

# Social Exclusion among Older People in Europe: A Cross-Country Comparison

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**Abstract:** The ageing population is one of the very few undeniable contemporary trends in the old continent. During the last decades in almost all European countries birth and mortality rates are falling in parallel producing a new demographic mix; a mix which challenge many aspects of the current economic and social policy in every country. At the same time the present and future socioeconomic reality of the older people appears to be in constant danger. Persistent financial constraints, pension and health care reforms seem to have serious impact on their lives. Social exclusion rates are growing again across Europe, especially as concerns the aged population. But is this a common trend for the elderly? Is social exclusion a universal characteristic of old age? This paper attempts to address the issue based on welfare state economics theory as well as on new data by the Survey of Health, Ageing and Retirement in Europe. The available dataset of the 5<sup>th</sup> wave combines micro data on health, socioeconomic status and social networks of households & individuals aged 50 plus. The initial findings provide a comparative analysis for 15 European countries during 2013.

**Keywords:** *Ageing population, welfare state, social exclusion, SHARE data*

## 1. INTRODUCTION

Social exclusion as a form of material deprivation is one of the most dreaded threats in later life of individuals if not before. The study of individual ageing and population ageing in Europe has been progressively focused during the years of the current economic crisis on the broad scientific and political area of inequalities trying for better understanding and more efficiency. This paper attempts to contribute some key findings in that direction calling for more thorough data-driven investigation and welfare state intervention. The availability of new and reliable data supports this attempt allowing a close examination of the different socioeconomic statuses of older people in the old continent. Data for this paper are provided by the 5<sup>th</sup> wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) which is a multidisciplinary, longitudinal, and cross-national study focused on health, socioeconomic status and social networks of individuals aged 50 plus.<sup>1</sup>

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<sup>1</sup>This paper uses data from SHARE Wave 5 release 1.0.0, as of March 31st 2015 (DOI: 10.6103/SHARE.w5.100) or SHARE Wave 4 release 1.1.1, as of March 28th 2013 (DOI: 10.6103/SHARE.w4.111) or SHARE Waves 1 and 2 release 2.6.0, as of November 29th 2013 (DOI: 10.6103/SHARE.w1.260 and 10.6103/SHARE.w2.260) or SHARELIFE release 1.0.0, as of November 24th 2010 (DOI: 10.6103/SHARE.w3.100). The SHARE data collection has been primarily funded by the European Commission through the 5th Framework Programme (project QLK6-CT-2001-00360 in the thematic programme Quality of Life), through the 6th Framework Programme (projects SHARE-I3, RII-CT-2006-062193, COMPARE, CIT5- CT-2005-028857, and SHARELIFE, CIT4-CT-2006-028812) and through the 7th Framework Programme (SHARE-PREP, N° 211909, SHARE-LEAP, N° 227822 and SHARE M4, N° 261982). Additional funding from the U.S. National Institute on Aging (U01 AG09740-13S2, P01 AG005842, P01 AG08291, P30 AG12815, R21 AG025169, Y1-AG-4553-01, IAG BSR06-11 and OGHA 04-064) and the German Ministry of Education and Research as well as

## 2. COMPOSITION OF THE DATA SET & TYPES OF DATA

The SHARE wave 5 sample of micro data include a great variety of information collected by 65.281 individuals in 44.650 households in 14 European countries plus Israel. The longitudinal and baseline respondents of the survey have been interviewed in 2013 providing particularly detailed key areas of their life as they age. One of the major innovations during wave 5 was the introduction of new social exclusion items in the research. The countries which have contributed data to the 5<sup>th</sup> research wave of SHARE constitute a balanced representation of the geographical regions in Europe as well as the current typology of welfare states throughout Europe: ranging from the North & Scandinavia (Denmark and Sweden) to the South & Mediterranean (Spain, Italy and Israel) and from Eastern Europe (Czech Republic, Slovenia and Estonia) to the West and Central Europe (Austria, France, Germany, Switzerland, Belgium, Luxembourg, and the Netherlands). The average age of the respondents is almost 67 years old and 69% of them are married and living with spouse. About 5% of the respondents never went to school but the mean value of the years spent in education is more than 11. More than half of our sample is pensioners while a third is active in the labor market.

