



MAX-PLANCK-INSTITUT FÜR SOZIALRECHT UND SOZIALPOLITIK
MAX PLANCK INSTITUTE FOR SOCIAL LAW AND SOCIAL POLICY

mea *Munich Center for the Economics of Aging*

Retirement Income Adequacy of Traditionally Employed and Self-Employed Workers: Analyses with SHARE Data

Yuri Pettinicchi, Axel Börsch-Supan

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Abstract:

This paper measures individual and household indicators of retirement income adequacy with a particular emphasis on the difference between formerly traditionally employed and formerly self-employed workers. We also present estimates of the prevalence of old-age poverty in European countries. We report the figures at the country level, covering most of the European countries, and differentiate by other standard socio-economic dimensions, such as gender, age and years of education.

Formerly self-employed retirees report higher degree of financial distress and have lower incomes. They generally rely more on financial assets outside the public pension systems to cope with income and health shocks during their retirement. Their empirical income distribution represents them as a highly diverse group with high degree of income inequality. While some are rich in retirement, formerly self-employed are more often at risk of poverty than their formerly traditionally employed counterparts.

Zusammenfassung:

Die vorliegende Studie untersucht, welche personen- und haushaltsbezogenen Indikatoren ein angemessenes Renteneinkommen bestimmen. Im Speziellen untersuchen wir, welche Unterschiede zwischen vormalig sozialversicherungspflichtig beschäftigten Arbeitnehmern und ehemaligen Selbstständigen bestehen. Des Weiteren messen wir die Verbreitung von Altersarmut in den europäischen Ländern. Wir stellen unsere Ergebnisse für jedes Land einzeln und für verschiedene sozioökonomische Merkmale (Geschlecht, Alter, Bildungsstand) dar.

Ehemals Selbstständige berichten häufiger über finanzielle Notlagen und haben im Vergleich zu vormalig Beschäftigten geringere Einkommen. Erstere sind generell mehr auf Vermögenswerte außerhalb des öffentlichen Rentensystems angewiesen, um finanzielle Einbußen oder Gesundheitsschocks während des Ruhestands bewältigen zu können. Die Einkommensverteilung stellt die Gruppe der vormalig Selbstständigen als äußerst heterogene Gruppe mit großer Einkommensungleichheit dar. Während im Ruhestand manche Personen vergleichsweise wohlhabend sind, sind die ehemals selbstständig Beschäftigten im Vergleich zu den versicherungspflichtig beschäftigten Arbeitnehmern einem größeren Altersarmuts-Risiko ausgesetzt.

Keywords:

Retirement Income, Poverty measures, Self-employment, Working histories

JEL Classification:

I32, J23, H55

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Yuri Pettinicchi^a
Axel Börsch-Supan^a

^a Munich Center for the Economics of Aging (MEA) at the
Max-Planck-Institute for Social Law and Social Policy (MPISOC)

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1. Introduction

The retirement income adequacy of the self-employed is of great concern for policy makers (EU Pension Adequacy Report 2018). Many self-employed workers deal with more precarious working conditions than their traditionally employed counterparts, lacking the safety net provided by job-related agreements between workers and employers. Over their working life, many entrepreneurs earn less and bear more risk than employees (Hamilton 2000, Moskowitz & Vissing-Jørgensen 2002). In many countries, they have also reduced access to public pension rights and often need to manage on an individual basis their risky financial decisions, e.g. pension plan participation and contributions (Möhring 2014).

This paper measures individual and household indicators of retirement income adequacy with a particular emphasis on the difference between formerly traditionally employed and formerly self-employed workers. It uses the life histories collected in Wave 7 of the Survey of Health, Ageing and Retirement in Europe (SHARE) to compare in detail the economic situation at old age of formerly self-employed and formerly traditionally employed workers. We report the figures at the country level, covering most of the European countries, and differentiate by standard socio-economic dimensions, such as gender, age and years of education.

Our main results are: Formerly self-employed retirees report higher degrees of financial distress and have lower incomes. They generally rely more on financial assets outside the public pension systems to cope with income and health shocks during their retirement. Their empirical income distribution represents them as a highly diverse group with high degree of income inequality. While some are rich in retirement, formerly self-employed are more often at risk of poverty than their formerly traditionally employed counterparts.

The paper is organized in nine sections. Section 2 describes the data used and provides insights on sample selection. Section 3 reports financial distress as a subjective measure of the inability to make ends meet, while Section 4 provides objective measures such as household income statistics and reports the degrees of inequality in income distribution. We also compute “At-Risk-Of-Poverty” rates and poverty gap measures in Section 5. Section 6 reports the entitlement to future pension and the current pension insurance coverage. For the latter, we also report statistics about the amount of pension benefits and their distributions (Section 7). Section 8 reports the private source of pension income computed as the ratio between financial assets and income. We also investigate inequality in the distribution. Section 9 concludes with an overview of our poverty measures for the SHARE sample.

2. Data and sample selection

The Survey of Health, Ageing and Retirement in Europe (SHARE) provides individual data collected in a harmonized way for the 26 continental EU countries (i.e. all EU countries except Ireland and the United Kingdom), as well as Switzerland and Israel. The data used are from SHARE Wave 7 which included the following countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and Switzerland.

We use Release 7.0.0 of the SHARE data. It provides information about more than 140,000 individuals aged 50 or older (around 380,000 interviews). SHARE performs cleaning procedures and enriches the collected data with additionally generated variables. For an overview of the released data, see the Release 7.0.0. Guidelines which are provided on the SHARE website. All variables reported in the survey interview -- including the amounts of all assets and liabilities in national currency -- are provided by the respondents. The fieldwork was done in 2017 and SHARE collected information about these amounts regarding the calendar year 2016.

Amounts of income, consumption and wealth that a household could not or did not want to answer have been imputed, i.e., assigned the most likely value given the household's characteristics. For SHARE, a multiple imputation technique has been chosen, whereby a distribution of possible values is estimated. This technique allows the uncertainty in the imputation to be reflected. For details about the methodological approach of the imputations, see the respective technical working paper (De Luca *et al.* 2015).

In this paper, the focus is on retirement income adequacy and monetary poverty of formerly self-employed versus formerly traditionally employed workers. Formerly self-employed and formerly non-self-employed are identified using information about their working life, i.e. how many years they spent working as self-employed.

The comparison between respondents who were formerly self-employed versus those who were formerly traditionally employed is possible due to the availability of retrospective information of the respondents. As part of Wave 7, SHARE asks about each working spell longer than 6 months of the respondents. A similar set of retrospective questions was asked in Wave 3 (named "SHARELIFE"). Whenever necessary due to the design of the questionnaire, we make use of respondents' information from previous waves, i.e. information about working histories of the respondents from Wave 3 or job details of panel respondents who did not change their job since the last interview. This procedure works

well in most countries; however, some Eastern European countries have small sample sizes for the formerly self-employed respondents, mostly due to the different economic system in place in the first part of the working life of the respondents. Since small samples could lead to biased estimates, we will not report any statistic, wherever the sample size is lower than 30 observations.

We select our sample following these criteria.

- We distinguish between respondents who are currently retired from their own work and those who are still in the labor force (currently working or looking for a job). The former group is labelled “Retirees” while the latter one is labelled “Workers”. We do not keep the respondents who are currently permanently disabled, homeworkers or in other employment situations. We drop 9,037 observations (in 8,641 households).
- We keep only the respondents older than 50 years. We drop another 586 observations (in 586 households).

Our final sample accounts for 62,033 observations, that is 86,57 % of the original dataset of SHARE Wave 7.

We then identify respondents who were formerly self-employed by applying the following criteria:

- if the respondent has worked more than 10 years
- if the respondent has information about job spell for at least 80% of his/her working life
- if the respondent has worked more years as self-employed than traditionally employed
- whenever working history information is not available, if the respondent was self-employed in his/her main job,
- whenever working history and main job information are not available, if the respondent was self-employed in their last job that lasted for more than 20 years.

If it is not possible to unambiguously identify a retiree as formerly self-employed or formerly traditionally employed, we attach the label “Do not know” (DK) to the respondent and report statistics about them in a separate column of the tables.

All tables in this paper have the same set up in which the columns represent groups of individuals. We report our results according to six different groups. We first split the sample into “Retirees” and “Workers”, and then distinguish formerly self-employed (Self), formerly traditionally employed (Empl) and insufficient information (DK) based on their employment histories. The rows of the tables either represent the countries in SHARE Wave 7 or demographic subgroups pooled across all countries.

Table 1 displays the frequencies of the samples “Retirees” and “Workers”, and the related subsamples, from SHARE data Wave 7 by country. It accounts for the observations selected according to the criteria described above for which we have information about their household income.

Table 2 displays the frequencies of the samples “Retirees” and “Workers” from SHARE data Wave 7 by gender, age and education. Gender distinguishes between male and female. Age classifies respondents in eight categories: from 50 to 54, from 55 to 59, from 60 to 64, from 65 to 69, from 70 to 74, from 75 to 79, from 80 to 84 and more than 85. Education is measured in years of education, starting from elementary school. It groups respondents in four categories: from 0 to 4, from 5 to 9, from 10 to 14, more than 15 years of education.

Table 1 and Table 2 also display the item-non-response rate of household income, the variable we use to compute poverty measures. We consider missing information when the interviewer fails to collect it, even after the unfolding brackets procedure (Heeringa and Suzman 1995). The item-non-response rate is 9% overall and ranges from 7% for the formerly traditionally employed retirees to 16% for the formerly self-employed workers. That order of magnitude and the non-random nature of the non-response behavior could affect our estimates (Groves 2006). In order to mitigate it, we compute the figures of this paper making use of the multiple imputations dataset provided by SHARE, see De Luca et al. 2015. We account for the variability due to the imputation procedures in our analysis.

Table 1: Sample size – Countries

This table displays the number of observations available by country. Cases with less than 30 observations are displayed in red. The frequency of missing values for household income variable is in brackets. Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years. The row labelled 'Total' reports all the observations available in the SHARE sample.

Data source: SHARE Wave 7 Release 7.0.0

| [#obs / (0-1)] Country | Retirees | | | | Workers | | | |
|---------------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Austria | 2377 (0.06) | 296 (0.05) | 1923 (0.06) | 158 (0.09) | 414 (0.05) | 55 (0.05) | 350 (0.05) | 9 (0.33) |
| Belgium | 2820 (0.07) | 258 (0.13) | 2278 (0.06) | 284 (0.11) | 1164 (0.07) | 107 (0.16) | 1011 (0.06) | 46 (0.09) |
| Bulgaria | 1225 (0.03) | 17 (0.06) | 1174 (0.03) | 34 (0.06) | 603 (0.05) | 31 (0.13) | 533 (0.05) | 39 (0.00) |
| Croatia | 1455 (0.03) | 74 (0.03) | 1250 (0.02) | 131 (0.06) | 553 (0.09) | 19 (0.21) | 483 (0.09) | 51 (0.08) |
| Cyprus | 776 (0.14) | 102 (0.06) | 468 (0.14) | 206 (0.17) | 267 (0.25) | 35 (0.31) | 220 (0.22) | 12 (0.50) |
| Czech Rep. | 3361 (0.08) | 56 (0.18) | 3230 (0.08) | 75 (0.07) | 553 (0.16) | 34 (0.24) | 503 (0.15) | 16 (0.38) |
| Denmark | 1712 (0.10) | 138 (0.11) | 1484 (0.10) | 90 (0.13) | 1274 (0.07) | 89 (0.15) | 1145 (0.06) | 40 (0.15) |
| Estonia | 3018 (0.04) | 29 (0.07) | 2899 (0.03) | 90 (0.17) | 1575 (0.06) | 62 (0.05) | 1474 (0.06) | 39 (0.08) |
| Finland | 1190 (0.08) | 115 (0.06) | 993 (0.07) | 82 (0.11) | 719 (0.06) | 55 (0.02) | 648 (0.06) | 16 (0.13) |
| France | 2285 (0.08) | 242 (0.05) | 1812 (0.08) | 231 (0.09) | 663 (0.07) | 64 (0.11) | 556 (0.06) | 43 (0.14) |
| Germany | 2293 (0.05) | 129 (0.10) | 2003 (0.05) | 161 (0.04) | 1121 (0.08) | 87 (0.18) | 1004 (0.07) | 30 (0.13) |
| Greece | 1519 (0.20) | 441 (0.21) | 897 (0.18) | 181 (0.23) | 569 (0.25) | 171 (0.25) | 330 (0.24) | 68 (0.25) |
| Hungary | 1149 (0.18) | 42 (0.14) | 1056 (0.18) | 51 (0.27) | 220 (0.28) | 18 (0.50) | 197 (0.25) | 5 (0.40) |
| Israel | 939 (0.12) | 50 (0.22) | 764 (0.10) | 125 (0.20) | 581 (0.12) | 73 (0.16) | 435 (0.10) | 73 (0.15) |
| Italy | 2380 (0.09) | 392 (0.12) | 1748 (0.08) | 240 (0.10) | 980 (0.13) | 176 (0.16) | 733 (0.12) | 71 (0.21) |
| Latvia | 985 (0.16) | 0 | 957 (0.15) | 28 (0.32) | 570 (0.27) | 6 (0.17) | 552 (0.27) | 12 (0.33) |
| Lithuania | 1009 (0.03) | 6 (0.00) | 973 (0.02) | 30 (0.10) | 705 (0.06) | 16 (0.13) | 671 (0.05) | 18 (0.22) |
| Luxembourg | 670 (0.17) | 70 (0.17) | 555 (0.18) | 45 (0.13) | 214 (0.13) | 16 (0.13) | 189 (0.13) | 9 (0.22) |
| Malta | 495 (0.07) | 44 (0.09) | 391 (0.06) | 60 (0.13) | 243 (0.08) | 24 (0.13) | 193 (0.08) | 26 (0.04) |
| Poland | 2583 (0.06) | 396 (0.07) | 1981 (0.05) | 206 (0.09) | 1249 (0.10) | 153 (0.17) | 1034 (0.08) | 62 (0.15) |
| Portugal | 245 (0.20) | 22 (0.09) | 170 (0.16) | 53 (0.34) | 94 (0.18) | 10 (0.20) | 74 (0.19) | 10 (0.10) |
| Romania | 1367 (0.06) | 13 (0.23) | 1163 (0.06) | 191 (0.05) | 312 (0.13) | 7 (0.14) | 292 (0.12) | 13 (0.38) |
| Slovakia | 912 (0.05) | 15 (0.00) | 854 (0.05) | 43 (0.09) | 893 (0.05) | 30 (0.07) | 840 (0.05) | 23 (0.09) |
| Slovenia | 2570 (0.08) | 103 (0.04) | 2277 (0.08) | 190 (0.22) | 517 (0.15) | 29 (0.10) | 465 (0.14) | 23 (0.22) |
| Spain | 1225 (0.10) | 184 (0.12) | 844 (0.09) | 197 (0.11) | 361 (0.08) | 51 (0.16) | 283 (0.07) | 27 (0.07) |
| Sweden | 2341 (0.07) | 131 (0.12) | 2105 (0.06) | 105 (0.16) | 673 (0.07) | 53 (0.06) | 578 (0.07) | 42 (0.05) |
| Switzerland | 1373 (0.11) | 123 (0.13) | 1066 (0.10) | 184 (0.11) | 672 (0.12) | 99 (0.12) | 531 (0.11) | 42 (0.21) |
| Total | 44274 (0.08) | 3488 (0.11) | 37315 (0.07) | 3471 (0.13) | 17759 (0.10) | 1570 (0.16) | 15324 (0.09) | 865 (0.16) |

Table 2: Sample size – Gender, age and education

This table displays the number of observations available by gender, age and education (years). Cases with less than 30 observations are displayed in red. The frequency of missing values for household income variable is in brackets.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years. The row labelled 'Total' reports all the observations available in the SHARE Sample.

