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Poor survivors? Economic consequences of death of spouse

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Abstract:

The main objective of public survivor benefit programs is to prevent poverty or to maintain the living standard after widowhood. In this paper, we analyze the financial consequences of widowhood and the role of the survivor pension systems in Europe. More concretely, we evaluate the need for survivor pensions in old age and assess whether the social security systems are (over-)fulfilling their target of supporting survivors. We use longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE) and create a generosity index based on country specific details of the survivor pension programs. Our results show that survivor programs are necessary if the aim is to maintain the standard of living after widowhood. The survivor pensions keep the per capita income at a relatively stable level and we find no evidence that financial problems increase with widowhood. However, there are large differences between the countries, which can partly be explained by our generosity index.

Zusammenfassung:

Das Ziel gesetzlicher Hinterbliebenenrenten ist, den Lebensstandard auch nach der Verwitwung aufrechtzuerhalten bzw. Armut zu verhindern. Wir analysieren die finanziellen Folgen von Verwitwung und dahingehend die Rolle der Hinterbliebenenrentensysteme in Europa. Konkret bewerten wir die Notwendigkeit von Hinterbliebenenrenten im Alter und beurteilen, ob Sozialversicherungssysteme ihr Ziel, Hinterbliebene zu unterstützen, (über-)erfüllen. Wir verwenden Längsschnittdaten aus dem Survey of Health, Ageing and Retirement in Europe (SHARE) und erstellen einen Index, der basierend auf länderspezifischen Details der Hinterbliebenenrentenprogramme, die Großzügigkeit bewertet. Unsere Ergebnisse zeigen, dass Hinterbliebenenprogramme dann notwendig sind, wenn es darum geht, den Lebensstandard nach der Verwitwung aufrechtzuerhalten. Hinterbliebenenrenten halten das Pro-Kopf-Einkommen auf einem relativ stabilen Niveau, und wir finden keine Hinweise darauf, dass finanzielle Probleme durch die Verwitwung zunehmen. Es gibt jedoch große Unterschiede zwischen den Ländern, die nur teilweise mit unserem Großzügigkeitsindex erklärt werden können.

Keywords:

Survivor pensions, social security, old-age finances

JEL Classification:

H55, I38, J14, J26

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1. Introduction

The death of a spouse can translate into an economic downfall for the surviving household member. Public survivor benefit programs are part of the social safety net of developed countries to compensate income losses of the deceased spouse. The main objective of these programs is to prevent poverty or in some countries even to ensure the same living standard for the surviving partner as before the death of their spouse. Similar to all other parts of modern social security systems, survivor pension programs need to be designed such that its objectives are met without setting incentives for undesired effects (misuse, disincentive to work etc.).

The survivor pension programs were originally designed as co-family insurances in an era where women were inactive in the labor market and where widows were unable to support themselves and their children. In the course of many old-age pension reforms to face the challenges of demographic change and to reach a sustainable public pension system, the survivor pension programs are also under critical review. More concrete, the relevance and justification of generous survivor pensions could be outdated as most married women are working today (full time) and are building up own pension claims. Following this logic, widowed spouses could be better off than other single households nowadays thanks to generous survivor pensions. Moreover, the provision of these pensions might create disincentives to continue working in the labor market after the death of the spouse, which could lead to undesired negative side effects.

In this paper, we contribute to the literature of the relationship between the economic consequences of widowhood and the pension systems in Europe. We evaluate the need for survivor pensions in old age and assess whether the social security systems are (over-)fulfilling their target of supporting survivors.

We use longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE). This dataset enables us to look at the change of the household income after the death of a partner and to split it into different components, namely survivor pensions, normal old-age pension, occupational pensions, wages and private income sources. On the country level, we create an index for the generosity of the survivors' pension and link it to the financial situation of the survivors. Further, the longitudinal data allows us to analyze the labor market status before and after the widowhood and to relate it to the survivors' financial situation.

Our results show that survivor programs are still necessary if the standard of living ought to be maintained after widowhood. Although the total household income decreases after the death of the partner, the survivor pensions keep the per capita income at a relatively stable level. Moreover, we find no evidence that the risk of poverty increases with widowhood. In fact, the number of individuals facing fewer financial problems after widowhood is higher than of those having more difficulties. However, there are large differences between the considered countries. At least some of those differences can be explained by our generosity index. Unfortunately, only few widows were still active in the labor market

before the death of their partner, therefore our sample size is insufficient to analyze the incentives from survivor programs on the labor market participation. Furthermore, we cannot answer the question of whether survivor pensions cause undesirable redistributive effects.

The paper is structured as follows: Section 2 provides a presentation of the previous literature on this topic. The general design and different components of survivor programs are presented in Section 3, followed by a data and sample description in Section 4. In Section 5, the change in household income is examined and differentiated by the various income sources. This is followed by an analysis of the financial situation after widowhood and of the circumstances that lead to problems with making ends meet. In Section 6, we present our generosity index and show that this index can explain at least some of the country variations. In Section 7 we conclude.

2. Literature Review

Many studies on the consequences of widowhood based on longitudinal data are from the late eighties. Zick and Smith (1986) use the Panel Study of Income Dynamics (PSID) and found that both widowers and widows had a one-in-three change of experiencing a year or more of poverty in the first five years of widowhood. They complement their findings with a study focusing on the timing of economic change after the death of a spouse (Zick and Smith 1991). Based on the same data they find that the economic adjustment is not instantaneous, but happens over time and depends on a number of factors. Most of the other early studies concentrate on the consequences of widowhood for women. Based on the Longitudinal Retirement History Survey (RHS), Hurd and Wise (1989) found that widows are much more likely than couples to be affected by poverty and that they make up a large proportion of the poor elderly; 80 percent are widows or other single individuals. Bound et al. (1991) use the Panel Study of Income Dynamics (PSID) and found that widowhood drops living standards by 18 percent and pushes 10 percent of women whose incomes were above the poverty line prior to widowhood into poverty after it. Burkhauser et al. (1994) confirm that, despite massive social security expenditures, older women remain the most vulnerable members of our society, in part because of a substantial drop in the level of social security protection they receive following the death of their spouse.

Sevak et al. (2003) concentrate on the economic consequences for women after the death of their husband using data from the Health and Retirement Study (HRS) in the US. They find that widowhood remains an important risk factor for a transition into poverty, although somewhat less so than 20 years ago. They also find that poor women are more likely to become widowed at a young age, because of the relationship between mortality and socioeconomic status. This shows that the poverty risk after widowhood is not only due to income losses, but also due to selection effects. It is therefore important to consider the situation prior to widowhood.

Another important factor is the support by the social security system. Different studies examine whether survivor pensions can mitigate the income losses after widowhood. Some also study whether these pensions provide disincentives to work and lead to earlier exits from the labor market. James (2009)

analyzes the efficiency and equity of survivor benefit programs. The author argues that if not well designed, survivor benefit programs may be costly and lead to work disincentives and unnecessary redistributions. It might be more beneficent to guarantee a general poverty prevention (via universal flat benefits, minimum pensions or means-tested income supplementation) rather than maintaining the previous living standards of marital survivors. Burkhauser et al. (2005) compares the economic consequences of a husband's death in the United States, Germany, Great Britain and Canada. They show that besides the public survivor benefit programs, the private sources of income play an important role in income replacement of women following a husband's death.