**Table 1: SHARE wave 5 sample description**

	Age (%)		Gender (%)		Total			
	<65	>=65	Male	Female	Ind.	%	Hhs.	%
Austria	51,9	48,1	45,9	54,1	4.252	6,5	2.954	6,6
Germany	50,8	49,2	46,5	53,5	5.690	8,7	3.791	8,5
Sweden	47,5	52,5	47,8	52,2	4.531	6,9	3.193	7,2
Netherlands	53,5	46,5	47,7	52,3	4.129	6,3	2.897	6,5
Spain	50,2	49,8	46,1	53,9	6.450	9,9	4.045	9,1
Italy	46,1	53,9	45,4	54,6	4.703	7,2	2.994	6,7
France	51,7	48,3	45,4	54,6	4.445	6,8	3.138	7,0
Denmark	51,3	48,7	47,6	52,4	4.136	6,3	2.827	6,3
Switzerland	51,6	48,4	47,0	53,0	3.008	4,6	2.119	4,8
Belgium	51,7	48,3	46,5	53,5	5.614	8,6	4.009	9,0
Israel	57,9	42,1	46,2	53,8	2.332	3,6	1.534	3,4
Czech R.	52,0	48,0	45,3	54,7	5.698	8,7	3.894	8,7
Luxembourg	56,5	43,5	47,8	52,2	1.610	2,5	1.214	2,7
Slovenia	55,9	44,1	45,9	54,1	2.948	4,5	2.166	4,9
Estonia	51,1	48,9	39,6	60,4	5.735	8,8	3.875	8,7
Total	50,3	49,7	46,1	53,9	65.281	100	44.650	100

*Note: Weighted statistics and unweighted observations*

The variables that have been taken into account for our analyses derive from five different modules of the survey (demographics, consumption, physical health, mental health, activities) and generated variables as weights and imputations). Of course our research interest is mostly focused on the variables that cover aspects of affordability of specific expenses:

- Demographics: age, as of 2013 & gender – male or female
- Afford to regularly buy necessary groceries – yes, no
- Afford to go on holiday at least once a year (a week long) – yes, no
- Afford to pay an unexpected expense without borrowing money – yes, no
- To help keeping living costs down: continue wearing clothing that was worn out – yes, no

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from various national sources is gratefully acknowledged (see [www.share-project.org](http://www.share-project.org) for a full list of funding institutions)..

- To help keeping living costs down: continued wearing shoes that were worn out – yes, no
- To help keeping living costs down: put up with feeling cold – yes, no
- To help keeping living costs down: postponed visits to the dentist – yes, no
- Is household able to make ends meet – easily, fairly easily, with some or great difficulty
- Self-perceived health: answer categories – excellent, very good, good, fair, poor
- Limitation with activities: for the past six months at least, to what extent have been limited because of a health problem in activities people usually do – severely limited, limited but not severely, not limited
- Depression scale: mental health index which accumulates 16 relevant incidences
- Life satisfaction: on a scale from 0 to 10 where 0 means completely dissatisfied and 10 means completely satisfied
- Life happiness: how often, look back on life with a sense of happiness – often, sometimes, rarely, never

### 3. RESEARCH QUESTION & FINDINGS

The new module (within modules) of social exclusion extends the informational dynamic of SHARE in the area of material deprivation in 15 European countries. The consequences of the economic crisis on the welfare state as well as on the well-being of the older population have been substantial in many occasion so far and thus the need for more and better data [4]. Our analyses provide alternative informative measures allowing for direct comparisons between countries and distinctive groups. SHARE contains 20 questions in three different modules (consumption, behavioral risks, and household income) whose results address directly the issue of social exclusion. In our exercise we utilize 8 of them – all in the key area of household consumption. The selected questions took the form of categorical variables where 1 represents a negative outcome while 0 represents a positive outcome. In this way the incidence of social exclusion or material deprivation may be noted as long it is there and not hidden by logical missing values. For this primary investigation of social exclusion and material deprivation among older people we attempt to construct and analyze one particular index and then examine the application of this index in other areas of interest: on cross-country and group-country comparisons & group differentiations. The whole experiment is drawn by the inequality theorizing and measurement of quality of life in old age [5].