Data source: SHARE Wave 7 Release 7.0.0

| [#obs / (0-1)] | Retirees | | | | Workers | | | |
|------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Gender | | | | | | | | |
| Male | 20555 (0.08) | 2122 (0.11) | 17730 (0.08) | 703 (0.14) | 8423 (0.11) | 1028 (0.16) | 7067 (0.10) | 328 (0.17) |
| Female | 23719 (0.08) | 1366 (0.11) | 19585 (0.07) | 2768 (0.12) | 9336 (0.10) | 542 (0.16) | 8257 (0.09) | 537 (0.15) |
| Total | 44274 (0.08) | 3488 (0.11) | 37315 (0.07) | 3471 (0.13) | 17759 (0.10) | 1570 (0.16) | 15324 (0.09) | 865 (0.16) |
| Age | | | | | | | | |
| 50-54 | 135 (0.10) | 5 (0.40) | 114 (0.08) | 16 (0.19) | 3238 (0.09) | 214 (0.11) | 2861 (0.08) | 163 (0.20) |
| 55-59 | 957 (0.08) | 32 (0.09) | 857 (0.08) | 68 (0.09) | 7297 (0.10) | 524 (0.13) | 6503 (0.09) | 270 (0.16) |
| 60-64 | 5229 (0.08) | 273 (0.07) | 4692 (0.08) | 264 (0.09) | 5297 (0.10) | 494 (0.17) | 4523 (0.09) | 280 (0.13) |
| 65-69 | 10740 (0.08) | 757 (0.11) | 9418 (0.08) | 565 (0.11) | 1361 (0.13) | 218 (0.21) | 1060 (0.12) | 83 (0.14) |
| 70-74 | 10007 (0.08) | 772 (0.10) | 8594 (0.07) | 641 (0.13) | 358 (0.12) | 81 (0.16) | 236 (0.10) | 41 (0.12) |
| 75-79 | 7865 (0.07) | 673 (0.09) | 6520 (0.07) | 672 (0.11) | 148 (0.11) | 26 (0.23) | 114 (0.07) | 8 (0.38) |
| 80-84 | 5393 (0.09) | 534 (0.14) | 4268 (0.07) | 591 (0.13) | 37 (0.16) | 9 (0.11) | 21 (0.10) | 7 (0.43) |
| 85+ | 3937 (0.10) | 442 (0.12) | 2847 (0.09) | 648 (0.17) | 13 (0.15) | 4 (0.50) | 6 (0.00) | 3 (0.00) |
| Total | 44263 (0.08) | 3488 (0.11) | 37310 (0.07) | 3465 (0.13) | 17749 (0.10) | 1570 (0.16) | 15324 (0.09) | 855 (0.16) |
| Education | | | | | | | | |
| 0-4 | 2821 (0.10) | 312 (0.13) | 2037 (0.08) | 472 (0.17) | 634 (0.11) | 61 (0.13) | 521 (0.11) | 52 (0.15) |
| 5-9 | 12759 (0.08) | 1488 (0.10) | 9771 (0.07) | 1500 (0.12) | 2076 (0.11) | 304 (0.18) | 1578 (0.09) | 194 (0.15) |
| 10-14 | 19713 (0.08) | 1112 (0.10) | 17638 (0.07) | 963 (0.11) | 9581 (0.09) | 746 (0.13) | 8416 (0.08) | 419 (0.15) |
| 15+ | 7377 (0.09) | 411 (0.13) | 6701 (0.09) | 265 (0.15) | 5106 (0.12) | 419 (0.17) | 4529 (0.11) | 158 (0.17) |
| Total | 42670 (0.08) | 3323 (0.11) | 36147 (0.07) | 3200 (0.13) | 17397 (0.10) | 1530 (0.15) | 15044 (0.09) | 823 (0.15) |

3. Financial distress

We follow two different approaches to measure monetary poverty: self-reported financial distress and an income-based poverty measure.

Self-reported financial distress is captured by the SHARE question ‘*Thinking of your household's total monthly income, would you say that your household is able to make ends meet... 1. With great difficulty 2. With some difficulty 3. Fairly easily 4. Easily*’. This computation is based on recoded answers (1 to ‘easily’ and 4 to ‘with great difficult’). Higher values mean a greater inability to make ends meet.

Table 3 displays the average financial distress index by country. Table 4 displays the average financial distress index by gender, age, and education. We rely on multiple imputations of the missing values and we adjust our estimation of the average index and its standard deviation to account for the variability induced by the imputation process.

The survey data can be usefully exploited for describing the distribution of financial pressure and identifying which groups self-assess being vulnerable to economic and financial risk. Formerly self-employed tend to report higher inability to make ends meet with respect to the formerly traditionally employed. The cross-country variation in financial distress is substantial. Poorer countries display higher indexes than richer countries (Table 3). Retired women tend to report slightly higher financial distress than retired men and working women. Among workers, working men report higher financial distress than working women (Table 4, upper panel). Across age categories, formerly self-employed individuals report being less able to make ends meet than traditionally employed individuals. This is true for both retirees and current workers (Table 4, middle panel). With respect to years of education, retirees display a decreasing trend of financial distress; the higher education the higher the ability to make ends meet. Surprisingly, workers report a hump shape trend of financial distress with respect to education¹. Workers with less than 5 years of education report financial distress closer to that one reported by workers with more than 15 years of education (Table 4, lower panel).

A word of caveat is needed when we compare self-assessed measures across individuals because different scales and benchmarks that people use to evaluate themselves could bias the results (Angelini *et al.* 2015). Therefore, we turn to income-based measures to investigate the prevalence of poverty in Europe.

¹ A plausible explanation for lower financial distress among less educated people could be the presence of successful entrepreneurs or type of workers with less substitutable skills that have been gained during their work history.

Table 3: Financial distress: Inability to make ends meet – Countries

This table displays the inability of the households to make ends meet by country. The table shows the average index. A high score indicates lower quality of life. Min: 1, Max: 4. The standard deviation of the index is shown in brackets. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| Country | [1-4] | Retirees | | | | Workers | | | |
|----------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Austria | | 1.65 (.01) | 1.70 (.11) | 1.63 (.99) | 1.87 (1.12) | 1.65 (.98) | 1.52 (.94) | 1.67 (.98) | N - |
| Belgium | | 1.84 (.99) | 2.01 (1.07) | 1.80 (.97) | 2.06 (.98) | 1.81 (1.42) | 1.67 (1.1) | 1.79 (1.41) | 2.83 (1.55) |
| Bulgaria | | 3.13 (.86) | N - | 3.13 (.85) | 3.30 (1.01) | 2.90 (.84) | 2.90 (.53) | 2.89 (.85) | 3.19 (.96) |
| Croatia | | 2.79 (.93) | 2.92 (1.01) | 2.76 (.94) | 2.98 (.79) | 2.75 (1.) | N - | 2.71 (.98) | 3.01 (1.06) |
| Cyprus | | 2.65 (1.18) | 2.89 (.98) | 2.52 (1.23) | 2.86 (1.08) | 2.76 (1.07) | 2.93 (.88) | 2.75 (1.07) | N - |
| Czech Republic | | 2.01 (1.14) | 1.81 (.91) | 2.01 (1.15) | 2.25 (1.02) | 1.91 (1.66) | 1.95 (1.59) | 1.90 (1.66) | N - |
| Denmark | | 1.39 (.75) | 1.40 (.71) | 1.38 (.76) | 1.44 (.68) | 1.33 (.77) | 1.47 (.87) | 1.32 (.75) | 1.36 (.92) |
| Estonia | | 2.63 (.97) | N - | 2.62 (.96) | 2.92 (1.1) | 2.26 (.99) | 2.08 (.98) | 2.25 (.98) | 2.61 (1.2) |
| Finland | | 1.89 (1.39) | 2.00 (1.82) | 1.88 (1.32) | 1.92 (1.83) | 1.88 (1.24) | 2.15 (1.02) | 1.88 (1.25) | N - |
| France | | 1.89 (.93) | 1.97 (.92) | 1.86 (.91) | 2.11 (.98) | 2.03 (1.21) | 2.04 (1.01) | 2.01 (1.22) | 2.29 (1.25) |
| Germany | | 1.67 (.98) | 1.88 (1.04) | 1.65 (.96) | 1.75 (1.02) | 1.66 (.99) | 1.55 (.95) | 1.66 (.98) | 2.16 (1.23) |
| Greece | | 3.24 (.89) | 3.36 (.77) | 3.15 (.93) | 3.44 (.73) | 3.13 (.96) | 3.24 (.86) | 3.10 (.92) | 2.91 (1.38) |
| Hungary | | 2.92 (2.22) | 2.59 (.76) | 2.92 (2.29) | 3.11 (.87) | 2.64 (1.65) | N - | 2.65 (1.79) | N - |
| Israel | | 2.06 (1.35) | 2.10 (1.14) | 2.02 (1.39) | 2.31 (1.17) | 2.22 (2.39) | 2.24 (2.23) | 2.22 (2.53) | 2.27 (1.26) |
| Italy | | 2.44 (.98) | 2.58 (.94) | 2.35 (.97) | 2.81 (.91) | 2.59 (1.17) | 2.42 (1.19) | 2.59 (1.14) | 2.99 (1.3) |
| Latvia | | 3.04 (.8) | N - | 3.04 (.8) | N - | 2.74 (.86) | N - | 2.73 (.87) | N - |
| Lithuania | | 2.70 (.88) | N - | 2.70 (.88) | 2.79 (.97) | 2.44 (.89) | N - | 2.43 (.88) | N - |
| Luxembourg | | 1.56 (.82) | 1.49 (.71) | 1.57 (.83) | 1.56 (.83) | 1.73 (1.13) | N - | 1.72 (1.12) | N - |
| Malta | | 2.37 (1.) | 2.64 (.99) | 2.32 (.98) | 2.53 (1.09) | 2.18 (.91) | N - | 2.15 (.88) | N - |
| Poland | | 2.60 (1.04) | 2.77 (.99) | 2.54 (1.05) | 2.81 (.93) | 2.55 (1.08) | 2.56 (.91) | 2.51 (1.08) | 3.16 (1.03) |

| | | | | | | | | |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Portugal | 2.36 (1.62) | N - | 2.26 (1.62) | 2.43 (1.11) | 2.80 (1.58) | N - | 2.67 (1.55) | N - |
| Romania | 2.98 (1.) | N - | 2.91 (.99) | 3.36 (.88) | 2.72 (1.08) | N - | 2.71 (1.05) | N - |
| Slovakia | 2.58 (.99) | N - | 2.59 (.95) | 2.43 (1.23) | 2.09 (.95) | 1.59 (.85) | 2.09 (.94) | N - |
| Slovenia | 2.56 (1.02) | 2.46 (.85) | 2.53 (1.04) | 2.92 (.89) | 2.36 (1.15) | N - | 2.33 (1.11) | N - |
| Spain | 2.13 (1.19) | 2.26 (1.3) | 2.09 (1.15) | 2.21 (1.2) | 2.36 (1.75) | 2.28 (1.34) | 2.35 (1.78) | N - |
| Sweden | 1.62 (.94) | 1.66 (1.01) | 1.61 (.93) | 1.75 (.95) | 1.41 (.91) | 1.45 (1.06) | 1.37 (.79) | 1.93 (1.62) |
| Switzerland | 1.61 (.79) | 1.68 (.78) | 1.60 (.8) | 1.61 (.74) | 1.51 (.93) | 1.64 (1.04) | 1.49 (.9) | 1.53 (.76) |

Table 4: Financial distress: Inability to make ends meet – Gender, age, and education

This table displays the inability of the households to make ends meet by gender, age and education. The table shows the average index. A high score indicates high quality of life. Min: 1, Max: 4. The standard deviation of the index is shown in brackets. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| (1-4) Gender | Retirees | | | | Workers | | | |
|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Male | 2.11 (1.63) | 2.30 (1.53) | 2.06 (1.62) | 2.59 (1.72) | 2.17 (2.25) | 2.23 (1.91) | 2.14 (2.31) | 2.69 (1.82) |
| Female | 2.21 (1.86) | 2.39 (1.61) | 2.16 (1.88) | 2.35 (1.72) | 2.09 (2.07) | 2.23 (1.75) | 2.05 (2.06) | 2.49 (2.29) |
| Age | | | | | | | | |
| 50-54 | 2.35 (1.87) | N - | 2.35 (1.86) | N - | 2.25 (2.06) | 2.37 (1.72) | 2.20 (2.09) | 2.79 (1.63) |
| 55-59 | 2.42 (1.75) | 2.96 (.49) | 2.36 (1.77) | 2.79 (1.44) | 2.10 (2.06) | 2.25 (1.59) | 2.07 (2.1) | 2.55 (2.17) |
| 60-64 | 2.27 (2.) | 2.23 (1.37) | 2.25 (2.05) | 2.68 (1.62) | 2.12 (2.36) | 2.17 (1.7) | 2.10 (2.48) | 2.38 (1.56) |
| 65-69 | 2.13 (1.6) | 2.24 (1.54) | 2.10 (1.59) | 2.33 (1.63) | 2.07 (2.64) | 2.15 (3.57) | 2.00 (1.78) | 2.45 (1.89) |
| 70-74 | 2.11 (1.68) | 2.28 (1.45) | 2.07 (1.71) | 2.34 (1.62) | 1.79 (1.9) | 1.80 (1.45) | 1.62 (1.83) | 2.59 (1.31) |
| 75-79 | 2.12 (1.67) | 2.37 (1.59) | 2.05 (1.65) | 2.40 (1.74) | 2.02 (2.26) | N - | 1.93 (2.75) | N - |
| 80-84 | 2.17 (1.67) | 2.35 (1.42) | 2.10 (1.66) | 2.34 (1.69) | N - | N - | N - | N - |
| 85+ | 2.18 (1.81) | 2.44 (1.64) | 2.06 (1.75) | 2.35 (1.77) | N - | N - | N - | N - |
| Education | | | | | | | | |
| 0-4 | 2.51 (1.74) | 2.58 (1.26) | 2.40 (1.85) | 2.81 (1.56) | 2.05 (1.71) | 2.07 (1.43) | 2.02 (1.7) | 2.60 (2.12) |
| 5-9 | 2.43 (1.68) | 2.50 (1.44) | 2.39 (1.72) | 2.55 (1.7) | 2.63 (2.1) | 2.58 (2.38) | 2.61 (2.04) | 2.90 (2.01) |
| 10-14 | 2.07 (1.73) | 2.17 (1.47) | 2.06 (1.75) | 2.05 (1.65) | 2.19 (2.06) | 2.24 (1.58) | 2.16 (2.11) | 2.58 (1.79) |
| 15+ | 1.71 (1.49) | 1.85 (1.5) | 1.70 (1.48) | 1.75 (1.39) | 1.77 (2.09) | 1.94 (1.57) | 1.74 (2.14) | 2.11 (2.19) |

4. Equivalised Disposable Income

The income-based poverty measure is computed using equivalised disposable income, which is the total income of a household after taxes and other deductions that is available for spending or saving, divided by the equivalised number of household members. Household members are equivalised by weighting each member according to their age using the so-called modified OECD equivalence scale.

The equivalised disposable income is calculated in three steps:

1. We start from the amount reported by the household respondent. The wording of the question is as follows:

“How much was the overall income, after taxes and contributions, that your entire household had in an average month in 2016?”

The question asks about monthly household income. We make use of the imputed values where the raw data have been transformed in the annual income in euro for all countries.

2. In order to reflect differences in a household's size and composition, the total (net) household income is divided by the number of ‘equivalent adults’, using the modified equivalence OECD scale. This scale gives a weight to all members of the household, i.e. 1.0 to the first adult, 0.5 to the second and each subsequent person aged 14 and over, 0.3 to each child aged under 14. Then the scale adds these values up to compute the equivalised household size.
3. The equivalised disposable income is calculated from the total disposable income of each household divided by the equivalised household size. It is attributed equally to each member of the household.