Ahn (2005) and Bíró (2013) provide international comparisons on the financial situation of widows in Europa. Ahn (2005) uses cross-section and panel data from the European Community Household Panel. He finds large differences in the income across countries at least as long as he does not control for housing costs. Moreover, he observes a decline in household income regardless of whether the wife or husband dies. However, due to the pension regulations widows have to cope with higher income losses than widowers. Bíró (2013) considers not only the financial situation of widows but also investigates the role of employment, health and social security systems on the living conditions of widows. Based on SHARE data he finds that the lack of the deceased husband's income not only leads to a worse financial situation, but also to health problems and earlier exit from the labor market of widows. He concludes that the cross-country variation in the negative effect of widowhood on financial status cannot be explained by the differences in the overall generosity of survivors' pensions. The generosity of a system in Bíró (2013) is measured by the basic replacement rate of the survivors' pension benefits and two measures of the country-level aggregated expenditures on survivors' pensions. The author states that the simple statistics cannot capture the complexity of the pension systems and the results reveal only basic patterns of the relation between the economic consequences of widowhood and the generosity of the survivors' pension system.

We extend this study by 1) using information from the additional waves; 2) split up the household income into the separate income sources and different pension benefits; 3) creating an index for the generosity of the survivors' pension system to capture the different features of the social security program. By these additions, we enhance the understanding of the relationship between the economic consequences of widowhood and the pension systems in Europe. Unfortunately, our data set cannot provide enough information to contribute to the discussion whether the social security systems are (over-)fulfilling their target of supporting survivors and whether more generous survivor pensions create disincentives to engage in the labor market.

3. Institutional Background

Survivor pensions generally supplement old-age security programs (James 2009). The institutional settings for survivor benefits therefore heavily depend on the design of the old-age pension system of a country. For instance, a country with a lump sum pension will also provide a lump sum survivor pension,

while in countries with an income-related old age pension the survivor pension often depends on the income of the deceased partner. The design also differs concerning the aim of the payments, thus whether the survivor's standard of living should be maintained or whether only poverty should be avoided.

Additionally, special eligibility rules are established to minimize undesirable (incentive) effects. This is particularly about avoiding misuse, causing work disincentives or introducing undesirable redistribution (from working women to non-working women, from singles and dual career couples to single-earner couples and in some cases even from low- to high-earning families). Depending on these objectives, survivor benefit programs build up around the determinants that are discussed in the following: Beneficiaries and contribution time, amount of benefits, eligibility age and limit of total benefit (mean/income test).

Beneficiaries and contribution time: In almost all countries, married partners are entitled to survivors pensions as long as their deceased partner was insured in the (public) pension system for a minimum duration. In some countries, the beneficiaries even include unmarried couples to cope with the changing realities of life. Divorced partners normally remain eligible as long as they do not remarry. However, recently it got more common to split the pension claims between the former spouses at the time of divorce (e.g. Germany). Having children enlarges the survivor pension if the children are not yet of working age, otherwise they will receive a separate orphan's pension.

Amount of benefits: As stated before, the survivor benefits are dependent on the design of the pension system. In many countries, the survivor pensions are linked to the old-age pension or disability pension of the deceased partner. This link is especially strong in countries, which have an income related public pension system and therefore are more focused on maintaining the living standard. As the living costs decrease with the death of a household member, the survivor pension amounts only to a certain proportion of the deceased partner's pension. Since some costs of a household are fixed (e.g. rental costs), the household expenses do not simply halve in the case of a previously two-person household. In fact, a reduction of 20-30% is plausible. In our study, the survivor benefits of the countries with an income related public pension systems range from 50% (Estonia) to 85% (Poland) of the deceased partner's pension claims, but may increase with the number of eligible persons (e.g. children). On the other hand, there are countries, which pay lump sum survivor pensions (e.g. the Netherlands and Denmark). In addition, countries with a greater focus on occupational pension have additional survivor benefits regulations for occupational pension types (e.g. Switzerland and Sweden). Moreover, several countries support the survivors in the first year with an additional death grant or a contribution on the funeral cost.

Eligibility ages: In general, survivor pensions can be claimed much earlier than normal old-age pensions. For example, in Germany a widow receives a full survivor pension if she is 47 or older while the earliest eligibility age for an old-age pension is 63. For the countries in this study, the survivor

pension's eligibility ages range from 35 to 67. However, there are also some countries, which link the eligibility for a survivor's pension on the survivor's ability to work (e.g. Estonia) or do not have any restrictions at all (e.g. Italy and Spain). Regardless of age or other restrictions, a survivor pension is at least granted for a transitional period directly after the death of the partner to help the surviving partner to rearrange his life after this decisive event. This period is often enlarged if a surviving spouse still has to care for a child under the working age.

Limit of total benefit (means test): Due to the partial young eligibility ages and the changing employment of married women, the coincidence of own work income or pension benefits while receiving a survivor pension has become more likely over the past decades. This can lead to survivors being better off compared to singles or single-earner couples (undesired redistribution), since the death of a working partner does not necessarily mean the loss of all sources of income. Consequently, the justification for redistribution in the public pension system by means of survivor pensions is no longer in any case given. Many countries have therefore started or intensified the practice to count high labor and pension income against survivor pensions. However, crediting work income can imply a negative incentive to work. Still, in the case of securing living standards, it must be taken into account that the common income was the basis of the previous way of life. Due to this ambiguity, the used methods vary from country to country. For example, some countries define a maximum total income (e.g. Belgium), other countries only count income above a certain level on the survivors pension benefits (e.g. Germany) while yet others reduce the survivor pension if the own income exceeds a certain income threshold (e.g. Italy).

Table A2 in the appendix gives an overview of these four dimensions of the survivor pension systems for the considered countries.

4. Data

4.1 Survey of Health, Ageing and Retirement in Europe (SHARE)

We use data from the Survey of Health, Ageing and Retirement in Europe (SHARE). This multidisciplinary, cross-national panel dataset contains information on health, socioeconomic status, work history and social networks for individuals aged 50+ across European countries (Börsch-Supan et al. 2013). The first wave of SHARE was conducted in 2004 in 11 European countries with an initial sample of more than 22,000 individuals aged 50 or over. Since then, the scope of the representative survey has expanded in biennial survey waves; it now covers more than 140,000 individuals in 28 countries.

We use all regular waves of SHARE for the following countries: Austria, Germany, Sweden, Netherlands, Spain, Italy, France, Denmark, Greece, Switzerland, Belgium, Czech Republic, Poland, Portugal, Slovenia and Estonia. The pooled sample contains 244,936 observations. We restrict the sample to households with a maximum of two persons for an easier comparison of the financial situation (187,685 observations). Further, we base the analysis on persons who are married or widowed and leave

out persons with another marital status from the sample (151,207 remaining observations).