As a first step in table 1 we present indicative empirical evidence that cover certain aspects of affordability and especially the lack of it. For example in 2013 almost one third of the sample population could not afford to go on holiday at least once a year while one fourth could not pay an unexpected expense without borrowing money. This was most evident in Spain, Italy, Slovenia and Estonia. Putting up with cold to keep living costs down was more apparent in the South and not so much in the North, which may be unexpected in terms of climate but not so much in economic terms. The continuation of wearing clothing and shoes that was worn out in order to keep living costs down were evident in Eastern Europe (Slovenia and Estonia) more than anywhere else. In more general terms the households of the respondents were able to make ends meet with some difficulty or with great difficulty (as opposed to subjective easiness) by more than a third. Once again the Southern and Eastern European countries are the ones who face the bigger problem. Not afford to regularly buy necessary groceries & postponed visits to the dentist due to cost are the lesser issues in this line keeping the degree of inequality down on these areas but the country pattern is still in place.

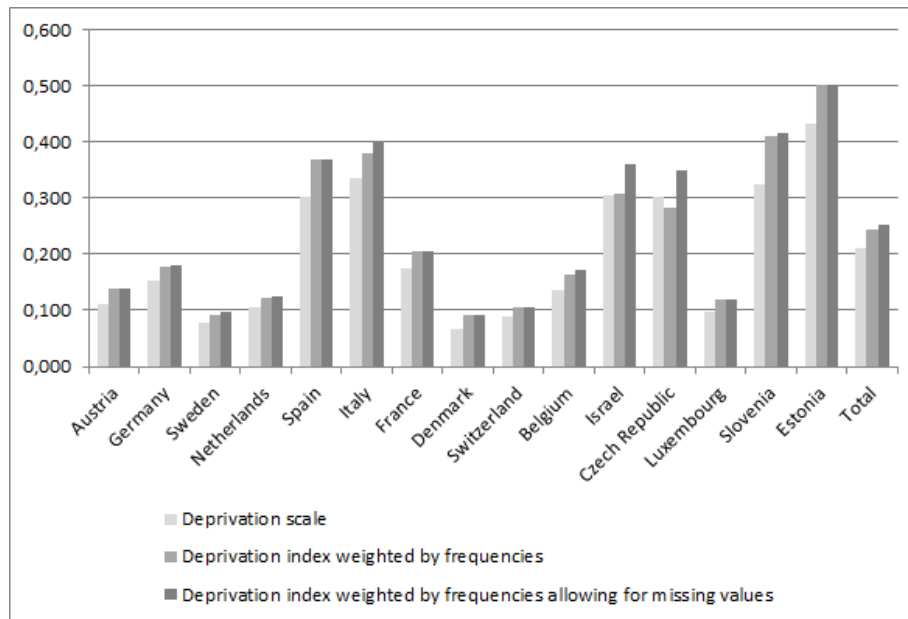
**Table 2: SHARE wave5 social exclusion component – selected variables**

	Not afford to:			To help keeping living costs down:				Hhd able to make ends
	regularly buy	go on holiday	pay un-expected	continue wearing	continue wearing	put up with	postpone visits to	