Table 5 displays the median and the interquartile range of the equivalised disposable income by country in euro. Columns 1-4 of Table 5 display the equivalised disposable income for the retired people. Columns 5-8 of Table 5 display the equivalised disposable income for the workers.

A general inspection of columns 1 and 5 of Table 5 suggests that retirees’ disposable incomes are lower than workers’ ones, with the exceptions of individuals in Luxembourg and Portugal. Moreover, formerly self-employed have lower household income than formerly traditionally employed. The largest incomes among retirees and workers are those from Luxemburg (36,963) and Switzerland (43,177), respectively. The lowest incomes among retirees are in Bulgaria (2,086), while among workers, in Romania (3,152) (Table 5).

There is large cross-country heterogeneity in income distributions, and this is evident after visual inspection of Figures 1 and 2. Figure 1 (2) shows the empirical weighted distributions for the retirees (workers) who have been

formerly self-employed and formerly traditionally employed. Richer countries tend to display fatter right tails in the income distributions for both retirees and workers.

Figure 1 and Figure 2 also display visually the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers. The following values in euro for 2016 are used: Austria: 14217; Belgium: 13377; Bulgaria: 1891; Croatia: 3435; Cyprus: 8412; Czech-Republic: 4703; Denmark: 17199; Estonia: 5187; Finland: 14190; France: 13028; Germany: 12765; Greece: 4500; Hungary: 2861; Israel: 11915; Italy: 9748; Latvia: 3819; Lithuania: 3387; Luxemburg: 20291; Malta: 8170; Poland: 3530; Portugal: 5269; Romania: 1469; Slovakia: 4171; Slovenia: 7396; Spain: 8209; Sweden: 15098; Switzerland: 26552.

Table 6 displays the median and the interquartile range of the equivalised disposable income by gender, age, and education. The values are adjusted for the purchasing power. The base value is Germany 2016. The nominal and the ppp exchange rates are available in the public release of the data SHARE Wave 7 (variables nomx2016 and pppc2016).

When pooling the observations together and adjusting for purchasing power, we are able to investigate the income distribution across additional dimensions. Table 6 confirms the gap in household income between formerly self-employed and formerly traditionally employed. When considering years of schooling, the hump shape evidenced earlier in Table 4 is also present in Table 6 (lower panel). Individuals with 5-9 years of education report the lowest levels of disposable income. This pattern does not characterize the situation for retirees. In their case, we find a positive relationship between education and income levels.

After exploring income-based measures, the relationship between self-assessed measures of financial distress and income-based measures seems consistent. The lower the income-based measure, the higher the financial distress. As it has been shown, the patterns we have identified can be observed and derived for both measures.

The income-based measure allows us to investigate inequality in the income distributions. Table 7 displays the income quintile share ratio by country. Table 8 displays the income quintile share ratio by gender, age, and education for SHARE countries that are part of the EU. The income quintile share ratio (also called the S80/S20 ratio) is a measure of the inequality of income distribution. It is calculated as the ratio of total income received by the 20% of the population with the highest income (the top quintile) to that received by the 20% of the population with the lowest income (the bottom quintile). Columns 1-4 of Table 7 (8) display the income quintile share ratio for the retired people. Columns 5-8 of Table 7 (8) display the income quintile share ratio for the workers. We report the income quintile share ratio only for those subsamples with more than 100 observations.

We also make use of imputed values in computing the income quintile ratio, even if the bias due to imputations tends to be higher when the estimates are derived from the tails of the distribution. The trade-off is between dealing with item-non-response issues and inflating our estimates with imputed values on the tails. We choose the latter solution. Our figures are on average 6% higher than those computed without using imputed values.

Based on Table 7, there is no clear pattern between retirees and workers, nor among self-employed and employed within each subsample. What does stand out are the relatively high ratios for Cyprus and Greece. In the case of Cyprus, the high degree of inequality may be driven by former traditionally employed, supposedly foreign pensioners who decide to spend their retirement in Cyprus. For the latter country, high inequality may also be driven by the self-employed. More specifically, it could be due to the presence of a few successful entrepreneurs in the sample.

Table 8 displays the information by gender, age, and education. Even if adjusting the data for purchasing powers, the heterogeneity across countries is reflected in the magnitude of the ratios. The ratios in this table may be as large as triple the size of the ratios in Table 7. When analysing the sample by gender, the relationships resemble those made in the financial distress section (Table 8, upper panel). There is higher inequality or larger S80/S20 ratios among retired women than among retired men. The situation reverses in the case of current workers; larger S80/S20 ratios are calculated for working men than for working women. When analysing the data by age groups, there is no clear relationship between S80/S20 ratios and age (Table 8, middle panel). However, inequality seems higher for retirees than for workers within most age categories. With respect to education levels, inequality seems to reduce with the years of schooling (Table 8, lower panel). This holds in general for both samples. When comparing self-employed and traditionally employed individuals, there is a clearer relationship within the working sample; inequality is higher among the formerly self-employed.

Table 5: Equivalized disposable income – Countries

This table displays equivalized disposable income by country. The table shows median values in euro. The interquartile range is shown in brackets. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| (in euro) Country | Retirees | | | | Workers | | | |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Austria | 19200 (10101) | 18000 (10730) | 19874 (10113) | 14944 (8704) | 21866 (12704) | 20472 (8623) | 23081 (12800) | N - |
| Belgium | 19200 (8660) | 16474 (10059) | 20000 (9229) | 15547 (5846) | 23122 (11496) | 20000 (15078) | 23765 (10926) | 14013 (6574) |
| Bulgaria | 2086 (1411) | N - | 2119 (1418) | 1497 (1699) | 3681 (2767) | 3681 (3700) | 3681 (2606) | 2454 (2228) |
| Croatia | 4823 (3199) | 4019 (2667) | 4861 (2975) | 3820 (2481) | 5627 (4483) | N - | 5794 (4558) | 3344 (3222) |
| Cyprus | 9896 (12419) | 8320 (5056) | 11965 (14130) | 8400 (9588) | 14934 (14400) | 13480 (13805) | 14966 (14716) | N - |
| Czech Republic | 6382 (2160) | 6886 (2724) | 6382 (2160) | 6078 (2405) | 8476 (4257) | 8682 (2496) | 8461 (4480) | N - |
| Denmark | 24002 (13662) | 21187 (12718) | 24649 (12906) | 20866 (11883) | 38029 (19251) | 32901 (16028) | 38717 (18369) | 34092 (20495) |
| Estonia | 5200 (1910) | N - | 5200 (1863) | 4767 (1863) | 9268 (5577) | 8197 (6711) | 9551 (5458) | 6993 (4324) |
| Finland | 20526 (10685) | 16000 (8649) | 20840 (10400) | 16034 (13100) | 25618 (16206) | 24000 (16358) | 25760 (16519) | N - |
| France | 20000 (12603) | 16000 (9413) | 21408 (12779) | 15617 (9194) | 20985 (14017) | 19680 (17086) | 21809 (13232) | 14095 (8238) |
| Germany | 19043 (10049) | 16160 (11575) | 19200 (10884) | 16800 (10259) | 23641 (14704) | 24347 (18522) | 23600 (13789) | 16800 (13957) |
| Greece | 8081 (5913) | 7446 (4575) | 8800 (6010) | 7858 (5131) | 8697 (6631) | 7999 (6314) | 9349 (6881) | 8960 (7295) |
| Hungary | 4657 (2348) | 5227 (3107) | 4657 (2313) | 3837 (1822) | 5191 (3728) | N - | 5167 (3294) | N - |
| Israel | 21604 (20809) | 19701 (20497) | 22337 (20307) | 16106 (19230) | 24223 (14935) | 23003 (21788) | 24760 (15481) | 24578 (12064) |
| Italy | 13328 (8581) | 12000 (8010) | 14400 (8400) | 10805 (6736) | 15478 (11047) | 17476 (13291) | 15169 (10768) | 13527 (15852) |
| Latvia | 3473 (1693) | N - | 3478 (1675) | N - | 5265 (3561) | N - | 5224 (3581) | N - |
| Lithuania | 3797 (1934) | N - | 3816 (1909) | 2990 (2301) | 6000 (4400) | N - | 6193 (4270) | N - |
| Luxembourg | 36963 (22218) | 36000 (18915) | 38378 (22678) | 35609 (25870) | 35800 (22923) | N - | 37557 (21864) | N - |
| Malta | 7963 (4514) | 6358 (3347) | 8000 (4571) | 8702 (4742) | 10100 (8582) | N - | 10608 (9091) | N - |
| Poland | 4903 (2883) | 3759 (2297) | 5337 (2861) | 3712 (2259) | 5638 (4424) | 5017 (4133) | 5999 (4228) | 3721 (2667) |
| Portugal | 6760 (4472) | N - | 7020 (4293) | 6335 (3592) | 5726 (4335) | N - | 5860 (4958) | N - |
| Romania | 2371 (2009) | N - | 2627 (1851) | 1663 (1306) | 3152 (2693) | N - | 3152 (2671) | N - |

| | | | | | | | | |
|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Slovakia | 6240 (2156) | N - | 6240 (2082) | 5600 (2969) | 9600 (5120) | 12070 (12044) | 9600 (4938) | N - |
| Slovenia | 8529 (4788) | 8000 (5314) | 8800 (4576) | 5790 (3962) | 10800 (5844) | N - | 11051 (6044) | N - |
| Spain | 10197 (6890) | 8048 (5157) | 11119 (7706) | 9320 (5335) | 11335 (9562) | 11816 (10142) | 11250 (9275) | N - |
| Sweden | 20757 (11209) | 18765 (12499) | 20757 (11387) | 16382 (8166) | 33212 (15541) | 27316 (10349) | 33212 (14585) | 30371 (14032) |
| Switzerland | 35981 (25811) | 31663 (22986) | 36183 (25635) | 31951 (25974) | 43177 (29512) | 43321 (33657) | 43177 (29396) | 37247 (28255) |

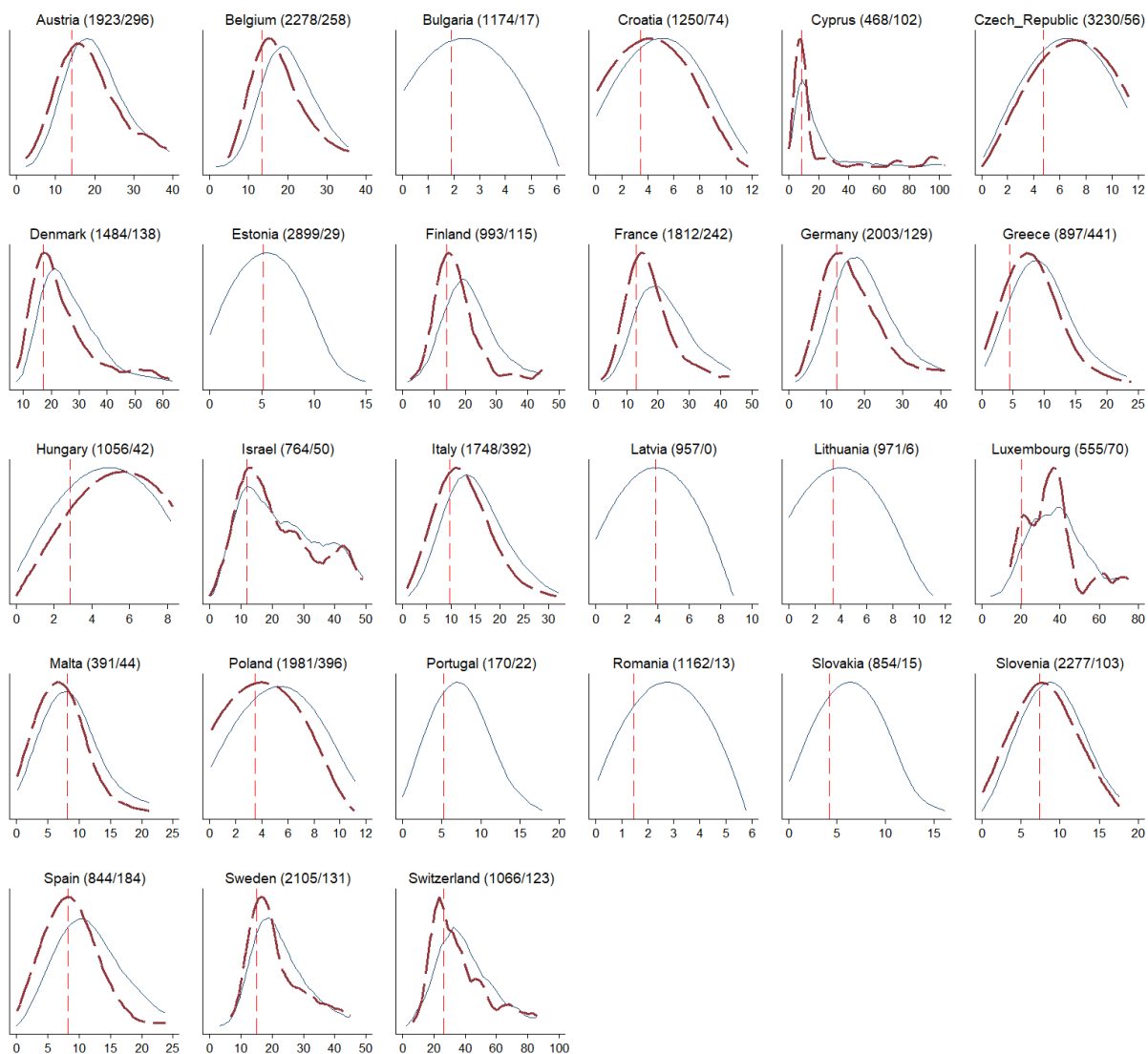


Figure 1: Equivalized disposable income (retirees) – Countries

Distribution of the equivalized disposable income in euro by country. The dark red dashed line is the distribution of the formerly self-employed retirees and the blue continuous line is the distribution of the formerly traditionally employed retirees. The vertical red line is the At-risk-of-poverty threshold, computed as the 60% of the median equivalized disposable income. On top of each graph the country and sample size for the two groups are reported (Empl / Self). The graphs show distribution up to the 95th percentile. Data source: SHARE Wave 7 Release 7.0.0

