is among the lowest.

Interestingly, the pattern of deprivation for the selected items varies across countries. For example, while in Spain the percentage of respondents reporting illiteracy is highest at 16.0 per cent, only a very low proportion of respondents are unsatisfied with their local area (1.2% declare that people in their neighbourhood are not helpful and 0.3% do not feel part of their local area). On the other hand, a high proportion of respondents in the Czech Republic feel “left out of things” (50.7%) and relatively few are deprived of other items. Such differences reflect various historical, cultural and institutional aspects which determine the quality of life of the 50+ in Europe and stress the importance of using a comprehensive set of dimensions in the process of creating a meaningful index for the purpose of international comparisons. When taking into consideration most of the considered items, the two countries that stand out negatively with respect to social deprivation in comparison to other 50+ populations are Italy and Israel.

6.3 Social deprivation by country and age group

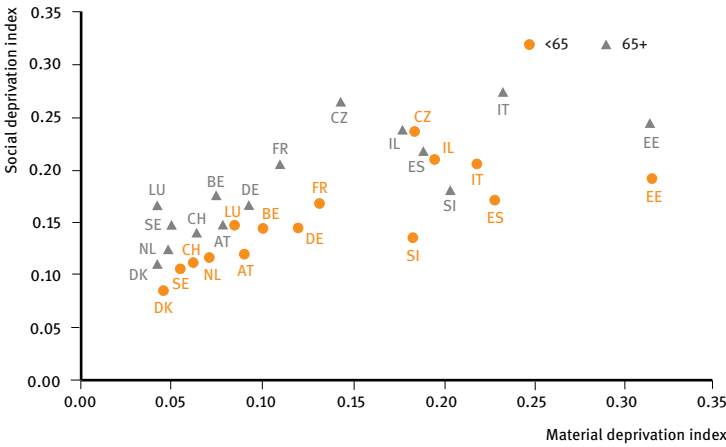


Figure 6.2: Levels of social and material deprivation indices by country for population aged 50–64 and over 64 years

Notes: Values of material deprivation index computed on household level are taken for each individual in the household; No. of observations: Material deprivation index: 56,792; Social deprivation index: 56,635

Source: Authors' calculations using SHARE Wave 5 release 0 data, weighted with individual weights

Figure 6.2 shows a strong positive correlation between the measure of social deprivation and material deprivation developed in chapter 5 and some important variation by age group. Countries with relatively low levels of material deprivation often also have low levels of social deprivation (e.g. Austria, Denmark, Netherlands, Sweden and Switzerland) and vice versa. In general, levels of deprivation in the two dimensions are much higher in Southern and Eastern Europe and Israel. In terms of material distress the highest level is observed for Estonia, while social deprivation is most severe in the Czech Republic. At the same time, there is a number of cases where the level of material deprivation differs substantially for a given level of social deprivation. This is the case for example when we look at Italy and Estonia, or Spain and France. On the other hand, while the average level of material deprivation in Israel and Slovenia is similar, the level of social deprivation in these countries differs significantly.

Looking at the variation by age group and considering those aged 50–64 and the 65+, in the case of all countries the level of social deprivation is higher for the older group while, with three exceptions of Italy, Slovenia and Switzerland, material deprivation is lower among older people. The problem of social deprivation

vation thus appears to be growing with age, which may reflect, on the one hand, increased isolation of older individuals and, on the other hand, greater importance assigned by them to their situation in the social domain.

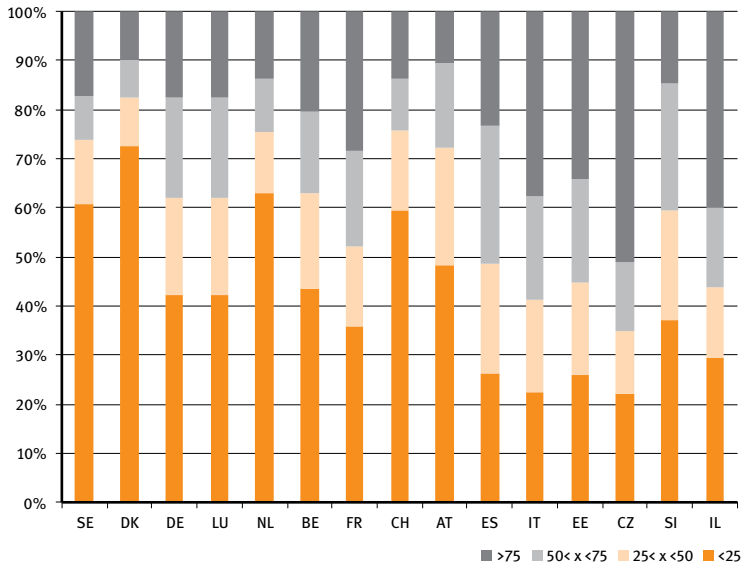


Figure 6.3: Distribution of social deprivation index by country

Notes: No. of observations: 56,635

Source: Authors' calculations using SHARE Wave 5 release 0 data, weighted with individual weights