	necessary groceries	at least once a year	expense without borrowed money	clothing that was worn out	shoes that were worn out	feeling cold	the dentist	meet with difficulty
Austria	0,047	0,193	0,168	0,123	0,094	0,055	0,039	0,167
Germany	0,063	0,210	0,213	0,179	0,126	0,099	0,057	0,236
Sweden	0,049	0,123	0,115	0,047	0,033	0,051	0,040	0,130
Netherlands	0,056	0,132	0,139	0,099	0,082	0,052	0,037	0,179
Spain	0,128	0,494	0,377	0,322	0,281	0,139	0,172	0,478
Italy	0,111	0,489	0,334	0,310	0,273	0,195	0,203	0,588
France	0,067	0,243	0,185	0,235	0,132	0,153	0,084	0,291
Denmark	0,039	0,102	0,141	0,040	0,029	0,029	0,035	0,110
Switzerland	0,063	0,126	0,149	0,102	0,068	0,047	0,031	0,127
Belgium	0,062	0,206	0,189	0,095	0,075	0,076	0,046	0,248
Israel	0,178	0,389	0,364	0,148	0,130	0,117	0,173	0,505
Czech R.	0,144	0,373	0,116	0,229	0,164	0,138	0,072	0,452
Luxembourg	0,058	0,109	0,135	0,125	0,089	0,050	0,037	0,181
Slovenia	0,144	0,430	0,459	0,369	0,340	0,139	0,052	0,589
Estonia	0,350	0,694	0,487	0,475	0,408	0,085	0,344	0,598
Total	0,085	0,306	0,244	0,222	0,169	0,127	0,105	0,347

*Note: All probability weighted mean values above are significant at 1% (\*\*\*)*

Apart from the value added in the analysis by the results above, these 8 variables help us building up a more complex measure for the estimation of the social exclusion based on material deprivation. In the first instant and most simple form our index takes the form of an accumulation scale similar to a scoring mechanism. In fact the scale can be generated by summing dummy variables divided by the number of their non-missing observations. Ones or zeros can be added up providing a crude picture for those households and individuals who live in material deprivation. Next step forward was to apply some kind of weights correcting the simplistic properties of an index which accumulates facts of different attributes. It has to be noted that there is a variety of this kind of weighting available, both internal as external to the survey data and that the end product of this procedure is the rebasing results in all observations lying within the range of 0 (no deprivation) and 1 (full deprivation) [2]. Our social exclusion / material deprivation index in this respect takes the form of the sum of independent variables taken into account multiplied by their frequencies divided by the sum of each variable which has not a missing value [3]. In this experiment we use internal weighting (variable frequencies with no missing values) to construct our main index while we use probability weights for further estimations.



**Figure 1: Social exclusion-related indices**

The resulting index can serve as a direct measurement of deprivation in terms of materials and services in the SHARE household & individual sample (i.e. same score for household members). After this step by step note on the applied technique above, the composite social exclusion / material deprivation index is a compilation of the eight variables and returns the results above. The deprivation index weighted by frequencies allowing for missing values in figure 1 provides a continual variable from zero to one. The next step in our exercise is to estimate five quintiles for this index and then focus the analysis on the estimated inequality between the first (less deprived) and the fifth (most deprived) group of individuals in each country. In the concluding step we utilize the estimation technique of odds ratio when dealing with categorical data [1]. The scope is the examination of whether or not the probability of 0 or 1 (negative versus positive outcome) is the same in two distinct groups (1<sup>st</sup> & 5<sup>th</sup> quintiles of our index in this case) when being compared. For the estimations in table 4 we use logistic regressions with probability weights reporting odds ratios.

**Table 4: Bottom-top quintile of social exclusion index by country odds ratios for possible positive outcome (standard errors in second rows)**

	<b>Self-perceived health</b>	<b>Limitation with activities</b>	<b>Depression scale</b>	<b>Life satisfaction</b>	<b>Life happiness</b>
Austria	0,393	0,388	0,455	0,266	0,305
	0,0469	0,0393	0,0541	0,0270	0,0306
Germany	0,372	0,371	0,405	0,170	0,341
	0,0440	0,0304	0,0476	0,0143	0,0273
Sweden	0,460	0,432	0,405	0,405	0,603
	0,0445	0,0394	0,0490	0,0402	0,0550
Netherlands	0,507	0,458	0,409	0,255	0,384
	0,0699	0,0515	0,0599	0,0290	0,0423
Spain	0,412	0,499	0,374	0,330	0,448
	0,0855	0,0762	0,0687	0,0500	0,0688
Italy	0,396	0,279	0,365	0,252	0,250
	0,0654	0,0412	0,0757	0,0396	0,0393
France	0,325	0,424	0,472	0,272	0,592
	0,0541	0,0515	0,1010	0,0349	0,0701