In SHARE, some modules are only answered by a designated financial respondent although they refer to the whole household. If the partner who answered the financial questions dies, the other partner has to answer the financial questions in the next wave. This implies the following problems: 1) Non-response: Many widows and widowers are not able or willing to answer the financial questions and we do not observe any values. 2) Biases: The differences in the values of financial variables are possibly caused by the change in the financial respondent, not only by the change in income. To avoid these problems, we delete those households where the financial respondent changed between the waves (107,532 remaining observations).

Table 1 gives an overview of the sample sizes by wave and gender for different groups based on the marital status. The first group consists of married persons living together with their partner. The second group are the newly widowed persons, who lose their partner between the current and the previous SHARE interview. The third group of widowed persons consists of persons who either became widowed before the first wave of SHARE or who are widowed since two waves or more.

Table 1: Sample size by wave and gender

	Males			**Females**		
	Married	*Newly widowed*	*Widowed*	*Married*	*Newly widowed*	*Widowed*
Wave 1 (2004)	4,928	-	730	4,657	-	3,065
Wave 2 (2007)	5,399	74	784	5,197	151	3,474
Wave 4 (2011)	7,785	108	1,074	8,115	184	5,296
Wave 5 (2013)	10,265	148	1,270	10,563	370	5,717
Wave 6 (2015)	10,080	175	1,256	10,438	471	5,758
Total	38,457	505	5,114	38,970	1,176	23,310
Pooled sample	x	x	x	x	x	x
Panel sample		x			x	

The *pooled sample* covers all waves and all marital groups and contains 39,251 households, 56,874 persons and 107,532 observations. We use this sample for summary statistics, inter-group comparisons and cross-country comparisons of survivor pensions.

For the analysis of the change in household income after the death of the partner, we reduce the observations to a *panel sample* containing the waves before and after death of the spouse for the group of newly widowed persons only. Overall, we observe 1,681 households with a partner who deceased between two waves. The panel sample contains 3,362 observations, as we look at two waves per household.

4.2 Variables and summary statistics

Besides the usual demographic indicators (age, gender, education, children, employment status), we use the following indicators to examine the financial situation of a household.

Make ends meet: Based on self-reports this variable measures whether a household is able to make ends meet 1) With great difficulty, 2) With some difficulty, 3) Fairly easily, 4) Easily. For better readability of some graphs we additionally build a binary variable by summing up the categories making ends meet easily or fairly easily ("No difficulties") and with some difficulty or with great difficulty ("Difficulties").

Household income: A variable of the household income is obtained by aggregating all individual income components at the household level. Individual income components include: Earnings from (self-)employment; old age/early retirement pensions; survivor pensions; war pensions; private pensions; disability and sickness benefits; unemployment benefits; social assistance; private transfers; Interest/dividend from bank account, bond, stock, and mutual funds; income from rent or sublet. Item non-response is especially high for financial variables, therefore SHARE provides five imputations of the missing values (see Christelis 2011). We use the mean of the five available replicates. For reasons of comparability, we calculate the per capita income and adjust for PPP to account for country differences.

Household expenditures*:* Similar to the household income, the variable for the household expenditures is an aggregation of the single components of expenditures. These include the following essential expenditures: rent and home-related expenditures; food at home consumption; food outside home consumption; home produced consumption; out-of-pocket payment for inpatient care, outpatient care, drugs and nursing home/home care. Once again, we calculate the per capita expenditures and adjust for the PPP.

Table 2 provides some summary statistics on the demographic variables and the financial indicators for the subgroups of married, widowed and newly widowed persons across all waves. With 70% women among the newly widowed and 82% women among the widowed persons, our summary statistics represent the fact that women have a longer life expectancy. Married persons are on average 66.5 years old, while newly widowed person on average are 74 and all widowed persons are on average 75.5 years old. The household size intuitively differs between the groups: 98% of married persons in our sample live in a two-person household and in contrast around 82% of the (newly-)widowed persons live in a one-person household. While 24% of the married persons are still employed, this percentage drops to 6-7% for the widowed persons. The obvious explanation would be the higher average age of the widowed persons, which makes retirement much more likely in this group. Married persons have on average 10.9 years of education, while newly widowed persons have spent 9.6 years in education and widowed persons on average 9.3 years. This bivariate statistics is in line with the findings of Sevak et al. (2003) and Bíró (2013), who find that lower education is associated with worse socioeconomic status

and that poor women are more likely to become widowed at a young age, because of the relationship between mortality and the socioeconomic status. Married persons have the highest per capita household income and only 18% of married persons report that they have financial problems. Although newly widowed persons have less per capita income than all widowed persons taken together have on average, only 30% of the newly widowed persons report financial problems while 41% of all widowed persons report financial problems. This might be because newly widowed persons are still in the accommodation phase after the death of their partner, in which they have less expenditures due to grieving. Another explanation could be that at the beginning private savings are still sufficient to cover for the income losses. At last, one could again claim that the higher average age of the widows could be connected to higher expenditures for out-of-pocket payments such as medical aids and appliances. The self-reported health status is worst for the newly widowed persons and best for the married persons. However, these differences could again be linked to the age differences. Since it is moreover a subjective statement, this measure is probably influenced by the mental condition of the newly widowed persons.

Table 2: Summary statistics by marital status

		Full sample (n= 107,532)	Married (n= 77,427)	Widowed (n= 28,424)	Newly widowed (n= 1,681)
Gender	Male (%)	40.99	49.67	17.99	30.04
	Female (%)	59.01	50.33	82.01	69.96
Age	Years	69.0	66.5	75.5	74.0
Household size	1 Person (%)	24.51	2.16	82.16	79.12
	2 Persons (%)	75.49	97.84	17.84	20.88
Employment status	Employed (%)	18.91	23.90	6.01	7.20
	Retirement (%)	63.71	60.08	73.07	72.69
	Others (%)	17.37	16.02	20.92	20.11
Education	Years	10.4	10.9	9.3	9.6
Per capita income	Euro	16,752	17,752	14,214	13,613
Financial problems	Yes (%)	24.20	18.04	40.60	30.46
	No (%)	75.80	81.96	59.40	69.54
Self-reported health	Excellent	6.92	8.10	3.89	3.76
	Very good	16.19	18.19	11.06	10.61
	Good	35.46	36.80	31.97	32.92
	Fair	29.18	26.73	35.58	33.81
	Poor	12.24	10.17	17.50	18.90

Table 3 shows the share of survivor pension recipients per country (first column). This share varies between 0.48% in Estonia and 59% in Spain. The overall average amounts to 39%, meaning that a bit more than one third of all widowed persons receive survivor pensions. Since in most countries the payments are received automatically, the remaining widows and widowers are might not be eligible for

a pension. According to OECD (2018) less than two-thirds of widowed persons older than 65 receive survivor benefits with a great variation between the countries. The reason that the number of recipients in our sample is smaller could be that the respondents misreport the question on pensions income during the SHARE interview by wrongly pooling the survivor pensions together with their public pension. The second and the third columns show the percentage of male and female persons respectively receiving survivor pensions conditional on being widowed. In all countries, the share of recipients is higher among female widows. It ranges between 0.51% in Estonia and 71% in Spain with an average of 43% over all countries. Among male widowers, the share of recipients on average is 11%. It ranges between 0.28% in Estonia and 28% in Germany. Thus, in our sample, the majority of the survivor pension recipients are women. On average, 94% of all the recipients in our sample are female. This is a number slightly higher than the OECD average, which states that women represent more than 85% of the widowed survivor pension recipients (OECD 2018).