The indicator of social deprivation is unequally distributed within specific countries. Figure 6.3 shows the percentage of individuals for each country placed in a specific quartile of the total social deprivation distribution. In the case of Western Europe and the Nordic countries the majority of the 50+ population is only mildly deprived. In Austria, Denmark, Netherlands, Sweden and Switzerland 50 to 70 per cent of individuals are in the lowest quartile of the total social deprivation index. On the other hand, in the Czech Republic, Estonia, Italy and Israel between 34 and 51 per cent of individuals are in the highest quartile of the overall social deprivation index distribution. In the Czech Republic every second person is severely socially deprived, in Italy this problem concerns almost 40 per cent of the individuals in the SHARE sample.

6.4 At risk of social exclusion indicator

Because deprivation indices cannot be interpreted in a cardinal fashion, in order to combine the material and social measures of deprivation into a single two-dimensional indicator we refer to specific thresholds in the two distributions to identify those with high levels of deprivation in each dimension. The thresholds are defined with respect to the 75th percentile of the total distribution of each deprivation index (see e.g. Jehoel-Gijsbers & Vrooman 2008). Individuals with deprivation measures placing them above the 75th percentile of distribution in both dimensions are classified as being “severely deprived” and we use this measure as an indicator of risk of social exclusion. While the 75th percentile threshold is arbitrary, on the one hand, it is high enough to capture the most deprived individuals, and on the other, low enough to allow for analysis of the potential cross-country variation. Introducing a universal rather than a country-specific threshold provides us with a common reference and thus ability to compare the levels of risk of social exclusion between the SHARE countries.

Figure 6.4 presents the percentage of households identified as at risk of social exclusion according to our two-dimensional measure. The highest proportion of population classified as being at risk of social exclusion is in Estonia (27.1%), Israel (25.5%) and Italy (23.1%), closely followed by the Czech Republic (17.6%) and Spain (13.0%). In Denmark, Sweden and Switzerland this proportion does not exceed 3.6 per cent.

To investigate the factors behind the probability of being at risk of social exclusion we run a logistic regression with the binary social exclusion indicator regressed on a number of characteristics. These include a quadratic function of age, gender, household size, indicator for living in rural area, partnership status, declared employment status, self-reported health, hearing and eyesight impairments, education and country dummies.

Regression coefficients and marginal effects estimated for the age of 65 years are reported in Table 6.2 and show that the risk of social exclusion marginally decreases with age and is slightly lower among those living in rural areas. Having a partner in the household decreases the probability of being socially excluded by 6.3 percentage points (pp). As compared to other employment states, retirement and employment substantially reduce the probability of social exclusion, respectively by 3.8pp and 7.6pp. Probability of social exclusion decreases with higher education (by 3.7pp). On the other hand, poor health and hearing and eyesight impairments substantially increase the risk of social exclusion, respectively by 7.3pp and 4.0pp. The cross-country comparison confirms the variation reported in Figure 6.1, while a more detailed analysis (not reported here) suggests significant within-country variation in social exclusion in such countries like Israel (with

substantially higher levels of exclusion among non-Hebrew speakers). The geographic pattern of social exclusion and the initial results on differences along the lines of ethnic division suggests an important dimension for analysis of social exclusion for further research.