Denmark	0,511	0,423	0,421	0,329	0,384
	0,0485	0,0401	0,0490	0,0371	0,0405
Switzerland	0,371	0,482	0,331	0,257	0,468
	0,0481	0,0571	0,0550	0,0329	0,0549
Belgium	0,366	0,446	0,388	0,228	0,453
	0,0452	0,0437	0,0581	0,0230	0,0440
Israel	0,354	0,313	0,549	0,251	0,397
	0,0643	0,0556	0,0984	0,0458	0,0696
Czech R.	0,405	0,476	0,537	0,404	0,555
	0,0669	0,0539	0,0737	0,0455	0,0667
Luxembourg	0,558	0,546	0,528	0,331	0,524
	0,0923	0,0756	0,1030	0,0469	0,0725
Slovenia	0,278	0,286	0,248	0,278	0,566
	0,0646	0,0450	0,0606	0,0444	0,0873
Estonia	0,120	0,193	0,252	0,141	0,482
	0,0359	0,0206	0,0422	0,0166	0,0473
Total	0,379	0,425	0,419	0,242	0,387
	0,0208	0,0192	0,0268	0,0114	0,0177

Note: All OR are significant at 1% (\*\*\*)

Further in this line Table 5 represents four European country-groups based on geography which may be seen also as one more point of departure concerning the contemporary typology of the European welfare state: Mediterranean, Continental, Eastern, and Scandinavian. The results from the previous exercise allows for further examination of this typology by taking up the implementation of odds ratios for the selected dichotomized variables.

**Table 5: Bottom-top quintile by European country group of social exclusion index odds ratios for possible positive outcome (standard errors in brackets)**

	Self-perceived health	Limitation with activities	Depression scale	Life satisfaction	Life happiness
South	0,400 [0,0476]	0,359 [0,0365]	0,382 [0,0484]	0,282 [0,0295]	0,329 [0,0347]
Central	0,368 [0,0263]	0,415 [0,0232]	0,413 [0,0348]	0,213 [0,0121]	0,422 [0,0232]
East	0,360 [0,0510]	0,419 [0,0385]	0,458 [0,0549]	0,351 [0,0323]	0,585 [0,0540]
North	0,473 [0,0332]	0,427 [0,0291]	0,407 [0,0350]	0,377 [0,0291]	0,530 [0,0364]
Total	0,379 [0,0208]	0,425 [0,0192]	0,419 [0,0268]	0,242 [0,0114]	0,387 [0,0177]

Note: All OR are significant at 1% (\*\*\*)

#### 4. CONCLUSION

In this paper we visited various dimensions of social exclusion and material deprivation as well as certain measurements of cross-country and between-groups' inequality. Particularly as concerns cost affordability of necessary materials and services. The construction of an index able to give at first glance a complex picture of deprivation and the utilization of a stratification variable based on this index took the most of our analysis. At this point we could summarize a few concluding remarks:

- At first a note on method: despite the obvious differences the whole set of deprivation indices represents the same pattern. Furthermore the household-based variables retain the informational properties under their transformation into individual ones in this case.
- The main deprivation index reveals that material deprivation is a serious problem for the ageing population of Europe mostly in the East and the South. At the same time the North and half the countries of Central Europe have the lower score among these results following the pattern described by the variables which generated the composite

index. Country by country comparisons reveals also that the mean value for all countries separates clearly those above and below the estimation.

- The focus on bottom and top quintiles of the respected index serves well as a direct measurement of differentiation and inequality. All odds ratios are statistically significant and well below the central value of one. It is apparent in every case examined that the less deprived quintile is in better position than the most deprived. In subjective physical & mental health as well as in general life circumstances the first group has less and less probabilities to achieve a positive outcome as compared to probabilities of the second group. The distance appears to be quite defined and defining.

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