Table 3: Share of survivor pension recipients by country

	Share of recipients out of all widowed persons	Share of recipients out of female widows	Share of recipients out of male widowers
Austria	50.97 %	58.16 %	9.97 %
Germany	55.81 %	64.78 %	27.65 %
Sweden	35.48 %	44.03 %	13.41 %
Netherlands	12.99 %	16.30 %	2.54 %
Spain	61.61 %	73.82 %	5.98 %
Italy	51.89 %	61.32 %	9.57 %
France	61.42 %	69.83 %	23.22 %
Denmark	12.52 %	13.91 %	8.33 %
Greece	47.03 %	54.95 %	1.24 %
Switzerland	19.32 %	22.77 %	6.05 %
Belgium	42.54 %	53.24 %	4.48 %
Israel	33.68 %	39.25 %	10.19 %
Czech Republic	46.18 %	48.01 %	35.73 %
Poland	18.66 %	22.75 %	0.85 %
Portugal	49.56 %	56.30 %	24.66 %
Slovenia	21.42 %	24.44 %	5.42 %
Estonia	0.48 %	0.51 %	0.28 %
Total	38.61 %	44.69 %	12.14 %

5. Financial situation before and after widowhood

5.1 Household income

We start the analysis of the financial situation before and after widowhood by looking at the household income based on the panel sample. Figure 1 displays the change of total household income and of per capita income by gender. We see that the total household income is in both cases before and after widowhood higher when the male partner responds to the income questions. There are various possible explanations for this. Most likely, there is a selection effect in which the man takes on the task of

answering income questions if the household income is high. At least, the income situation is less homogeneous for households in which the men responds to the income questions and the wife dies. The drop in total household income after death is around 15.000€ for both male and female survivors. The decline in total household income if the female partner dies indicates that in our sample the traditional family structure in which the wife does not work is already outdated. The lower panel shows the change in per capita income before and after widowhood for both male and female persons. For male persons, the per capita income remains about the same after the death of the partner. Female widows experience a slightly significant decrease in per capita income.

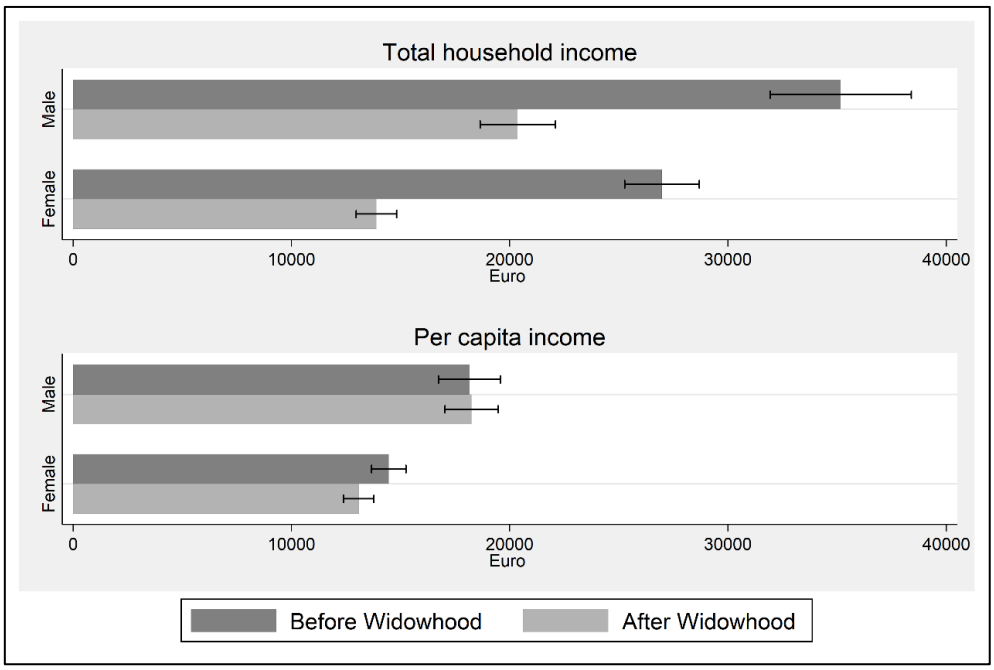

Figure 1: Total change of household and per capita household income by gender

For a better understanding of the financial situation after widowhood and the relation to the institutional settings, we compare the change in household income between different European countries. Figure 2 presents the change of per capita income before and after widowhood per country. Overall, there is a high variation in the per capita income before widowhood between countries. In most Eastern and Southern European countries, the average annual per capita income is below 10,000 €. The Netherlands, France, Switzerland and Belgium have the highest average per capita income before widowhood with more than 20,000€. In many countries, the per capita income decreases after widowhood (Germany, Sweden, Netherlands, Spain, Italy, France, Switzerland, Belgium, Israel, Slovenia). The highest and at the same time only significant decrease can be found in Slovenia with an decrease from 12,407€ to 7,802€. Among the countries with an increase of the per capita income (Austria, Denmark, Greece, Czech Republic, Poland, Portugal, Estonia), Denmark experiences the biggest, yet insignificant raise from 15,659€ to 17,778€.