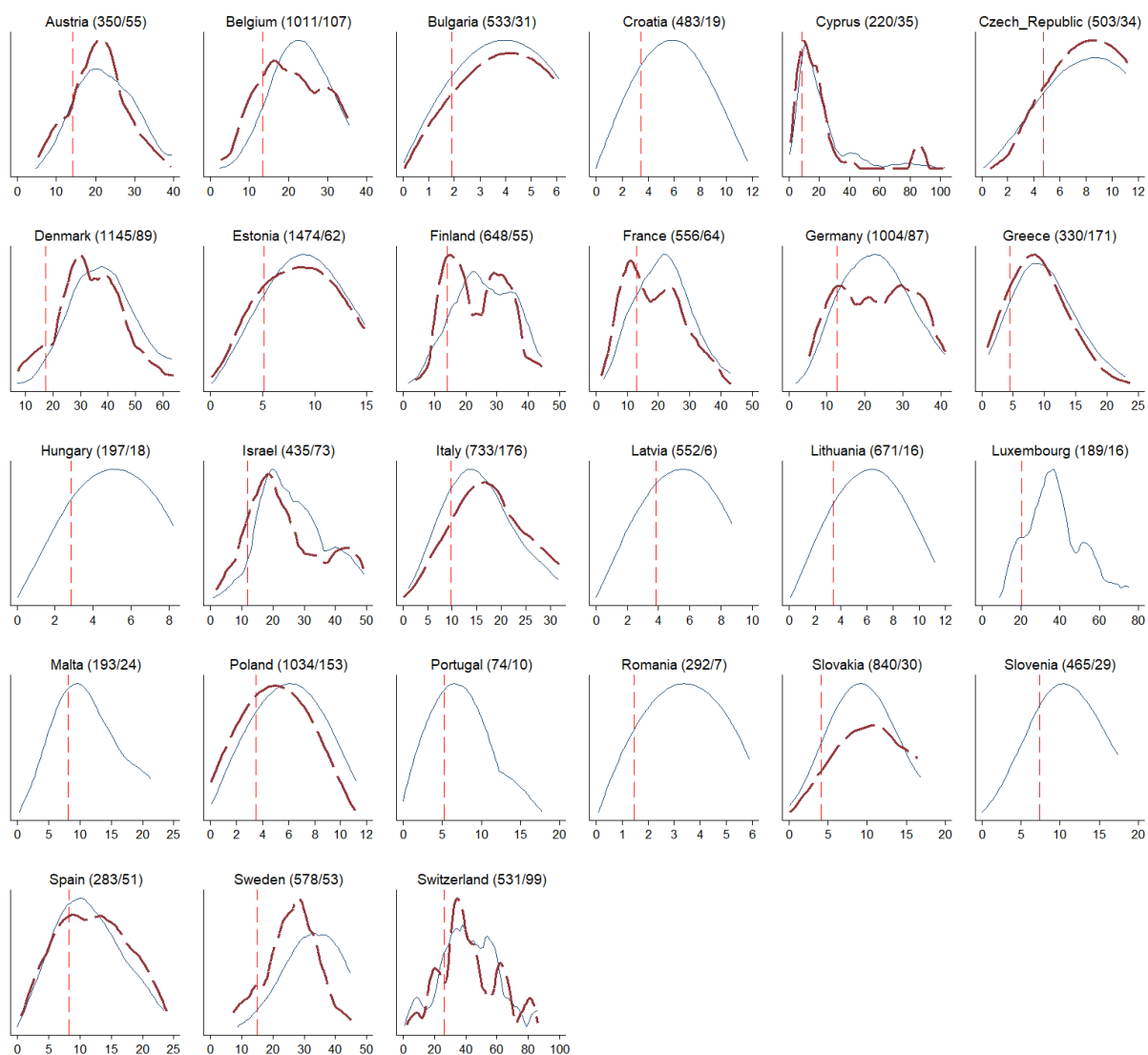


Figure 2: Equivalent disposable income (workers) – Countries

Distribution of the equivalent disposable income in euro by country. The dark red dashed line is the distribution of the workers formerly self-employed and the blue continuous line is the distribution of the worker formerly traditionally employed. The vertical red line is the At-risk-of-poverty threshold, computed as the 60% of the median equivalent disposable income. On top of each graph the country and sample size for the two groups are reported (Empl / Self). The graphs show distribution up to the 95th percentile. Data source: SHARE Wave 7 Release 7.0.0

Table 6: Equivalized disposable income – Gender, age, and education

This table displays equivalized disposable income by gender, age and education. The table shows median values in euro (ppp adjusted). The interquartile range is shown in brackets. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| (in euro) Gender | Retirees | | | | Workers | | | |
|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Male | 14649 (11444) | 12232 (10124) | 15134 (11761) | 10499 (8630) | 16944 (14949) | 15938 (15029) | 17230 (14865) | 12094 (11525) |
| Female | 13499 (10980) | 12000 (8115) | 14400 (11358) | 11452 (9702) | 18000 (13657) | 16464 (13944) | 18449 (13554) | 12927 (13063) |
| Age | | | | | | | | |
| 50-54 | 12585 (9785) | N N | 12585 (9457) | N N | 15551 (13484) | 13486 (12746) | 16194 (13451) | 9983 (7706) |
| 55-59 | 12067 (9944) | 5041 (3373) | 12703 (9410) | 9077 (6956) | 17662 (13834) | 15320 (11601) | 18028 (13862) | 14534 (15260) |
| 60-64 | 14321 (13466) | 14002 (11705) | 14606 (13436) | 9509 (11383) | 18243 (15388) | 19507 (18265) | 18436 (15149) | 13483 (11920) |
| 65-69 | 15125 (11892) | 13811 (9861) | 15459 (12257) | 12265 (10374) | 18424 (16690) | 16978 (19866) | 19254 (15556) | 13379 (10505) |
| 70-74 | 14671 (11359) | 13437 (9866) | 15148 (11806) | 11737 (9617) | 22409 (20733) | 23790 (17156) | 24585 (26757) | 12000 (9750) |
| 75-79 | 14188 (10511) | 11710 (7780) | 14945 (10660) | 11450 (9527) | 15333 (14267) | N N | 13800 (7470) | N N |
| 80-84 | 13263 (10412) | 11797 (8743) | 14255 (10428) | 11768 (9350) | 16672 (14270) | N N | N N | N N |
| 85+ | 12228 (9479) | 10314 (6688) | 13929 (10215) | 10671 (7016) | N N | N N | N N | N N |
| Education | | | | | | | | |
| 0-4 | 9468 (8300) | 8978 (6506) | 10250 (9376) | 7637 (6491) | 18514 (16512) | 18400 (21104) | 19173 (15815) | 9780 (11477) |
| 5-9 | 11525 (8166) | 10917 (7261) | 12051 (8235) | 10343 (7393) | 12129 (12271) | 12661 (12608) | 12123 (12224) | 11841 (11419) |
| 10-14 | 15222 (10689) | 13983 (9311) | 15359 (10977) | 14482 (10488) | 16257 (12587) | 15246 (13171) | 16710 (12532) | 11886 (11375) |
| 15+ | 21588 (15152) | 20035 (14557) | 21948 (15042) | 18188 (15750) | 22969 (15966) | 20319 (18141) | 23261 (15561) | 16800 (18960) |

Table 7: Income ratio S80/S20 – Countries

This table displays the ratio between the sum of average equivalized household income of the top quintile and that one of the bottom quintile of the income distribution by country. N stands for “not calculated” because less than 100 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| Country | (ratio) | Retirees | | | | Workers | | | |
|----------------|----------------|--------------------|---------------------|---------------------|-------------------|--------------------|---------------------|---------------------|-------------------|
| | | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Austria | 3.68 | 4.57 | 3.23 | 3.24 | | 2.86 | N | 2.99 | N |
| Belgium | 2.54 | 2.99 | 2.52 | 2.34 | | 2.83 | 2.85 | 2.61 | N |
| Bulgaria | 3.39 | N | 3.38 | N | | 3.54 | N | 3.11 | N |
| Croatia | 3.91 | N | 3.16 | 4.6 | | 4.76 | N | 5.22 | N |
| Cyprus | 14.46 | 12.35 | 16.55 | 14.48 | | 14 | N | 12.93 | N |
| Czech Republic | 2.27 | N | 2.26 | N | | 2.28 | N | 2.09 | N |
| Denmark | 4.14 | 4.06 | 4.31 | N | | 3.39 | N | 3.31 | N |
| Estonia | 2.72 | N | 2.64 | N | | 3.26 | N | 3.35 | N |
| Finland | 3.2 | 3.12 | 3.04 | N | | 3.75 | N | 3.39 | N |
| France | 4.18 | 3.2 | 3.95 | 4.2 | | 3.97 | N | 3.77 | N |
| Germany | 3.38 | 4.39 | 2.81 | 3.14 | | 3.68 | N | 3.56 | N |
| Greece | 6.95 | 8.16 | 5.62 | 8.62 | | 6.47 | 6.01 | 6.01 | N |
| Hungary | 2.85 | N | 2.71 | N | | 1.79 | N | 3.64 | N |
| Israel | 5.46 | N | 4.92 | 5.05 | | 3.09 | N | 2.95 | N |
| Italy | 4.9 | 5.34 | 4.18 | 5.65 | | 4.89 | 4.68 | 4.75 | N |
| Latvia | 2.85 | N | 2.81 | N | | 3.46 | N | 3.59 | N |
| Lithuania | 2.93 | N | 2.99 | N | | 4.55 | N | 3.83 | N |
| Luxembourg | 3.58 | N | 3.54 | N | | 3.51 | N | 3.46 | N |
| Malta | 3.35 | N | 3.13 | N | | 4.42 | N | 4.09 | N |
| Poland | 3.81 | 3.93 | 3.56 | 4.42 | | 4.62 | 5.39 | 4.23 | N |
| Portugal | 4.49 | N | 4.43 | N | | N | N | N | N |
| Romania | 5.15 | N | 4.95 | 4.86 | | 4.36 | N | 4.25 | N |
| Slovakia | 3.03 | N | 3.05 | N | | 4.16 | N | 3.71 | N |
| Slovenia | 2.49 | 3.21 | 2.87 | 3.56 | | 2.89 | N | 3.01 | N |
| Spain | 3.21 | 3.88 | 3.67 | 3.32 | | 4.71 | N | 4.73 | N |
| Sweden | 2.8 | 2 | 2.72 | 2.42 | | 2.03 | N | 2.05 | N |
| Switzerland | 5.37 | 4.4 | 4.6 | 6.29 | | 5.3 | N | 5.36 | N |

Table 8: Income ratio S80/S20 – Gender, age, and education

This table displays the ratio between the sum of average equivalized household income of the top quintile and that one of the bottom quintile of the income distribution by gender, age and education. We make use of PPP values. N stands for “not calculated” because less than 100 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| (ratio) Gender | Retirees | | | | Workers | | | |
|--------------------------|-----------------|-------------|-------------|-----------|----------------|-------------|-------------|-----------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Male | 8.74 | 8.03 | 9.15 | 8.30 | 9.07 | 9.18 | 8.79 | 17.17 |
| Female | 12.23 | 11.21 | 11.01 | 14.39 | 7.92 | 9.39 | 7.52 | 8.85 |
| Age | | | | | | | | |
| 50-54 | 10.75 | N | 9.49 | N | 9.44 | 7.90 | 8.93 | 9.97 |
| 55-59 | 10.91 | N | 10.86 | N | 7.93 | 7.75 | 7.46 | 12.87 |
| 60-64 | 11.20 | 9.00 | 11.62 | 19.89 | 8.77 | 10.77 | 8.54 | 8.07 |
| 65-69 | 10.35 | 7.75 | 10.55 | 11.17 | 10.23 | 9.75 | 9.58 | N |
| 70-74 | 10.75 | 10.53 | 10.38 | 14.40 | 6.64 | N | 7.62 | N |
| 75-79 | 9.62 | 9.08 | 8.86 | 10.46 | 6.19 | N | 6.35 | N |
| 80-84 | 10.56 | 9.00 | 10.09 | 13.82 | N | N | N | N |
| 85+ | 9.79 | 8.16 | 9.38 | 10.32 | N | N | N | N |
| Education | | | | | | | | |
| 0-4 | 17.16 | 10.33 | 16.74 | 17.16 | 11.24 | N | 10.44 | N |
| 5-9 | 11.23 | 10.01 | 10.94 | 14.50 | 8.39 | 10.84 | 8.49 | 14.53 |
| 10-14 | 8.15 | 6.46 | 8.60 | 6.64 | 8.23 | 7.42 | 8.08 | 10.02 |
| 15+ | 6.91 | 5.23 | 7.09 | 4.98 | 5.72 | 7.27 | 5.80 | 3.83 |

5. At-Risk-Of-Poverty (AROP) rates and Poverty gap index (PGI)

The at-risk-of-poverty rate (AROP) is the share of people with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalized disposable income after social transfers. This indicator does not measure wealth or poverty, but low income in comparison to other residents in that country, which does not necessarily imply a low standard of living.

Table 9 displays the AROP rates by country. Table 10 displays the AROP rates by gender, age and education. The rate is computed as the share of people having an equivalized disposable income that is below the at-risk-of-poverty threshold.

Columns 1-4 of Table 9 (10) display the AROP rate for the retired people. Columns 5-8 of Table 9 (10) display the AROP rate for the working people (50+). We also test the hypothesis that the AROP rates differ between the formerly self-employed and formerly traditionally employed ($H_0: AROP_{Self} = AROP_{Empl}$). For each subsample (Retirees/Workers per country, gender, age and education), we report the degree of confidence for which we can reject the null hypothesis: * 0.1, **0.05, *** 0.01.

Table 9 shows a general pattern between the AROP rates of retirees and workers. Excluding France, Hungary and Luxembourg, there is larger proportion of retirees who are at risk of poverty, when compared to current workers. Regarding differences in employment history, the rates for the self-employed are statistically and significantly larger in both subsamples (retirees and workers), with the exception of the Czech Republic². The countries with the lowest AROP rates among retirees and workers are Greece (0.09)/Luxembourg (0.09) and Denmark (0.02), respectively. The countries with the highest AROP rates among retirees and workers are Latvia (0.60) and Malta (0.31)/Spain (0.31), respectively.

When pooling observations across countries, Table 10 shows no clear pattern for AROP rates by gender or age groups (Table 10, upper and middle panel). However, the proportion of individuals at risk of poverty seems higher for retirees than for workers within most age categories. Additionally, this proportion seems to decrease with the years of schooling, as one would expect (Table 10, lower panel). Regarding differences in employment history, AROP rates for the self-employed are larger than the rates for the traditionally employed in both subsamples. The result is statistically significant mainly for the retirees.

Table 11 displays the poverty gap index (PGI) by country. The PGI is the average income shortfall of the population, as a percentage of the poverty threshold. For each respondent below the AROP threshold, we calculate his or her income shortfall (difference between the AROP threshold and actual income) as a percentage of the AROP threshold.

² A few extra cases, e.g. Greece, are present in the table, but the test results are not statistically significant.

The PGI is thus obtained after normalizing the sum of these relative gaps by the population size. This index was introduced by Sen (1976) to overcome the limited information contained in the head-count ratio and the income-gap ratio by their own. The PGI ranges between 0 and 1, and gives an idea about the cost of alleviating poverty, in the sense of helping those at risk of poverty to meet the threshold.

Columns 1-4 of Table 11 display the PGI for the retired people. Columns 5-8 of Table 11 display the PGI for the working people (50+). We also test the hypothesis that the AROP rates differ between the formerly self-employed and formerly traditionally employed ($H_0: PGI_{Self} = PGI_{Empl}$). For each subsample (Retirees/Workers per country, gender, age and education), we report the degree of confidence for which we can reject the null hypothesis: * 0.1, **0.05, *** 0.01.

Table 11 does not show a clear pattern between the PGI rates of workers and retirees. Regarding differences in employment history, the PGI rates for the self-employed are larger in both subsamples. The result is statistically significant mainly for the retirees.³ The lowest PGI rates among retirees and workers are 0.02 (Belgium, Denmark, Greece, Hungary, Luxembourg, Slovakia and Sweden) and 0.01 (Czech Republic, Slovakia and Sweden), respectively. The highest PGI rates among retirees and workers are 0.16 (Latvia) and 0.09 (Spain), respectively.

³ The one exception is the case of retirees in Hungary.

Table 9: AROP rates – Countries

This table displays At-Risk-Of-Poverty (AROP) rates by country. The table shows the rates. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column 'AROP Ret Self=Empl' displays the output of the test H_0 that AROP rate in Column (2) and Column (3) is the same value (* 0.1, **0.05, *** 0.01). Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years. Column 'AROP work Self=Empl' displays the output of the test H_0 that AROP rate in Column (6) and Column (7) is the same value (* 0.1, **0.05, *** 0.01).