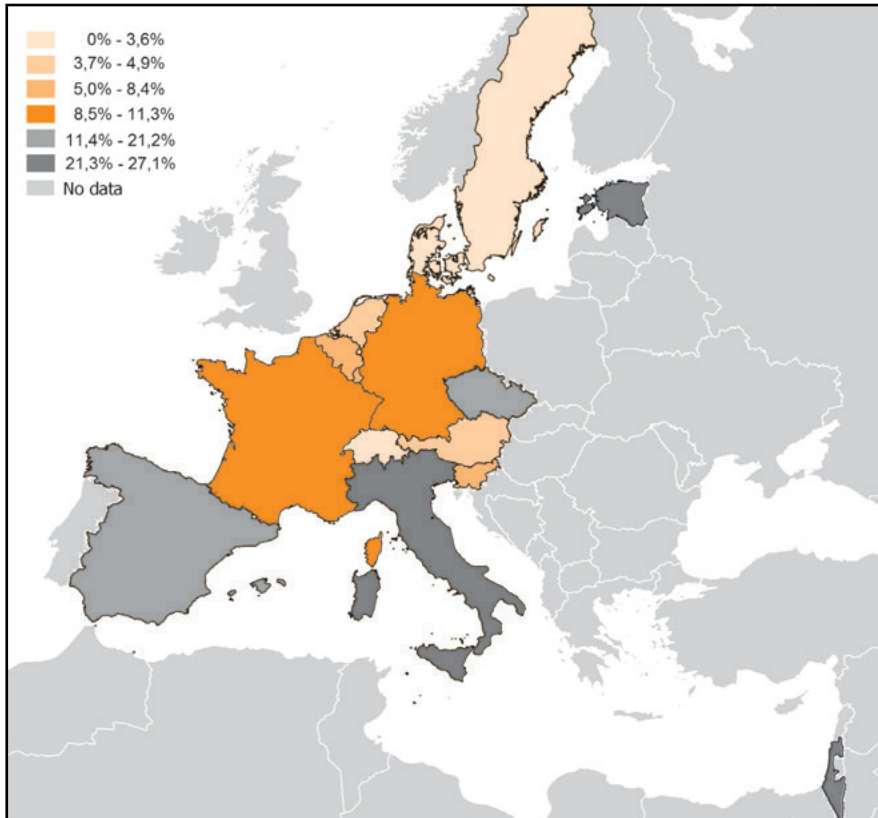


Figure 6.4: Proportion of individuals at risk of social exclusion by country

Notes: Values of material deprivation index computed on household level are taken for each individual in the household; No. of observations: 54,873

Source: Authors' calculations using SHARE Wave 5 release 0 data, weighted with individual weights

Table 6.2: Logistic regression results: coefficients and marginal effects calculated for age 65

	Coefficients	Standard error	Marginal effects	Standard error
Age	-0.093***	(0.017)	-0.001***	(0.000)
Age squared	0.001***	(0.000)	–	
Female dummy	-0.042	(0.032)	-0.003	(0.002)
Household size	0.144***	(0.017)	0.009***	(0.001)
Living in rural area	-0.078**	(0.034)	-0.005**	(0.002)
Having partner in household	-0.846***	(0.037)	-0.063***	(0.003)
Retired	-0.613***	(0.043)	-0.038***	(0.003)
Employed	-1.238***	(0.050)	-0.076***	(0.003)
Poor self-reported health	1.195***	(0.038)	0.073***	(0.003)
Poor hearing or eyesight	0.649***	(0.040)	0.040***	(0.003)
Higher education	-0.609***	(0.042)	-0.037***	(0.003)
Constant	1.305**	(0.601)	–	
Country dummies	YES		YES	
Observations	53,888		53,888	

Notes: In case of dummy variables marginal effects are calculated for discrete change of dummy variable from 0 to 1; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Source: Authors' calculations using SHARE Wave 5 data, unweighted

6.5 Monitoring social exclusion to support policies for an inclusive society

In this chapter we introduced an index measuring social deprivation constructed using a battery of questions included in SHARE Wave 5 data. Selection of the items was based on previous studies which evaluated social exclusion (Chakravarty & D'Ambrosio 2006, Levitas et al. 2007, Jehoel-Gijsbers & Vrooman 2008) and on cross-correlation analysis of specific items. We adopted the 75th percentile of the distribution of the social deprivation index as a threshold indicating severe deprivation and combined this with severe material deprivation indicator derived from the material deprivation index developed in chapter 5. Individuals classified as severely deprived in both of these dimensions have been considered as being at risk of social exclusion.

We find that while our measure of social deprivation strongly correlates with material deprivation, there is no direct relationship between these two indices. The social deprivation index is generally higher for older individuals, while the opposite is true for the material deprivation measure. There are also substantial

differences in social deprivation for a number of countries with very similar levels of material deprivation. The social deprivation index provides us thus with additional, potentially valuable, information on dimensions of the quality of life of the 50+ populations, which are missed in the measures of material conditions.

The proportion of people at risk of social exclusion, as identified by the material and social dimensions, varies significantly across countries. The levels of social exclusion are lowest in Western Europe and Scandinavian countries and highest in Estonia, Israel and Italy. Our analysis suggests that, as European societies grow older, the importance of different aspects of social inclusion as determinants of people's quality of life will grow. If public policy is to respond to these developments, then it should take into account dimensions which go beyond material conditions of older people. Such issues as access to public facilities and services, social relations and infrastructure for their development may thus require more attention among policy makers. These topics should deserve more space in the academic debate on ageing and in public policy discussions.

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