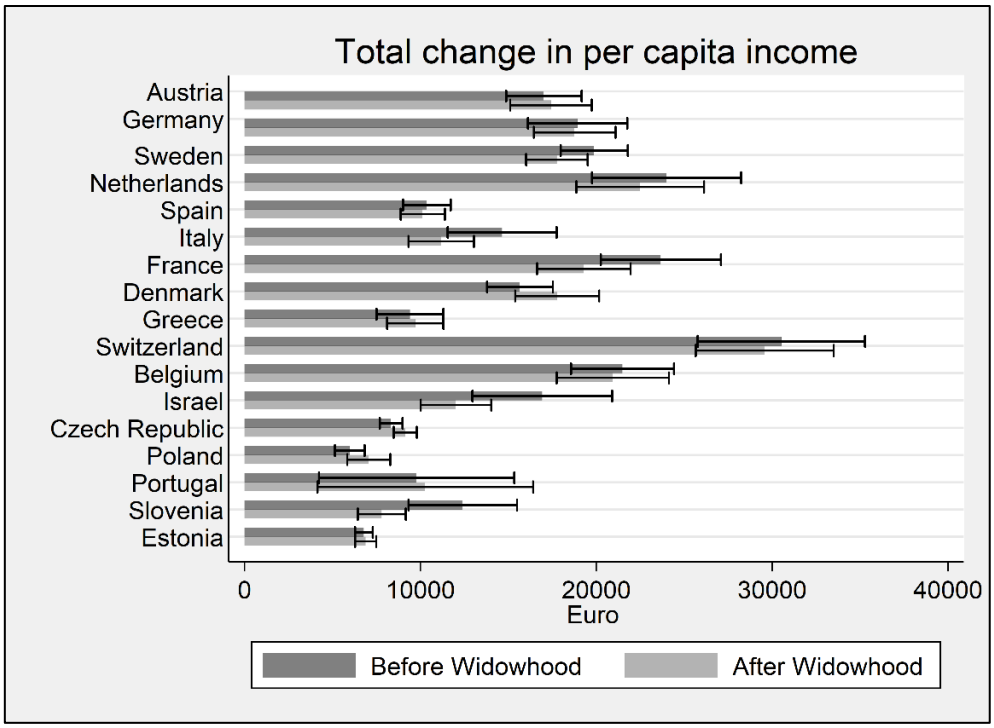

Figure 2: Total change of per capita income (PPP adjusted) by country

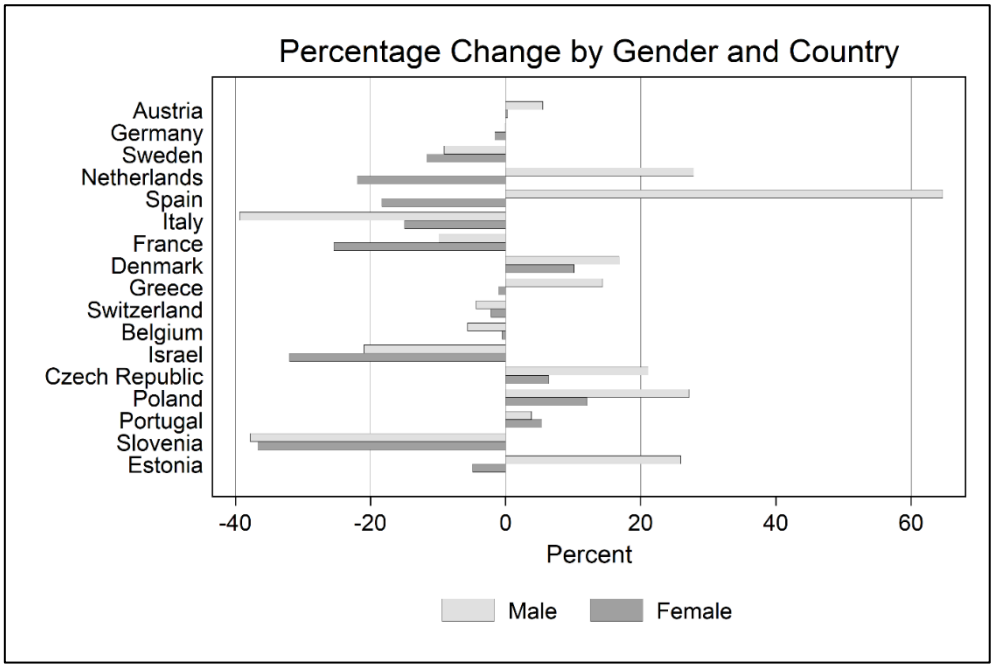

Figure 3: Percentage change of per capita income (PPP adjusted) by gender and country

Figure 3 displays the percentage change of the per capita income by country and gender. There are big differences in the percentage change after widowhood for males and females. In Sweden, Italy, France, Israel and Slovenia both widows and widowers experience a decline in per capita income after the death of the partner. In Denmark, Czech Republic, Poland and Portugal, the per capita income increases after the death of the partner and the increase is even higher for male persons than for female persons. Moreover, in the Netherlands, Spain, Greece and Estonia, the per capita income is increasing for male persons but decreasing for female persons. With Italy being the only exception, the picture shows that

female persons are worse off financially after the death of their partner than male persons. To better understand the role of the change in per capita income before and after widowhood, we split the income of the surviving partner into the following income sources:

Table 3: Income sources of surviving partner

Survivor pensions	Main/secondary public survivor pension from your spouse or partner
Public Pensions	Public old age pension, public early retirement or pre-retirement pension, public disability insurance, public invalidity/incapacity pension, war pension
(Self-)employment	Wages, salaries or other earnings from dependent employment or self-employment
Private Transfers	Life insurance payments, private annuity/personal pension, private health insurance payments, alimony, regular payments from charities
Unemployment insurance	Public unemployment benefits, social assistance
Occupational pensions	Occupational pension from last job/second job/third job, occupational early retirement pension, occupational disability or invalidity pension, occupational survivor pension from your partner's job[1]

Figure 4 displays the average amount of the different income sources before and after widowhood, whereby the averages consider only individuals with a respective income type. By definition, survivor pensions can only be received after becoming widowed. They amount to an annual average of approximately 6,770€. The most common income source in our sample are public pension benefits. With 935 persons, the majority of the sample is already retired before widowhood and claims their public pension. The number increases only marginally after the partner dies to 963 recipients. On the other hand, the annual amount of public pensions slightly decreases after becoming widowed. The average public pension amounts to approximately 1,200€ before widowhood and the decrease after widowhood is only small and not significant. In fact, one's own pension is influenced indirectly, if at all, by the loss of the partner (e.g. through different taxation) and should therefore remain relatively constant, as can be observed. Earnings from (self-)employment decline from 13,424€ to 10,182€ with the widowhood. One reason for this could be that widows stop working or reduce their working hours after the death of their partner. This development is mainly driven by individuals that are still employed, while the work income from retired individuals remains quite stable after widowhood (see Figures A2-A4 in the appendix). In this context, it is important to note that in all countries except Poland there are earnings limits in order to be eligible to receive (full) survivor pensions, which creates disincentives to be active in the labor market. The amount of private transfers increases after widowhood, which is reasonable since this category also includes life insurances and private pensions of the deceased person. Only retired people reported income of this category (see Figures A2-A4 in the appendix). Payments from unemployment insurances are on average lower after widowhood, which might also be related to the reduction of payments from the social security system when receiving survivor pensions. The payments from

[1] Unfortunately, not all waves of SHARE ask for the explicit composition of occupational pensions, which is why we cannot look at occupational survivor's pensions separately.

occupational pensions show a slight increase, which can be explained by the fact that occupational survivor pensions from the job of the deceased partner are included in this category.