Data source: SHARE Wave 7 Release 7.0.0

| Country | [0-1] | Retirees | | | | AROP Ret Self=Empl | Workers | | | | AROP work Self=Empl |
|----------------|-------|------------|-------------|-------------|-----------|-----------------------|------------|-------------|-------------|-----------|------------------------|
| | | All (1) | Self (2) | Empl (3) | DK (4) | | All (5) | Self (6) | Empl (7) | DK (8) | |
| Austria | | 0.21 | 0.28 | 0.18 | 0.42 | *** | 0.13 | 0.16 | 0.12 | N | |
| Belgium | | 0.14 | 0.26 | 0.11 | 0.26 | *** | 0.10 | 0.22 | 0.08 | 0.43 | ** |
| Bulgaria | | 0.43 | N | 0.42 | 0.61 | n.a. | 0.12 | 0.07 | 0.11 | 0.31 | |
| Croatia | | 0.28 | 0.35 | 0.25 | 0.43 | | 0.24 | N | 0.20 | 0.54 | n.a. |
| Cyprus | | 0.39 | 0.51 | 0.31 | 0.52 | *** | 0.20 | 0.31 | 0.18 | N | |
| Czech Republic | | 0.15 | 0.07 | 0.14 | 0.30 | ** | 0.07 | 0.01 | 0.08 | N | *** |
| Denmark | | 0.17 | 0.35 | 0.14 | 0.34 | *** | 0.02 | 0.06 | 0.02 | 0.06 | |
| Estonia | | 0.49 | N | 0.49 | 0.61 | n.a. | 0.12 | 0.15 | 0.12 | 0.27 | |
| Finland | | 0.17 | 0.30 | 0.14 | 0.41 | * | 0.12 | 0.12 | 0.12 | N | |
| France | | 0.17 | 0.30 | 0.13 | 0.34 | *** | 0.21 | 0.32 | 0.18 | 0.44 | * |
| Germany | | 0.19 | 0.37 | 0.16 | 0.35 | *** | 0.14 | 0.19 | 0.13 | 0.30 | |
| Greece | | 0.09 | 0.14 | 0.06 | 0.12 | *** | 0.11 | 0.10 | 0.12 | 0.07 | |
| Hungary | | 0.10 | 0.09 | 0.10 | 0.20 | | 0.18 | N | 0.21 | N | n.a. |
| Israel | | 0.24 | 0.26 | 0.23 | 0.32 | | 0.07 | 0.14 | 0.06 | 0.09 | |
| Italy | | 0.26 | 0.34 | 0.20 | 0.45 | *** | 0.24 | 0.17 | 0.25 | 0.32 | |
| Latvia | | 0.60 | N | 0.60 | N | n.a. | 0.27 | N | 0.27 | N | n.a. |
| Lithuania | | 0.39 | N | 0.38 | 0.54 | n.a. | 0.19 | N | 0.17 | N | n.a. |
| Luxembourg | | 0.09 | 0.12 | 0.08 | 0.14 | | 0.12 | N | 0.11 | N | n.a. |
| Malta | | 0.55 | 0.69 | 0.55 | 0.45 | * | 0.31 | N | 0.29 | N | n.a. |
| Poland | | 0.26 | 0.43 | 0.20 | 0.47 | *** | 0.19 | 0.28 | 0.17 | 0.42 | *** |
| Portugal | | 0.28 | N | 0.24 | 0.38 | n.a. | 0.25 | N | 0.19 | N | n.a. |
| Romania | | 0.25 | N | 0.21 | 0.40 | n.a. | 0.16 | N | 0.15 | N | n.a. |
| Slovakia | | 0.09 | N | 0.08 | 0.14 | n.a. | 0.04 | 0.05 | 0.04 | N | |
| Slovenia | | 0.36 | 0.44 | 0.33 | 0.68 | | 0.24 | N | 0.22 | N | n.a. |
| Spain | | 0.33 | 0.51 | 0.27 | 0.43 | *** | 0.31 | 0.31 | 0.29 | N | |
| Sweden | | 0.20 | 0.28 | 0.18 | 0.42 | ** | 0.04 | 0.11 | 0.03 | 0.10 | |
| Switzerland | | 0.27 | 0.38 | 0.24 | 0.38 | ** | 0.22 | 0.22 | 0.21 | 0.32 | |

Table 10: AROP rates – Gender, age, and education

This table displays At-Risk-Of-Poverty (AROP) rates by gender, age and education. The table shows the rates. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column 'AROP Ret Self=Empl' displays the output of the test H_0 that AROP rate in Column (2) and Column (3) is the same value (* 0.1, **0 .05, *** 0.01). Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years. Column 'AROP work Self=Empl' displays the output of the test H_0 that AROP rate in Column (6) and Column (7) is the same value (* 0.1, **0 .05, *** 0.01).

Data source: SHARE Wave 7 Release 7.0.0

| [0-1] Gender | Retirees | | | | | Workers | | | | |
|------------------|------------|-------------|-------------|-----------|-------------------|------------|-------------|-------------|-----------|-------------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | AROP Self=Empl | All (5) | Self (6) | Empl (7) | DK (8) | AROP Self=Empl |
| Male | 0.20 | 0.35 | 0.18 | 0.40 | *** | 0.19 | 0.20 | 0.18 | 0.32 | |
| Female | 0.23 | 0.35 | 0.19 | 0.38 | *** | 0.17 | 0.25 | 0.15 | 0.35 | ** |
| Age | | | | | | | | | | |
| 50-54 | 0.19 | N | 0.18 | N | n.a. | 0.19 | 0.26 | 0.17 | 0.47 | |
| 55-59 | 0.25 | 0.68 | 0.21 | 0.53 | *** | 0.18 | 0.21 | 0.17 | 0.30 | |
| 60-64 | 0.19 | 0.22 | 0.17 | 0.36 | | 0.16 | 0.18 | 0.15 | 0.28 | |
| 65-69 | 0.19 | 0.27 | 0.17 | 0.32 | *** | 0.18 | 0.22 | 0.16 | 0.29 | |
| 70-74 | 0.19 | 0.26 | 0.17 | 0.34 | *** | 0.18 | 0.17 | 0.13 | 0.48 | |
| 75-79 | 0.22 | 0.36 | 0.19 | 0.34 | *** | 0.14 | N | 0.05 | N | n.a. |
| 80-84 | 0.26 | 0.40 | 0.20 | 0.38 | *** | 0.18 | N | N | N | n.a. |
| 85+ | 0.33 | 0.48 | 0.24 | 0.47 | *** | N | N | N | N | n.a. |
| Education | | | | | | | | | | |
| 0-4 | 0.36 | 0.47 | 0.31 | 0.44 | *** | 0.22 | 0.18 | 0.21 | 0.47 | |
| 5-9 | 0.31 | 0.41 | 0.26 | 0.46 | *** | 0.32 | 0.31 | 0.31 | 0.37 | |
| 10-14 | 0.18 | 0.29 | 0.16 | 0.30 | *** | 0.18 | 0.19 | 0.17 | 0.37 | |
| 15+ | 0.08 | 0.14 | 0.07 | 0.14 | * | 0.10 | 0.18 | 0.08 | 0.20 | |

Table 11: Poverty gap index – Countries

This table displays the poverty gap index (PGI) by country. The table shows the indexes. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column 'PGI Ret Self=Empl' displays the output of the test H_0 that PGI in Column (2) and Column (3) is the same value (* 0.1, **0.05, *** 0.01). Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years. Column 'PGI Work Self=Empl' displays the output of the test H_0 that PGI in Column (6) and Column (7) is the same value (* 0.1, **0.05, *** 0.01). Data source: SHARE Wave 7 Release 7.0.0

| Country | [0-1] | Retirees | | | | | Workers | | | | |
|----------------|-------|------------|-------------|-------------|-----------|----------------------|------------|-------------|-------------|-----------|-----------------------|
| | | All (1) | Self (2) | Empl (3) | DK (4) | PGI Ret Self=Empl | All (5) | Self (6) | Empl (7) | DK (8) | PGI Work Self=Empl |
| Austria | | 0.04 | 0.07 | 0.03 | 0.10 | *** | 0.03 | 0.05 | 0.03 | N | |
| Belgium | | 0.02 | 0.04 | 0.02 | 0.03 | *** | 0.02 | 0.04 | 0.01 | 0.09 | ** |
| Bulgaria | | 0.11 | N | 0.10 | 0.22 | n.a. | 0.05 | 0.03 | 0.04 | 0.18 | |
| Croatia | | 0.07 | 0.11 | 0.06 | 0.11 | ** | 0.08 | N | 0.07 | 0.18 | n.a. |
| Cyprus | | 0.09 | 0.12 | 0.07 | 0.11 | ** | 0.05 | 0.08 | 0.05 | N | |
| Czech Republic | | 0.03 | 0.02 | 0.03 | 0.05 | | 0.01 | N | 0.01 | N | n.a. |
| Denmark | | 0.02 | 0.05 | 0.01 | 0.04 | *** | N | 0.02 | N | 0.01 | |
| Estonia | | 0.09 | N | 0.09 | 0.16 | n.a. | 0.03 | 0.04 | 0.03 | 0.07 | |
| Finland | | 0.04 | 0.06 | 0.03 | 0.09 | | 0.03 | 0.02 | 0.03 | N | |
| France | | 0.03 | 0.06 | 0.02 | 0.07 | *** | 0.05 | 0.09 | 0.05 | 0.11 | |
| Germany | | 0.04 | 0.08 | 0.03 | 0.07 | *** | 0.03 | 0.04 | 0.03 | 0.07 | |
| Greece | | 0.02 | 0.03 | 0.01 | 0.02 | *** | 0.02 | 0.02 | 0.02 | 0.02 | |
| Hungary | | 0.02 | 0.01 | 0.02 | 0.05 | ** | 0.04 | N | 0.05 | N | n.a. |
| Israel | | 0.06 | 0.07 | 0.06 | 0.08 | | 0.02 | 0.04 | 0.01 | 0.02 | |
| Italy | | 0.05 | 0.08 | 0.04 | 0.11 | *** | 0.06 | 0.04 | 0.06 | 0.11 | |
| Latvia | | 0.16 | N | 0.16 | N | n.a. | 0.08 | N | 0.08 | N | n.a. |
| Lithuania | | 0.09 | N | 0.09 | 0.18 | n.a. | 0.06 | N | 0.05 | N | n.a. |
| Luxembourg | | 0.02 | 0.01 | 0.02 | 0.02 | | 0.03 | N | 0.03 | N | n.a. |
| Malta | | 0.14 | 0.22 | 0.14 | 0.12 | *** | 0.08 | N | 0.07 | N | n.a. |
| Poland | | 0.06 | 0.11 | 0.05 | 0.13 | *** | 0.05 | 0.07 | 0.04 | 0.13 | * |
| Portugal | | 0.09 | N | 0.07 | 0.14 | n.a. | 0.08 | N | 0.05 | N | n.a. |
| Romania | | 0.08 | N | 0.07 | 0.14 | n.a. | 0.06 | N | 0.06 | N | n.a. |
| Slovakia | | 0.02 | N | 0.01 | 0.05 | n.a. | 0.01 | 0.01 | 0.01 | N | |
| Slovenia | | 0.09 | 0.14 | 0.07 | 0.24 | *** | 0.07 | N | 0.06 | N | n.a. |
| Spain | | 0.08 | 0.13 | 0.06 | 0.10 | *** | 0.09 | 0.09 | 0.08 | N | |
| Sweden | | 0.02 | 0.03 | 0.02 | 0.06 | | 0.01 | 0.03 | N | 0.04 | |
| Switzerland | | 0.08 | 0.09 | 0.07 | 0.12 | | 0.08 | 0.08 | 0.08 | 0.11 | |

6. Entitlement to pension and pension insurance coverage

Table 12 displays the percentage of the retirees who currently receive a public pension and the percentage of the workers who are entitled to a public pension, i.e. workers who paid pension contributions.

The following types of pension benefits are reported for the retired people:

- 1. Public old-age pension:**
 - Public old age pension
 - Public old age supplementary pension/ public old age second pension
 - Public early retirement or pre-retirement pension
 - Main public survivor pension from your spouse or partner
 - Secondary public survivor pension from your spouse or partner
 - Public war pension
- 2. Social Assistance:**
 - Social assistance
- 3. Disability pension.**
 - Main public disability benefits
 - Secondary public disability benefits
- 4. Sickness pension.**
 - Main public sickness benefits
 - Secondary public sickness benefits
 - Public long-term care insurance
- 5. Occupational pension**
 - Occupational old age pension
 - Occupational early retirement or pre-retirement pension
 - Occupational pension from your spouse or partner

The following types of pension benefits are reported for the working people:

- 1. Public old-age pension:**
 - Public old age pension
 - Public early retirement or pre-retirement pension
- 2. Disability and/or sickness pension.**
 - Public disability insurance; sickness/invalidity/incapacity pension
- 3. Occupational pension**
 - Occupational old age pension
 - Occupational early retirement or pre-retirement pension
 - Private old age pension
 - Private early retirement or pre-retirement pension

The figures in Table 12 show that the overall shares of retirees with at least one public old-age pension benefit are very high across countries, indicating an almost complete coverage, even across employment histories. A similar situation can be observed among workers; expected coverage from public old-age pension is high, and even slightly higher than the actual coverage of retirees.

Regarding the second pillar of the pension system, i.e. occupational pension benefits, there are large differences in the shares across countries, varying from 0.01 (Croatia, Czech Republic, France, Italy and Spain) to 0.48 (Switzerland) among retirees and 0.01 (Czech Republic and Poland) to 0.97 (Sweden) among workers. There does not seem to be a pattern across employment histories within workers. For retirees in countries where at least 20% of the respondents receive occupational pension benefits, the share is lower for the formerly self-employed than for the formerly traditionally employed.

Please note that the statistics available for French workers – category (i) – corresponds to expected coverage from voluntary supplementary pension benefits.

Table 12 (Expected) Coverage from public and occupational pension, social assistance, sickness/disability benefit: (workers) retirees

This table displays the entitlement to pension and the pension insurance coverage by country. N stands for “not calculated” because less than 30 observations are available. M stands for a missing value. Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

The rows labelled (a) display shares of retirees with at least one public pension benefit, (b) shares of retirees with a public old-age pension benefit, (c) shares of retirees with social assistance, (d) shares of retirees with a disability benefit, (e) shares of retirees with a sickness benefit, (f) shares of retirees with occupational benefit, (g) shares of workers who are entitled to public old-age pension benefits, (h) shares of workers who are entitled to disability or sickness insurance benefits, and (i) shares of workers who are entitled to either private or occupational pension.