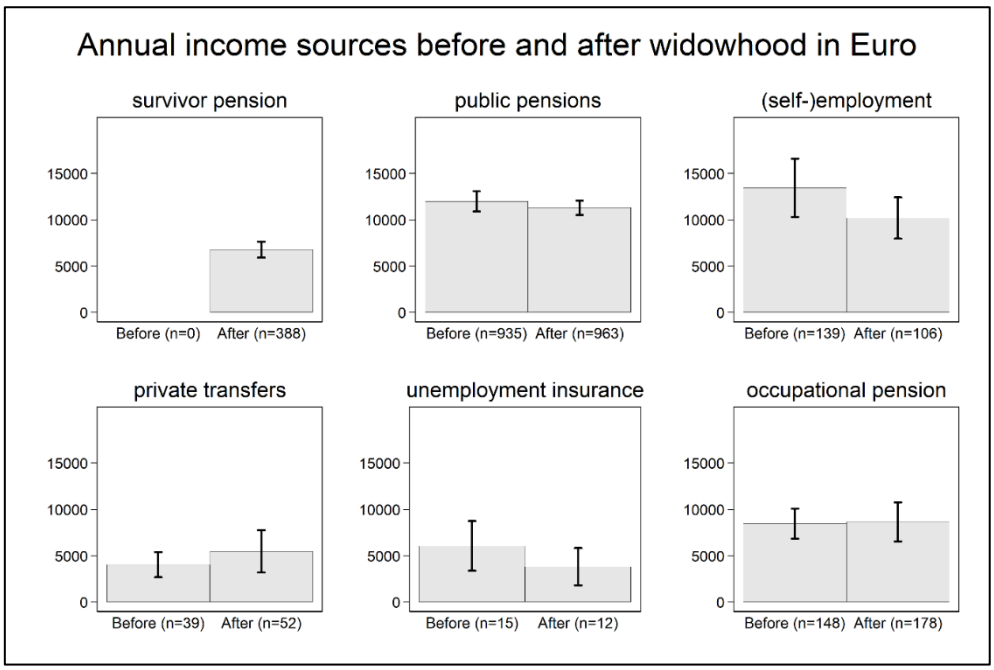

Figure 4: Income sources of surviving partner before and after widowhood

The availability of income sources partly depends on the social security system of the country, which makes international comparisons interesting. However, the number of individuals receiving a certain income source is too small for country-level analyses.

For the same reason, it is unfortunately not possible to examine the survivor pension's labor market incentives with our sample. From the 1,318 observations in the panel sample across all countries, only 103 are employed before becoming widowed. (see Table 4). Among these, 35 persons leave the labor market after becoming widowed. Based on such small numbers a deeper analysis is not possible and we cannot draw conclusions on the correlation between the exit from the labor market and a countries survivors' pensions' structure.

Table 4: Labor market status before and after widowhood

	Retired	(Self-)employed	Unemployed	Sick	Other	Total
Before widowhood	967	103	16	21	212	1,318
After widowhood	1,005	68	10	21	214	1,318

5.2 Household expenditures

Besides examining the household income, it is also important to look at the household expenditures. Most widows and widowers live in a one-person household and remaining fix costs (rent, electricity etc.) can lead to higher per capita expenditures. On the other hand, costs for medical treatments, drugs or care could decrease, especially if the partner suffered from an illness before death. Figure 5 displays

the per capita household expenditures before and after widowhood by country[2]. With Israel being the only exception, the per capita household expenditures decrease after the death of the partner. It is important to note that by the conception of the SHARE questionnaire the per capita household expenditures are much lower than the per capita household income. While there is a limited number of income sources, which are well represented in SHARE as shown in Table 3, there are innumerable ways to spend the money and it is difficult for the respondents to recall all the different amounts spent in the various categories. Therefore, the household expenditures considered in SHARE only include essential expenditures[3]. From Figure 5 we can conclude that the inevitable household expenditures decrease on average after the death of the partner. However, we cannot compare total household income and total household expenditures before and after widowhood to assess whether there is a financial deficit or surplus after the death of the partner. For the assessment of financial hardships after becoming widowed, we make use of another question in SHARE, which asks whether a household is able to make ends meet.

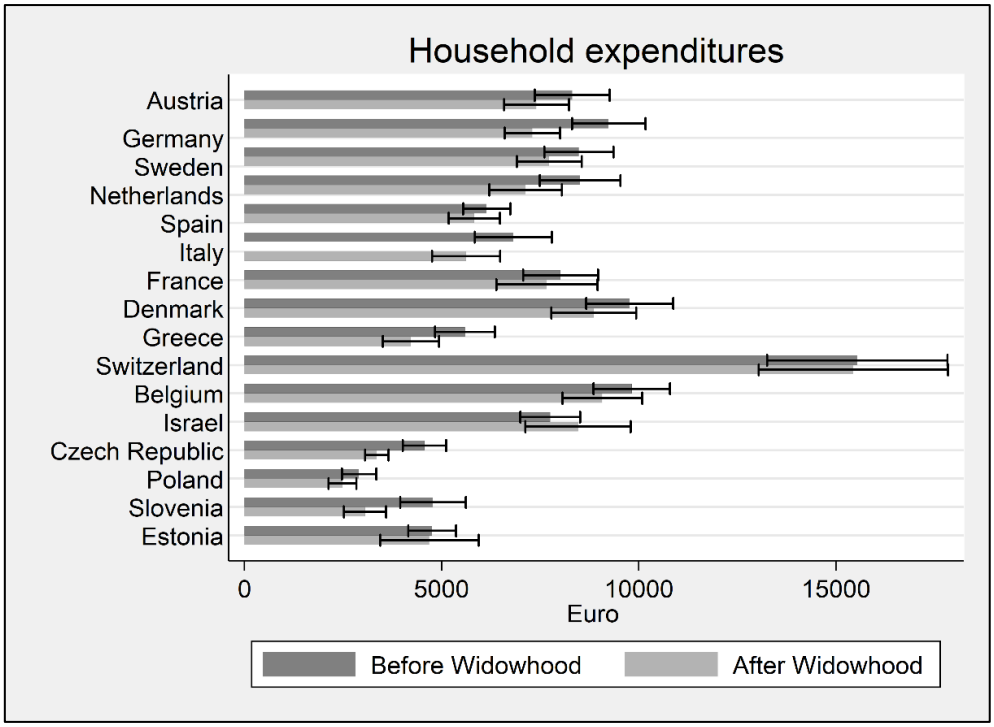

Figure 5: Annual per capita household expenditures before and after widowhood

5.3 Financial Difficulties

Figure 6 represents the answers given to the question on how well a household is able to make ends meet before and after becoming widowed. The picture looks very similar for male and female respondents. The proportion of those who are able to make ends meet only with great difficulty increases for both male and female respondents. Fewer men answer that they have some difficulties to make ends meet after the death of the partner than before, while for female respondents this proportion slightly

[2] Portugal was excluded from further analyses because the sample size is below n=50

[3] Expenditures include: amount rent paid, other home-related expenditures: charges and services, food at home consumption, food outside home consumption, home produced consumption, out-of-pocket payment for inpatient care, for outpatient care, for drugs, for nursing home / home care.

increases. The proportion of respondents managing fairly easily decreases both for widows and widowers. The share of respondents saying that they are able to make ends meet easily increases for both genders after the death of their partner, although there is a higher increase for widowers. Overall, only a small part of the sample experiences greater financial difficulties after becoming widowed.

Figure 6: Financial difficulties by gender

Figure 7 displays the financial situation in terms of making ends meet for the different countries with the binary indicator that combines "with great difficulty" and "with some difficulty" as well as "fairly easily" and "easily". In general, in Northern and Western countries few respondents report financial difficulties. In contrast, a higher proportion reports financial problems in Southern and Eastern countries. An increase of the share of respondents reporting greater financial difficulties after the death of the partner can be found in the following countries: Austria, Sweden, Netherlands, France, Denmark, Greece and Switzerland. In all other countries, the widows and widowers report that they have fewer difficulties than before, namely Germany, Spain, Italy, Switzerland, Belgium, Israel and Czech Republic. Whether the financial challenges increase or decrease with widowhood does not seem to depend on the proportion of reported financial problems in a country. For instance, in Germany and Austria there are only few responds suffering from financial difficulties. Nevertheless, the share decreases in Germany and increases in Austria after widowhood. We examine whether these country deviations can be attributed to the generosity of the public survivor pension system of the different countries in the next chapter.

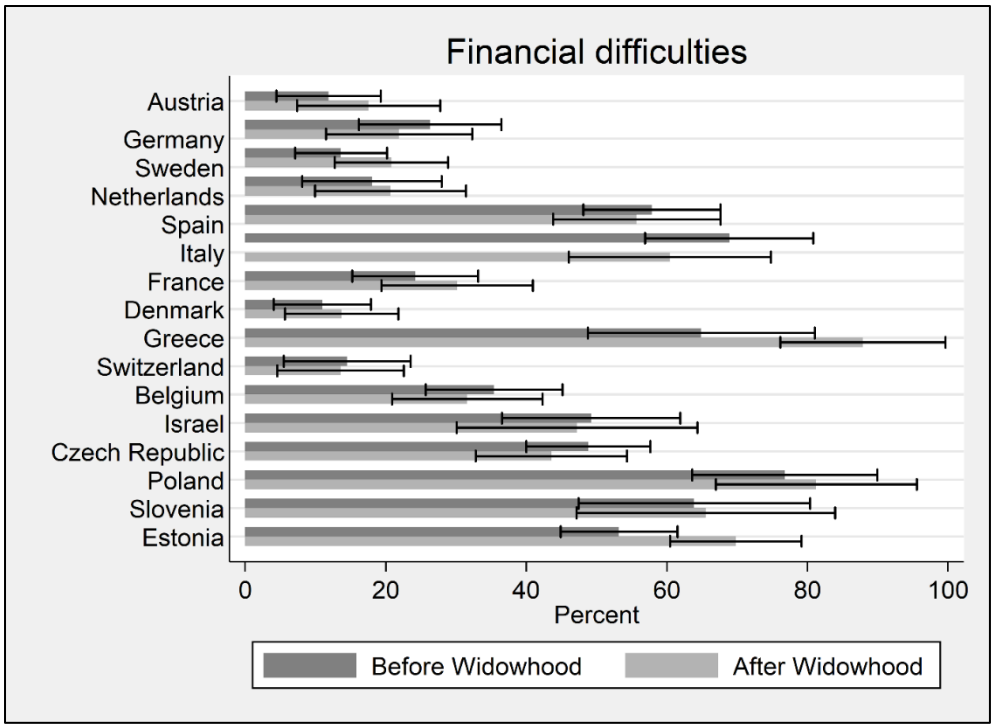

Figure 7: Financial difficulties by country

To find out which other factors influence the financial situation after the death of a partner, we run a multivariate probit regression with the binary indicator of financial difficulties as a dependent variable based on the pooled sample of 30,105 widows and widowers. The results are displayed in Figure 8. Women are more likely to report financial difficulties after the death of a partner. Younger age groups, especially aged between 50 and 59, have a higher probability of reporting financial problems compared to those being aged 80 and older. Having children increases the probability significantly only in case of four children and more. The lower the educational level counted by the years of education, the higher the probability of reporting financial difficulties. The employment status plays an important role. Both being employed or self-employed has the biggest negative influence on the probability of reporting financial problems, meaning that being employed makes it less likely for individuals to reporting financial difficulties. Being retired also makes it less likely to report financial difficulties compared to the reference category. In contrast, receiving payments from public pensions does not have a significant effect on the probability of financial difficulties, most likely because this category includes not only old-age pension, but also disability, incapacity and war pension. Receiving payments from the unemployment insurance is connected to a higher probability of having problems to make ends meet. On the other side, payments from private sources (e.g. life insurance, private pension plans), from occupational pensions and from public survivor pensions have a positive impact on the probability of reporting financial difficulties. A better self-reported health status significantly decreases the probability of reporting financial difficulties. Being widowed for less than a year is negatively related to the probability of reporting financial problems, which was already shown in the bivariate summary statistics.