Data source: SHARE Wave 7 Release 7.0.0

| | Country | [0-1] | Retirees | | | | Workers | | | | |
|-----|-----------------------|-------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|-----|
| | | | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) | |
| (a) | Austria | | 0.98 | 0.98 | 0.98 | 0.96 | | | | | |
| (b) | | | 0.90 | 0.90 | 0.89 | 0.92 | 1.00 | 1.00 | 1.00 | N | (g) |
| (c) | | | 0.01 | 0.00 | 0.01 | 0.01 | | | | | |
| (d) | | | 0.10 | 0.09 | 0.10 | 0.08 | 0.01 | 0.02 | 0.01 | N | (h) |
| (e) | | | 0.09 | 0.07 | 0.08 | 0.20 | | | | | |
| (f) | | | 0.06 | 0.01 | 0.07 | 0.00 | 0.16 | 0.12 | 0.15 | N | (i) |
| (a) | Belgium | | 0.97 | 0.97 | 0.98 | 0.91 | | | | | |
| (b) | | | 0.96 | 0.96 | 0.97 | 0.90 | 0.99 | 0.95 | 0.99 | 0.93 | (g) |
| (c) | | | 0.00 | 0.01 | 0.00 | 0.00 | | | | | |
| (d) | | | 0.03 | 0.02 | 0.03 | 0.03 | 0.02 | 0.01 | 0.02 | 0.09 | (h) |
| (e) | | | 0.01 | 0.02 | 0.01 | 0.02 | | | | | |
| (f) | | | 0.03 | 0.01 | 0.03 | 0.02 | 0.48 | 0.64 | 0.48 | 0.13 | (i) |
| (a) | Bulgaria | | 0.98 | N | 0.97 | 1.00 | | | | | |
| (b) | | | 0.93 | N | 0.93 | 0.82 | M | M | M | M | (g) |
| (c) | | | 0.02 | N | 0.02 | 0.06 | | | | | |
| (d) | | | 0.07 | N | 0.07 | 0.15 | M | M | M | M | (h) |
| (e) | | | 0.03 | N | 0.02 | 0.09 | | | | | |
| (f) | | | M | M | M | M | M | M | M | M | (i) |
| (a) | Croatia | | 0.99 | 0.99 | 0.99 | 0.99 | | | | | |
| (b) | | | 0.84 | 0.79 | 0.83 | 0.92 | M | M | M | M | (g) |
| (c) | | | 0.01 | 0.00 | 0.00 | 0.03 | | | | | |
| (d) | | | 0.16 | 0.22 | 0.16 | 0.10 | M | M | M | M | (h) |
| (e) | | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (f) | | | 0.01 | 0.00 | 0.01 | 0.01 | M | M | M | M | (i) |
| (a) | Cyprus | | 0.98 | 1.00 | 0.98 | 1.00 | | | | | |
| (b) | | | 0.96 | 1.00 | 0.95 | 0.97 | M | M | M | M | (g) |
| (c) | | | 0.01 | 0.02 | 0.01 | 0.02 | | | | | |
| (d) | | | 0.02 | 0.01 | 0.03 | 0.02 | M | M | M | M | (h) |
| (e) | | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (f) | | | M | M | M | M | M | M | M | M | (i) |
| (a) | Czech Republic | | 0.99 | 0.98 | 0.99 | 0.95 | | | | | |
| (b) | | | 0.94 | 0.95 | 0.94 | 0.88 | 1.00 | 1.00 | 1.00 | N | (g) |
| (c) | | | 0.03 | 0.01 | 0.03 | 0.07 | | | | | |
| (d) | | | 0.05 | 0.05 | 0.05 | 0.06 | 0.01 | 0.00 | 0.01 | N | (h) |
| (e) | | | 0.01 | 0.01 | 0.01 | 0.00 | | | | | |
| (f) | | | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.02 | N | (i) |
| (a) | Denmark | | 0.97 | 0.97 | 0.97 | 0.98 | | | | | |
| (b) | | | 0.94 | 0.97 | 0.94 | 0.90 | 0.99 | 1.00 | 0.99 | 0.98 | (g) |
| (c) | | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (d) | | | 0.03 | 0.01 | 0.03 | 0.07 | 0.02 | 0.03 | 0.02 | 0.10 | (h) |
| (e) | | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (f) | | | 0.42 | 0.12 | 0.47 | 0.13 | 0.87 | 0.43 | 0.91 | 0.66 | (i) |

| | | | | | | | | | | |
|-----|------------------|------|------|------|------|------|------|------|------|-----|
| (a) | Estonia | 0.99 | N | 1.00 | 0.97 | | | | | |
| (b) | | 0.97 | N | 0.97 | 0.90 | M | M | M | M | (g) |
| (c) | | 0.00 | N | 0.00 | 0.00 | | | | | |
| (d) | | 0.15 | N | 0.14 | 0.28 | M | M | M | M | (h) |
| (e) | | 0.01 | N | 0.01 | 0.03 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Finland | 0.97 | 0.99 | 0.97 | 0.94 | | | | | |
| (b) | | 0.91 | 0.98 | 0.91 | 0.83 | M | M | M | M | (g) |
| (c) | | 0.00 | 0.00 | 0.00 | 0.05 | | | | | |
| (d) | | 0.07 | 0.04 | 0.06 | 0.13 | M | M | M | M | (h) |
| (e) | | 0.00 | 0.00 | 0.01 | 0.00 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | France | 0.98 | 0.98 | 0.98 | 0.97 | | | | | |
| (b) | | 0.98 | 0.98 | 0.98 | 0.97 | 0.99 | 1.00 | 0.99 | 1.00 | (g) |
| (c) | | 0.00 | 0.00 | 0.00 | 0.01 | | | | | |
| (d) | | 0.02 | 0.01 | 0.02 | 0.01 | M | M | M | M | (h) |
| (e) | | 0.02 | 0.02 | 0.02 | 0.01 | | | | | |
| (f) | | 0.01 | 0.00 | 0.01 | 0.00 | 0.54 | 0.67 | 0.53 | 0.43 | (i) |
| (a) | Germany | 0.98 | 0.96 | 0.98 | 0.96 | | | | | |
| (b) | | 0.95 | 0.95 | 0.95 | 0.92 | 0.99 | 0.97 | 0.99 | 0.99 | (g) |
| (c) | | 0.02 | 0.06 | 0.02 | 0.05 | | | | | |
| (d) | | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 | 0.00 | 0.03 | 0.00 | (h) |
| (e) | | 0.02 | 0.02 | 0.02 | 0.06 | | | | | |
| (f) | | 0.25 | 0.12 | 0.28 | 0.07 | 0.40 | 0.16 | 0.42 | 0.21 | (i) |
| (a) | Greece | 0.92 | 0.89 | 0.94 | 0.94 | | | | | |
| (b) | | 0.90 | 0.86 | 0.91 | 0.91 | 0.96 | 0.95 | 0.97 | 0.95 | (g) |
| (c) | | 0.00 | 0.01 | 0.00 | 0.01 | | | | | |
| (d) | | 0.02 | 0.02 | 0.02 | 0.03 | 0.01 | 0.01 | 0.02 | 0.00 | (h) |
| (e) | | 0.00 | 0.00 | 0.00 | 0.01 | | | | | |
| (f) | | 0.02 | 0.07 | 0.01 | 0.00 | 0.05 | 0.05 | 0.04 | 0.06 | (i) |
| (a) | Hungary | 0.99 | 0.97 | 0.99 | 0.96 | | | | | |
| (b) | | 0.95 | 0.88 | 0.96 | 0.91 | M | M | M | M | (g) |
| (c) | | 0.00 | 0.00 | 0.00 | 0.03 | | | | | |
| (d) | | 0.05 | 0.09 | 0.04 | 0.06 | M | M | M | M | (h) |
| (e) | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Israel | 0.90 | 0.86 | 0.90 | 0.86 | | | | | |
| (b) | | 0.88 | 0.86 | 0.89 | 0.85 | 0.96 | 1.00 | 0.95 | 1.00 | (g) |
| (c) | | 0.00 | 0.00 | 0.00 | 0.02 | | | | | |
| (d) | | 0.04 | 0.02 | 0.04 | 0.04 | 0.04 | 0.01 | 0.05 | 0.00 | (h) |
| (e) | | 0.01 | 0.00 | 0.01 | 0.01 | | | | | |
| (f) | | 0.33 | 0.13 | 0.36 | 0.27 | 0.76 | 0.36 | 0.80 | 0.86 | (i) |
| (a) | Italy | 0.93 | 0.95 | 0.93 | 0.92 | | | | | |
| (b) | | 0.92 | 0.94 | 0.92 | 0.88 | 0.93 | 0.93 | 0.93 | 0.96 | (g) |
| (c) | | 0.02 | 0.03 | 0.01 | 0.05 | | | | | |
| (d) | | 0.03 | 0.04 | 0.03 | 0.06 | 0.02 | 0.01 | 0.02 | 0.02 | (h) |
| (e) | | 0.00 | 0.01 | 0.00 | 0.00 | | | | | |
| (f) | | 0.01 | 0.03 | 0.01 | 0.00 | 0.16 | 0.26 | 0.14 | 0.12 | (i) |
| (a) | Latvia | 0.99 | N | 0.99 | N | | | | | |
| (b) | | 0.99 | N | 0.99 | N | M | M | M | M | (g) |
| (c) | | 0.02 | N | 0.02 | N | | | | | |
| (d) | | 0.02 | N | 0.02 | N | M | M | M | M | (h) |
| (e) | | 0.00 | N | 0.00 | N | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Lithuania | 0.99 | N | 0.99 | 0.95 | | | | | |
| (b) | | 0.97 | N | 0.98 | 0.92 | M | M | M | M | (g) |
| (c) | | 0.01 | N | 0.01 | 0.00 | | | | | |
| (d) | | 0.03 | N | 0.03 | 0.03 | M | M | M | M | (h) |
| (e) | | 0.02 | N | 0.02 | 0.00 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |

| | | | | | | | | | | |
|-----|--------------------|------|------|------|------|------|------|------|------|-----|
| (a) | Luxembourg | 0.97 | 0.99 | 0.97 | 1.00 | | | | | |
| (b) | | 0.94 | 0.95 | 0.94 | 0.98 | 1.00 | N | 1.00 | N | (g) |
| (c) | | 0.01 | 0.00 | 0.01 | 0.00 | | | | | |
| (d) | | 0.04 | 0.04 | 0.04 | 0.02 | 0.04 | N | 0.04 | N | (h) |
| (e) | | 0.01 | 0.03 | 0.01 | 0.05 | | | | | |
| (f) | | M | M | M | M | 0.19 | N | 0.19 | N | (i) |
| (a) | Malta | 0.97 | 0.96 | 0.98 | 0.92 | | | | | |
| (b) | | 0.97 | 0.96 | 0.98 | 0.92 | M | M | M | M | (g) |
| (c) | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (d) | | 0.00 | 0.00 | 0.00 | 0.00 | M | M | M | M | (h) |
| (e) | | 0.03 | 0.02 | 0.03 | 0.07 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Poland | 0.99 | 0.98 | 0.98 | 0.99 | 0.99 | 1.00 | 0.98 | 1.00 | (g) |
| (b) | | 0.97 | 0.97 | 0.97 | 0.95 | | | | | |
| (c) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 | 0.03 | 0.00 | (h) |
| (d) | | 0.02 | 0.01 | 0.02 | 0.04 | | | | | |
| (e) | | 0.17 | 0.26 | 0.15 | 0.19 | 0.01 | 0.00 | 0.01 | 0.06 | (i) |
| (f) | | 0.05 | 0.00 | 0.06 | 0.05 | | | | | |
| (a) | Portugal | 0.91 | N | 0.96 | 0.89 | | | | | |
| (b) | | 0.87 | N | 0.95 | 0.77 | M | M | M | M | (g) |
| (c) | | 0.00 | N | 0.00 | 0.02 | | | | | |
| (d) | | 0.03 | N | 0.02 | 0.09 | M | M | M | M | (h) |
| (e) | | 0.01 | N | 0.00 | 0.03 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Romania | 0.97 | N | 0.98 | 0.93 | | | | | |
| (b) | | 0.92 | N | 0.92 | 0.88 | M | M | M | M | (g) |
| (c) | | 0.00 | N | 0.00 | 0.01 | | | | | |
| (d) | | 0.04 | N | 0.04 | 0.04 | M | M | M | M | (h) |
| (e) | | 0.02 | N | 0.03 | 0.01 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Slovakia | 0.86 | N | 0.87 | 0.82 | | | | | |
| (b) | | 0.83 | N | 0.84 | 0.73 | M | M | M | M | (g) |
| (c) | | 0.01 | N | 0.00 | 0.09 | | | | | |
| (d) | | 0.03 | N | 0.03 | 0.09 | M | M | M | M | (h) |
| (e) | | 0.01 | N | 0.01 | 0.01 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Slovenia | 0.98 | 0.98 | 0.98 | 0.96 | | | | | |
| (b) | | 0.89 | 0.92 | 0.89 | 0.86 | 0.98 | N | 0.99 | N | (g) |
| (c) | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (d) | | 0.11 | 0.08 | 0.11 | 0.12 | 0.04 | N | 0.03 | N | (h) |
| (e) | | 0.01 | 0.00 | 0.01 | 0.00 | | | | | |
| (f) | | M | M | M | M | M | M | M | M | (i) |
| (a) | Spain | 0.98 | 0.99 | 0.99 | 0.97 | | | | | |
| (b) | | 0.96 | 0.98 | 0.97 | 0.92 | 1.00 | 1.00 | 0.99 | N | (g) |
| (c) | | 0.01 | 0.00 | 0.00 | 0.02 | | | | | |
| (d) | | 0.02 | 0.00 | 0.02 | 0.02 | 0.08 | 0.13 | 0.08 | N | (h) |
| (e) | | 0.00 | 0.00 | 0.00 | 0.01 | | | | | |
| (f) | | 0.01 | 0.00 | 0.01 | 0.01 | 0.06 | 0.21 | 0.04 | N | (i) |
| (a) | Sweden | 0.98 | 0.98 | 0.98 | 0.97 | | | | | |
| (b) | | 0.96 | 0.97 | 0.96 | 0.92 | 0.99 | 0.99 | 0.99 | 0.99 | (g) |
| (c) | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (d) | | 0.03 | 0.03 | 0.03 | 0.05 | 0.08 | 0.03 | 0.09 | 0.11 | (h) |
| (e) | | 0.01 | 0.00 | 0.01 | 0.00 | | | | | |
| (f) | | 0.47 | 0.28 | 0.49 | 0.33 | 0.97 | 0.82 | 0.98 | 0.93 | (i) |
| (a) | Switzerland | 0.95 | 0.95 | 0.94 | 0.97 | | | | | |
| (b) | | 0.94 | 0.94 | 0.94 | 0.97 | 1.00 | 1.00 | 1.00 | 0.98 | (g) |
| (c) | | 0.00 | 0.02 | 0.00 | 0.00 | | | | | |
| (d) | | 0.01 | 0.00 | 0.01 | 0.00 | 0.06 | 0.05 | 0.06 | 0.08 | (h) |
| (e) | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| (f) | | 0.48 | 0.12 | 0.56 | 0.26 | 0.87 | 0.60 | 0.93 | 0.65 | (i) |

7. Pension amounts

This chapter reports amounts of the pension benefits for the SHARE respondents. Statistics about the three pension pillars (public, occupational, private) are provided in order to fully compare the pension incomes of retirees living under different pension systems.

Table 13 and Table 14 display the median and the interquartile range of the total amount of the public old-age pension benefits received by a retiree. Table 13 displays the aggregated values for a subset of the SHARE countries, while Table 14 presents the aggregated values by gender, age, and education.

The following benefits are aggregated:

- Public old age pension
- Public early retirement or pre-retirement pension
- Public survivor pension from spouse or partner
- Public war pension

Due to the questionnaire design of Wave 7, SHARE asks directly the amount of the public pension benefit only to the respondents who have already participated in Wave 3. Therefore, respondents who do receive a public pension benefit but are not asked about the amount would display a missing value by design. We recover information from Wave 6 for those respondents who have been interviewed in both waves and then use it as a proxy for Wave 7. We also recover multiple imputed values if the value was missing in Wave 6.

Richer countries report higher median public pension benefits. The highest values in euro correspond to Luxembourg (35,777) and Switzerland (20,225), while the lowest, to Croatia (3,467). Table 13 also shows that former traditionally employed individuals receive higher public pension benefits than former self-employed.

Figure 3 displays the distributions of the public old-age pension benefits by country for the retirees who were formerly self-employed and formerly traditionally employed. In accordance with the observations made in Table 13, there is a larger density of formerly self-employed at the lower values of public pension benefits for most of the countries in the sample.

Table 14 displays the aggregated values per gender, age and education. When analysing the data by gender, male retirees report higher public pension benefits (upper panel). Additionally, these benefits are increasing in education levels, as the bottom panel shows. When comparing between employment histories, once again, the formerly traditionally employed report higher public pensions than formerly self-employed individuals.

We next investigate the second and the third pillars of the pension system. The sample size of our dataset limits the analysis for the sub-sample of the formerly self-employed people only to a couple of countries. The figures for the formerly traditionally employed retirees are available on request. Given the heterogeneity of the pension systems across European states, we do not report figures about the second and the third pillars per gender, age and education.

We compute the aggregated value of the occupational pension benefit, the sum of the occupational old age pension, occupational early retirement pension and the occupational disability or invalidity insurance. The median value (interquartile range) for the occupational pension benefit of the formerly self-employed people is 2,406 (4,629) euro in Sweden and it is not statistically significantly different from the median value of the formerly traditionally employed.

We also compute the aggregated value of the individual private pension, the sum of life insurance from a private insurance company, private annuity / private personal pension and long-term care insurance from private insurance company. The median value (interquartile range) for the individual private pension of the formerly self-employed people is 4,840 (5,595) euro in Denmark and 2,566 (5,563) euro in Sweden. In both cases, the difference between the median values of the formerly self-employed and the formerly traditionally employed is not statistically different from zero.

Table 13: Retirees – Benefits receipt from public pension – Countries

This table displays individual total amounts of **public** pension benefits in euro by country. The table shows median weighted values. The interquartile range is shown in brackets. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| Country | (in euro) | Retirees | | | DK (4) |
|----------------|-----------|------------------|------------------|------------------|------------------|
| | | All (1) | Self (2) | Empl (3) | |
| Austria | | 15600 (10200) | 12665 (8112) | 16255 (9926) | 10008 (7800) |
| Belgium | | 17400 (9171) | 13579 (6725) | 18000 (9547) | 15038 (8095) |
| Croatia | | 3467 (2862) | 2217 (1865) | 3625 (2926) | 2859 (2375) |
| Czech Republic | | 4839 (1493) | 4390 (1566) | 4839 (1497) | 4552 (1581) |
| Denmark | | 11615 (6311) | 11467 (5909) | 11663 (6500) | 11292 (5409) |
| Estonia | | 4135 (768) | N N | 4140 (758) | 3960 (1176) |
| France | | 16800 (13254) | 12038 (9128) | 18182 (13475) | 10567 (9957) |
| Germany | | 13056 (9936) | 7200 (6715) | 14050 (9768) | 9446 (10161) |
| Greece | | 8393 (4800) | 7365 (4376) | 8976 (4862) | 6063 (4140) |
| Israel | | 6765 (4303) | 6073 (3132) | 6765 (4920) | 6709 (3719) |
| Italy | | 12000 (7240) | 9000 (5286) | 13200 (7200) | 7832 (5584) |
| Luxembourg | | 35777 (29315) | 23084 (17996) | 37392 (31359) | 25400 (30896) |
| Poland | | 3585 (2109) | 2678 (653) | 4228 (2227) | 2864 (1013) |
| Portugal | | 6480 (7178) | N N | 8338 (6250) | 3974 (3574) |
| Slovenia | | 6816 (4456) | 5849 (3600) | 7200 (4233) | 4800 (2635) |
| Spain | | 9412 (5971) | 7800 (2380) | 10260 (7087) | 8028 (4278) |
| Sweden | | 12604 (5690) | 11155 (5112) | 12830 (5457) | 11173 (4573) |
| Switzerland | | 20225 (6604) | 19475 (6743) | 20225 (6487) | 20337 (6504) |

Table 14: Retirees – Benefits receipt from public pension – Gender, age, and education

This table displays individual total amounts of **public** pension benefits in euro by gender, age, and education. The table shows median weighted values. The interquartile range is shown in brackets. N stands for “not calculated” because less than 30 observations are available. Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| (in euro) Gender | Retirees | | | |
|---------------------|------------------|-----------------|------------------|-----------------|
| | All (1) | Self (2) | Empl (3) | DK (4) |
| Male | 12678 (10808) | 9156 (6715) | 13691 (11079) | 8785 (13054) |
| Female | 9178 (8850) | 7447 (6098) | 9841 (8935) | 7799 (8184) |
| Age | | | | |
| 50-54 | N N | N N | N N | N N |
| 55-59 | N N | N N | N N | N N |
| 60-64 | 4823 (13879) | 3887 (9184) | 4979 (14244) | 4508 (12460) |
| 65-69 | 10770 (11184) | 8115 (9943) | 11598 (11734) | 7793 (10620) |
| 70-74 | 11852 (9311) | 9074 (6656) | 12594 (9546) | 7693 (7315) |
| 75-79 | 11620 (8925) | 8975 (5972) | 12304 (9600) | 8590 (6375) |
| 80-84 | 11595 (9638) | 8617 (6718) | 13119 (9262) | 7985 (9481) |
| 85+ | 11343 (9277) | 8465 (5419) | 13283 (10094) | 9279 (7808) |
| Education | | | | |
| 0-4 | 8796 (7991) | 7559 (5638) | 9636 (8800) | 7709 (5754) |
| 5-9 | 9780 (7926) | 8518 (5771) | 10966 (8215) | 7370 (8326) |
| 10-14 | 11318 (11093) | 8777 (7816) | 11834 (11134) | 8840 (10459) |
| 15+ | 14566 (16592) | 9954 (13628) | 15357 (16359) | 8243 (13146) |

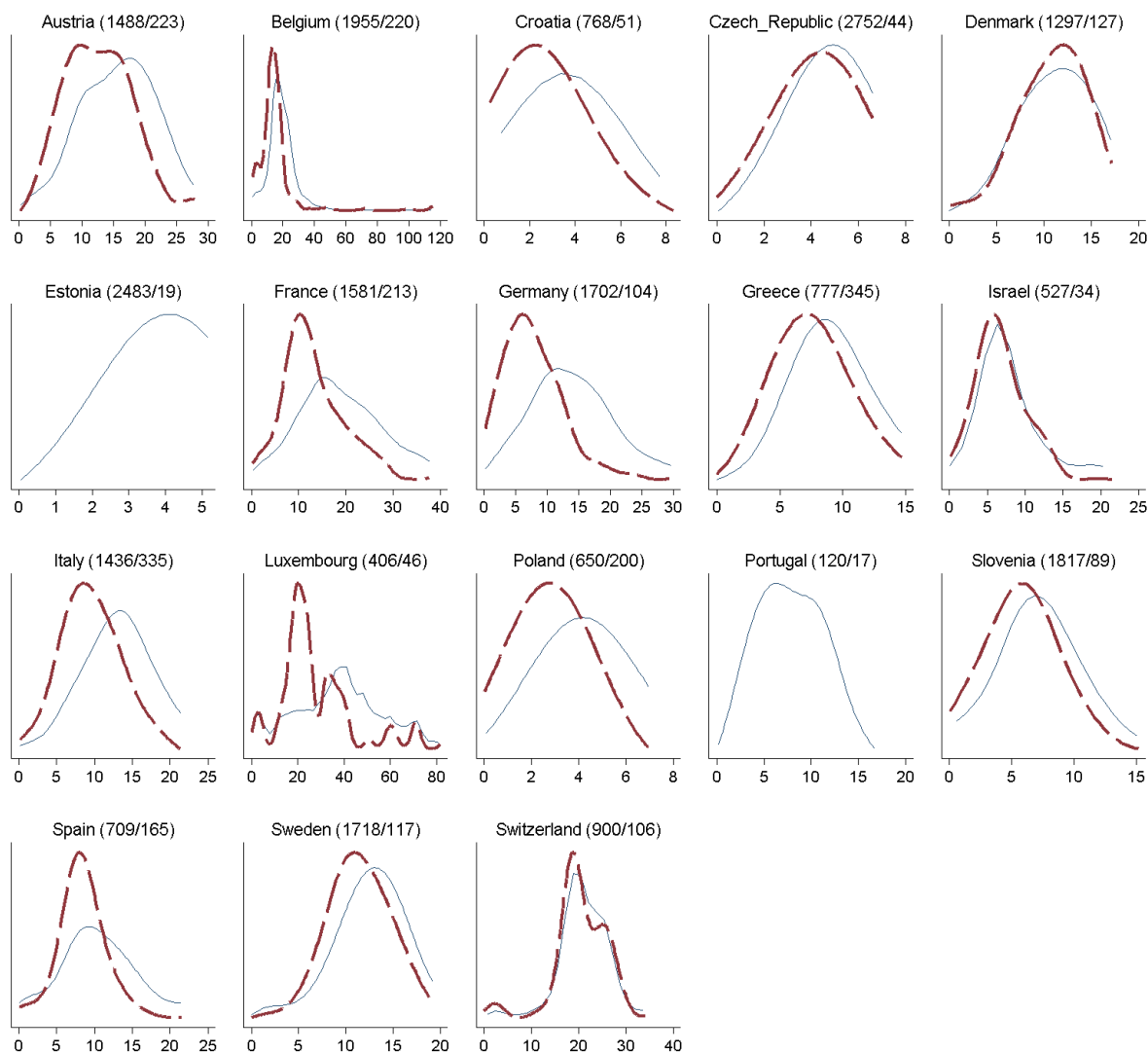


Figure 3: Retiree benefits receipt from public pension – Countries

Distribution of individual amounts of the public pension benefits in euro. The dark red dashed line is the distribution of the formerly self-employed retirees and the blue continuous line is the distribution of the formerly traditionally employed retirees. On top of each graph the country and sample size for the two groups are reported (Empl / Self). The graphs display weighted distribution up to the 95th percentile.

8. Asset-to-income ratio

Net liquid asset-to-income ratio is the ratio of net liquid assets-to-household gross annual income. Net liquid assets are calculated as the sum of the value of deposits, mutual funds, bonds, non-self-employment business wealth, (publicly traded) shares and managed accounts, net of credit line/overdraft debt, credit card debt and other non-mortgage debt.

SHARE computes and releases the following variables that are instrumental in calculating the net-liquid-asset-to-income ratio:

- Household gross financial asset is the sum of bank accounts, bond, stock, mutual funds and other savings for long-term investments.
- Household net financial asset is determined by subtracting financial liabilities from the household gross financial assets.

The amount in euro of the household net financial assets is divided by the amount in euro of the total household income. Due to the questionnaire design of Wave 7, SHARE computes net liquid assets values only for the respondents who have already participated in Wave 3. Therefore, respondents who did not participate in Wave 3 would have displayed a missing value by design. We recover information from Wave 6 for those respondents who have been interviewed in both waves and we use it as a proxy for Wave 7. We also recover multiple imputed values if the value was missing in Wave 6.

Table 15 displays median values and interquartile ranges of the net-liquid-asset-to-income ratio by country. Table 16 displays median values and interquartile ranges of the net-liquid-asset-to-income ratio by gender, age, and education.

A brief overview of the values in Table 15 suggests a positive relationship between economic development and the net asset-to-income ratios in both subsamples; richer countries have higher ratios. It is notable that in most countries, net asset-to-income ratios are low; net assets would not even support a year of consumption. Exceptions are Belgium, Denmark, Sweden and Switzerland. This holds for both workers and retirees (Columns 1 and 5 in Table 15). When comparing the different employment histories within subsamples, net asset-to-income ratios are larger for the self-employed wherever these ratios are substantial; however, there no clear relationship can be observed in the countries with small net asset-to-income ratios. The lowest asset-to-income ratios for retirees and workers are less than 0.01 (Croatia, Greece and Poland). The highest asset-to-income ratios for retirees and workers are 2.13 (Switzerland) and 2.48 (Switzerland), respectively.

As in the case of the equivalized disposable income, we inspect the distribution of the ratios. Figure 4 (5) shows the distributions of the asset-to-income ratios by country for the retirees (workers) who were (have been) formerly self-employed and formerly traditionally employed.

In line with the observations derived from Table 15, the domain values for the distributions of the median weighted asset-to-income ratios are larger for richer countries in both subsamples (Figures 4 and 5). Moreover, the relatively fat right tails of the distributions for some of the countries suggest some evidence of inequality in net asset-to-income ratios, especially among current workers.

When analysing the data by gender, asset-to-income ratios among retirees are higher for men (Table 16, upper panel). Conversely, among workers, these measures are larger for working women. A relationship between asset-to-income ratios and age groups is not clear for any of the two subsamples (Table 16, middle panel). The situation is different when arranging the data by education levels (Table 16, lower panel). The asset-to-income ratios tend to decrease with the number of schooling years among the retirees. This is not the case for the working samples, where the hump shape mentioned in earlier sections is still evident. Regarding differences across employment histories, the values in Table 16 show that, especially among retirees, traditionally employed individuals usually report higher financial assets relative to income.

Table 15: Net financial asset-to-income ratio – Countries

This table displays net liquid assets-to-income ratio by country. The table shows median weighted values. The interquartile range is shown in brackets. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| (ratio) Country | Retirees | | | | Workers | | | |
|---------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Austria | 0.35 (.98) | 0.32 (.98) | 0.36 (1.03) | 0.22 (.62) | 0.49 (1.38) | 0.80 (1.94) | 0.48 (1.32) | N N |
| Belgium | 1.62 (4.31) | 3.10 (7.75) | 1.60 (4.15) | 1.14 (3.18) | 1.73 (3.39) | 2.79 (4.93) | 1.70 (3.29) | 0.21 (1.89) |
| Croatia | 0.00 (.06) | 0.00 (.27) | 0.00 (.06) | 0.00 (.01) | 0.00 (.21) | N N | 0.00 (.22) | 0.00 (.24) |
| Czech Republic | 0.36 (.97) | 0.47 (.91) | 0.36 (.98) | 0.25 (.76) | 0.54 (1.1) | 0.23 (1.4) | 0.56 (1.06) | N N |
| Denmark | 1.35 (3.88) | 2.33 (6.23) | 1.31 (3.76) | 0.89 (3.57) | 1.62 (3.86) | 3.18 (5.82) | 1.57 (3.66) | 1.76 (4.97) |
| Estonia | 0.07 (.31) | N N | 0.08 (.31) | 0.01 (.13) | 0.08 (.36) | 0.07 (.73) | 0.08 (.35) | 0.05 (.26) |
| France | 0.77 (2.08) | 1.02 (2.5) | 0.76 (2.06) | 0.67 (1.87) | 0.40 (1.33) | 0.84 (2.47) | 0.39 (1.25) | 0.28 (1.62) |
| Germany | 0.52 (1.62) | 0.36 (2.16) | 0.52 (1.61) | 0.50 (1.5) | 0.85 (2.22) | 0.80 (3.2) | 0.89 (2.19) | N N |
| Greece | 0.00 (.18) | 0.00 (.19) | 0.01 (.19) | 0.00 (.09) | 0.00 (.27) | 0.00 (.35) | 0.00 (.25) | 0.00 (.19) |
| Israel | 0.04 (2.14) | 0.27 (2.1) | 0.08 (2.68) | 0.00 (.14) | 0.23 (2.38) | 0.04 (1.7) | 0.53 (3.14) | N N |
| Italy | 0.27 (.94) | 0.25 (.97) | 0.29 (.93) | 0.14 (.76) | 0.09 (.52) | 0.18 (.71) | 0.10 (.53) | 0.00 (.19) |
| Luxembourg | 0.46 (1.95) | 0.61 (2.6) | 0.50 (1.96) | 0.20 (1.34) | 0.62 (1.8) | N N | 0.64 (1.8) | N N |
| Poland | 0.00 (.24) | 0.00 (.02) | 0.02 (.3) | 0.00 (.17) | 0.01 (.25) | 0.00 (.19) | 0.01 (.25) | N N |
| Portugal | 0.41 (1.79) | N N | 0.92 (2.23) | 0.14 (.63) | 0.14 (1.32) | N N | 0.14 (1.44) | N N |
| Slovenia | 0.04 (.3) | 0.06 (.32) | 0.05 (.3) | 0.02 (.17) | 0.03 (.4) | N N | 0.03 (.43) | N N |
| Spain | 0.27 (1.11) | 0.22 (1.) | 0.30 (1.16) | 0.19 (.95) | 0.13 (1.03) | 0.25 (1.15) | 0.12 (.87) | N N |

| | | | | | | | | |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sweden | 1.68 (3.58) | 2.03 (4.95) | 1.68 (3.56) | 1.49 (3.33) | 1.40 (2.97) | 2.33 (5.29) | 1.38 (2.81) | 1.27 (2.56) |
| Switzerland | 2.13 (5.27) | 2.38 (7.14) | 2.15 (5.19) | 1.95 (5.25) | 2.48 (4.64) | 3.74 (5.59) | 2.37 (4.28) | 2.83 (6.65) |

Table 16: Net financial asset-to-income ratio – Gender, age, and education

This table displays net liquid assets-to-income ratio by gender, age and education. The table shows median weighted values. The interquartile range is shown in brackets. N stands for “not calculated” because less than 30 observations are available.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| (ratio) Gender | Retirees | | | | Workers | | | |
|--------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | All (5) | Self (6) | Empl (7) | DK (8) |
| Male | 0.46 (1.63) | 0.35 (1.79) | 0.50 (1.64) | 0.10 (.84) | 0.36 (1.67) | 0.32 (1.8) | 0.39 (1.69) | 0.01 (.63) |
| Female | 0.39 (1.46) | 0.22 (1.13) | 0.42 (1.51) | 0.35 (1.37) | 0.45 (1.66) | 0.44 (2.21) | 0.47 (1.64) | 0.13 (1.27) |
| Age | | | | | | | | |
| 50-54 | 0.42 (1.62) | N N | 0.42 (1.52) | N N | 0.27 (1.12) | 0.44 (1.88) | 0.30 (1.15) | 0.00 (.22) |
| 55-59 | 0.21 (.89) | 1.32 (1.62) | 0.27 (.9) | 0.02 (.56) | 0.38 (1.64) | 0.27 (1.69) | 0.41 (1.63) | 0.09 (1.48) |
| 60-64 | 0.50 (1.64) | 0.33 (1.85) | 0.53 (1.72) | 0.14 (.62) | 0.59 (2.02) | 0.67 (1.91) | 0.60 (2.03) | 0.32 (1.75) |
| 65-69 | 0.49 (1.81) | 0.43 (2.1) | 0.50 (1.8) | 0.36 (1.62) | 0.25 (1.83) | 0.14 (2.05) | 0.39 (1.92) | 0.02 (1.06) |
| 70-74 | 0.43 (1.59) | 0.23 (1.51) | 0.47 (1.59) | 0.31 (1.71) | 1.10 (2.43) | 1.83 (3.29) | 0.58 (2.17) | 2.50 (1.86) |
| 75-79 | 0.40 (1.44) | 0.26 (1.38) | 0.44 (1.49) | 0.32 (1.21) | 0.47 (2.89) | N N | 0.27 (2.89) | N N |
| 80-84 | 0.39 (1.36) | 0.26 (1.25) | 0.43 (1.44) | 0.32 (1.27) | 0.81 (2.7) | N N | N N | N N |
| 85+ | 0.39 (1.37) | 0.34 (1.27) | 0.42 (1.44) | 0.32 (1.14) | N N | N N | N N | N N |
| Education | | | | | | | | |
| 0-4 | 0.23 (1.09) | 0.11 (.53) | 0.29 (1.16) | 0.17 (.92) | 0.64 (2.11) | 1.44 (4.33) | 0.57 (2.04) | 0.07 (1.04) |
| 5-9 | 0.26 (1.07) | 0.19 (1.16) | 0.28 (1.07) | 0.20 (1.01) | 0.09 (.81) | 0.07 (.87) | 0.12 (.87) | 0.02 (.52) |
| 10-14 | 0.50 (1.64) | 0.38 (1.66) | 0.51 (1.62) | 0.46 (1.79) | 0.33 (1.48) | 0.35 (1.54) | 0.34 (1.48) | 0.14 (1.4) |
| 15+ | 0.92 (2.47) | 1.21 (3.68) | 0.91 (2.41) | 0.82 (2.) | 0.80 (2.36) | 0.84 (2.76) | 0.83 (2.35) | 0.17 (2.06) |

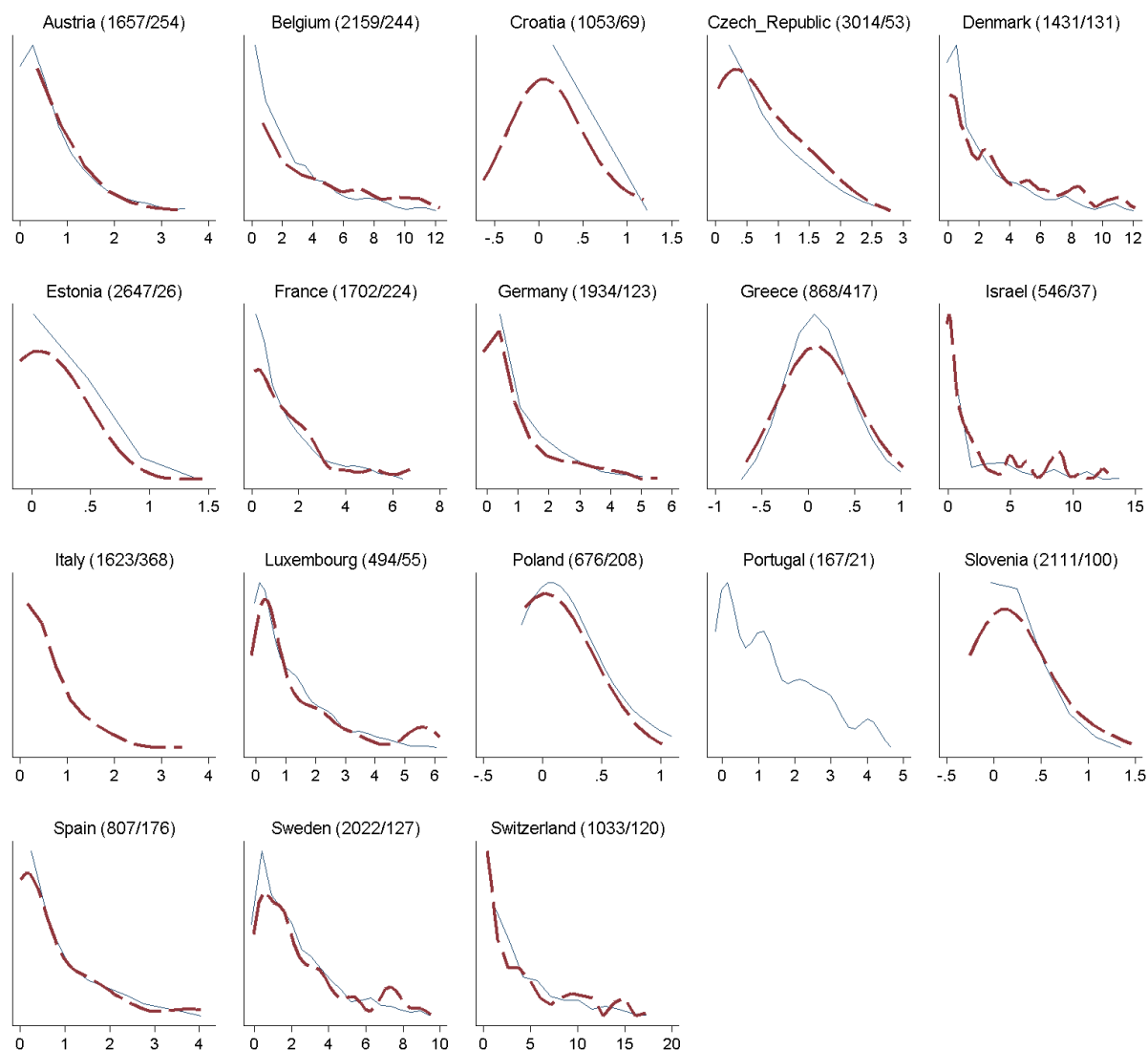


Figure 4: Net financial asset-to-income ratio (retirees) – Countries

Distribution of net financial asset-to-income ratio. The dark red dashed line is the distribution of the formerly self-employed retirees and the blue continuous line is the distribution of the formerly traditionally employed retirees. On top of each graph the country and sample size for the two groups are reported (Empl / Self). The graphs display weighted distribution between the 5th and the 95th percentile.

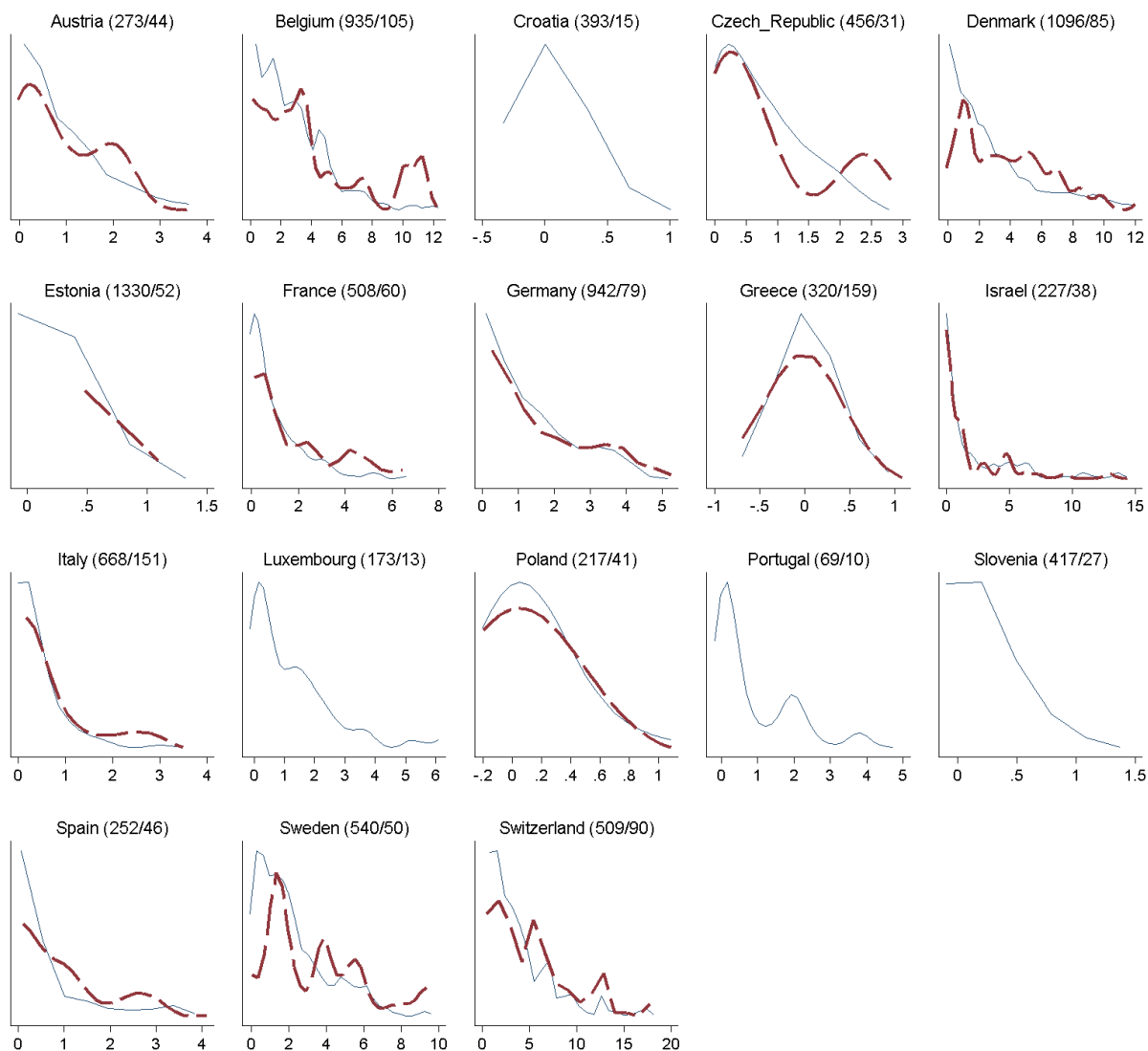


Figure 5: Net financial asset-to-income ratio (workers) – Countries

Distribution of net financial asset-to-income ratio. The dark red dashed line is the distribution of currently self-employed and the blue continuous line is the distribution of the currently employed. On top of each graph the country and sample size for the two groups are reported (Empl / Self). The graphs display weighted distribution between the 5th and the 95th percentile.

9. Aggregate indicators

We conclude with an overview of four aggregate income and poverty measures for the whole SHARE sample and for those SHARE countries that are part of the European Union (EU25), i.e. all the SHARE countries but Israel and Switzerland.

Table 17 displays the equivalized disposable income (EDI), the income quintile ratio (S80/S20) and the AROP rates. The equivalized disposable income is adjusted for its purchasing power. The income quintile ratio is computed over the income distribution of the pooled sample. The AROP rate reports the proportion of respondents below the poverty threshold of their own country. The upper panel relates to the entire SHARE sample while the lower panel only includes SHARE countries that are part of the European Union. Columns 1-4 of Table 17 display the aggregate indicators for the retired people. Columns 5-8 of Table 17 display the aggregate indicators for the working people (50+).

Retirees report lower income than workers do (13,997 vs 17,446). Formerly self-employed report lower income than formerly traditionally employed. That holds for both the retirees and the working people.

Income distribution of the retirees is characterized by higher degree of inequality with respect to the distribution of the workers (9.66 vs. 8.73). Inequality is lower for the formerly self-employed retirees with respect to the formerly traditionally employed retirees (9.25 vs. 10.12). The opposite holds for workers (9.22 vs 8.51).

AROP rates are higher for retirees (0.22 vs. 0.18). Formerly self-employed retirees are twice at-risk-of-poverty with respect to the formerly traditionally employed retirees (0.35 vs. 0.18). The gap is smaller for workers (0.21 vs. 0.17).

We observe similar patterns also for the EU sample. Removing Switzerland from the sample reduces the inequality in income distribution for formerly traditionally employed retirees, making it closer to the inequality in income distribution for formerly self-employed retirees.

Table 17: Aggregate indicators

This table displays the figures for the SHARE sample and for the EU25 sample. Row “EDI” refers to the equivalized disposable income in PPP values. The row shows median values. The interquartile range is shown in brackets. Row “S80S20” refers the ratio between the sum of average equivalized household income of the top quintile and that one of the bottom quintile of the income distribution. Row “AROP” refers to At-Risk-Of-Poverty rates.

Column (1) 'Retirees - all' refers to the retirees. Column (2) 'Retirees - Self' refers to the retirees with at least 50% of their working years as self-employed. Column (3) 'Retirees - Empl' refers to the retirees with at least 50% of their working years as employee or civil servant. Column (4) 'Retirees - DK' refers to the retirees with unclear patterns during their working years. Column (5) 'Workers - all' refers to the workers. Column (6) 'Workers - Self' refers to the workers with at least 50% of their working years as self-employed. Column (7) 'Workers - Empl' refers to the workers with at least 50% of their working years as employee or civil servant. Column (8) 'Workers - DK' refers to the workers with unclear patterns during their working years.

Data source: SHARE Wave 7 Release 7.0.0

| | Retirees | | | | | Workers | | | |
|--------------|------------------|-----------------|------------------|-----------------|--|------------------|------------------|------------------|------------------|
| | All (1) | Self (2) | Empl (3) | DK (4) | | All (5) | Self (6) | Empl (7) | DK (8) |
| SHARE | | | | | | | | | |
| EDI | 13997 (11081) | 12159 (9135) | 14721 (11528) | 11286 (9543) | | 17446 (14291) | 16101 (14493) | 17870 (14185) | 12643 (12383) |
| S80S20 | 9.66 | 9.25 | 10.12 | 12.83 | | 8.73 | 9.22 | 8.51 | 12.43 |
| AROP | .22 | .35 | .18 | .38 | | .18 | .21 | .17 | .34 |
| EU25 | | | | | | | | | |
| EDI | 13938 (10971) | 12035 (9032) | 14671 (11240) | 11140 (9363) | | 17172 (14069) | 15717 (14175) | 17691 (14053) | 12226 (11849) |
| S80S20 | 10.28 | 9.24 | 9.21 | 12.56 | | 7.88 | 8.56 | 8.07 | 11.45 |
| AROP | .22 | .35 | .18 | .38 | | .18 | .21 | .17 | .35 |

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