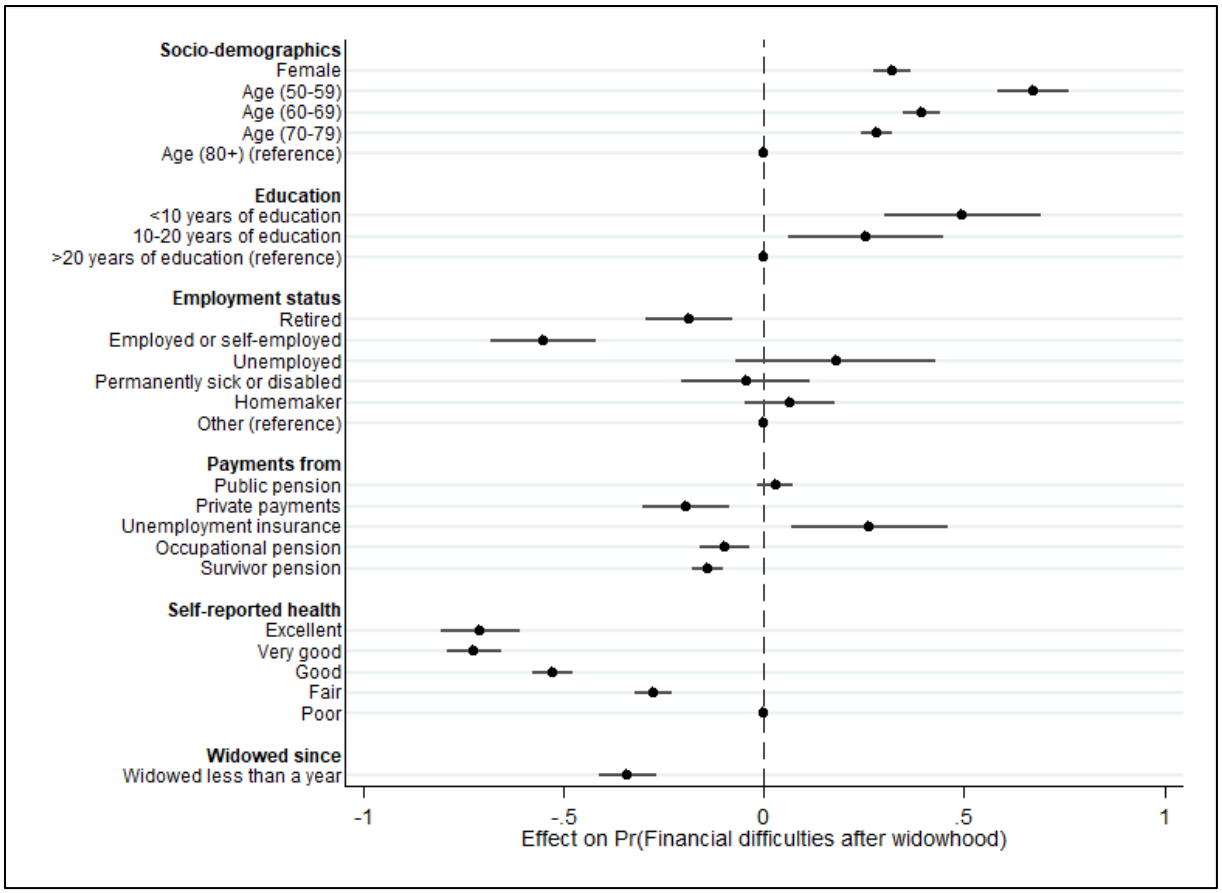

Figure 8: Marginal effects of multivariate probit regression based on 30.105 widowed persons including country-fixed effects

Overall, the results show being female, having a low educational level and not being employed increase the risk on having financial difficulties in widowhood. All of these factors can be attributed to the labor market performance and the contribution time to the public pension system over the life course. The negative relationship between age and the probability of reporting financial problems might be related to the fact that persons between 50-59 have more financial obligations than older persons, such as paying back outstanding debts or supporting their children if they are still in education. It could also be that their standard of living is higher (travels, leisure time activities, multimedia equipment) and they have a different perception of financial hardships. Moreover, the income loss could be higher, since survivor pensions amount only to a fraction of normal pensions which are already smaller than the former labor income.

6. The role of the public survivor pension system

6.1 The rating system

The previous chapter has shown that overall, the per capita household income does not change much after someone becomes widowed and there are only few people experiencing financial hardships after the death of their partner. However, we see that in some countries, the pattern looks different and we want to examine whether these differences can be explained by the institutional settings of the public survivor pension system.

The variety of policy features in a public survivor pension system makes it difficult to compare the systems across countries. For this purpose, we develop a rating system with the aim of classifying and clustering countries according to their generosity of survivor pensions. The rating system consists of five different categories reflecting different aspects of the system: Beneficiaries for survivor pension payments, necessary contribution time, amount of survivor pension benefits, eligibility ages or other restrictions and limit of total benefits (earnings tests). Each category is evaluated on a qualitative basis resting upon the dimensions demonstrated in Table 4. Each country is given a score for each of the five categories between zero and one, which is then summed up to one single score between zero and five. This quantification allows a numerical comparison between the countries, where a higher score reflects a more generous system. Table A2 in the appendix gives an overview of these five dimensions and the respective generosity score for the considered countries.

Table 4: Rating system for the generosity of survivor pensions

	Dimension	**Score**
Beneficiaries	widowers married to deceased person at time of death	**0**
	registered partnerships / living together permanently	**1/3**
	divorced spouses with financial dependence / special regulations	**2/3**
	divorced spouses	**1**
Contribution time	60 insurance months	**0**
	36 insurance months	**1/2**
	basic pension without contributions / no minimum insurance time	**1**
Amount of benefits	low flat-rate	**0**
	50% - 65%	**1/3**
	65% - 80% or 50% - 65% + flat-rate	**2/3**
	>80% or 65% - 80% + flat-rate	**1**
Eligibility ages	no permanent payment	**0**
	payment as long as taking care for child / unable to work / eligible for pension	**1/4**
	permanent payment if 45 or older	**1/2**
	permanent payment if 30 or older	**3/4**
	no min age for permanent payment	**1**
Limit of total benefits	no work allowed	**0**
	income test	**1/2**
	no income test	**1**
Maximum Score		**5**

Figure 9 shows the ranking of the countries according to our measurement of the generosity index. Spain, Belgium and Switzerland have the most generous survivor pension systems. The least generous systems can be found in Estonia and the Czech Republic, followed by Sweden and Denmark. As a next step, we analyze the relationship between the generosity of a survivor pension system, the share of recipients and the amount of payments of survivor pensions in the respective countries.

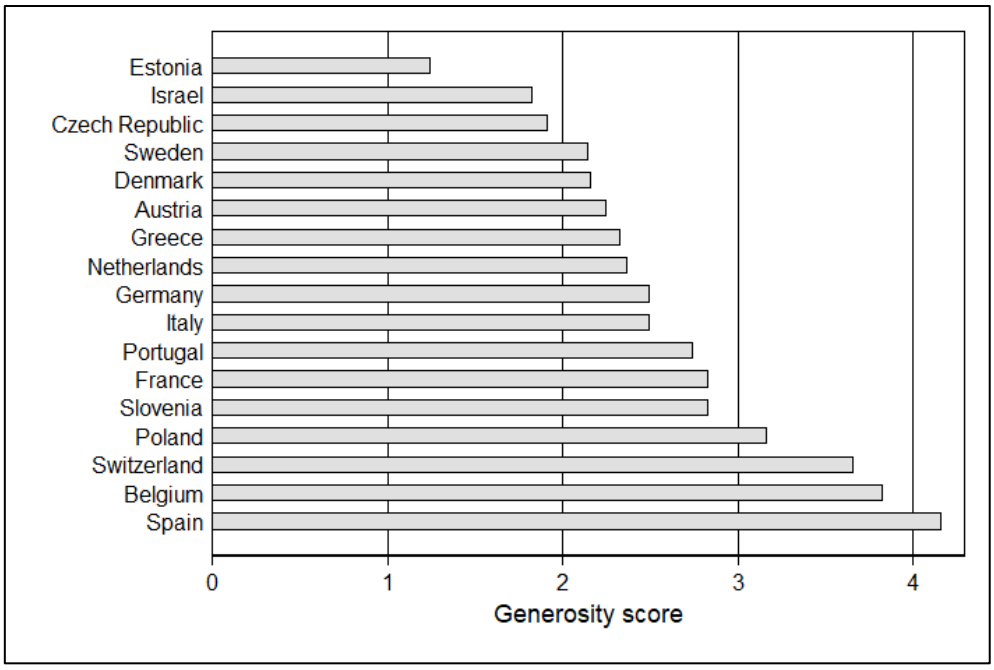

Figure 9: Generosity of survivor pension systems

6.2 Generosity and survivor pension payments

We associate the generosity of a survivor pension system with the share of the survivor pension recipients among widows and widowers of a country. Results are displayed in Figure 10.

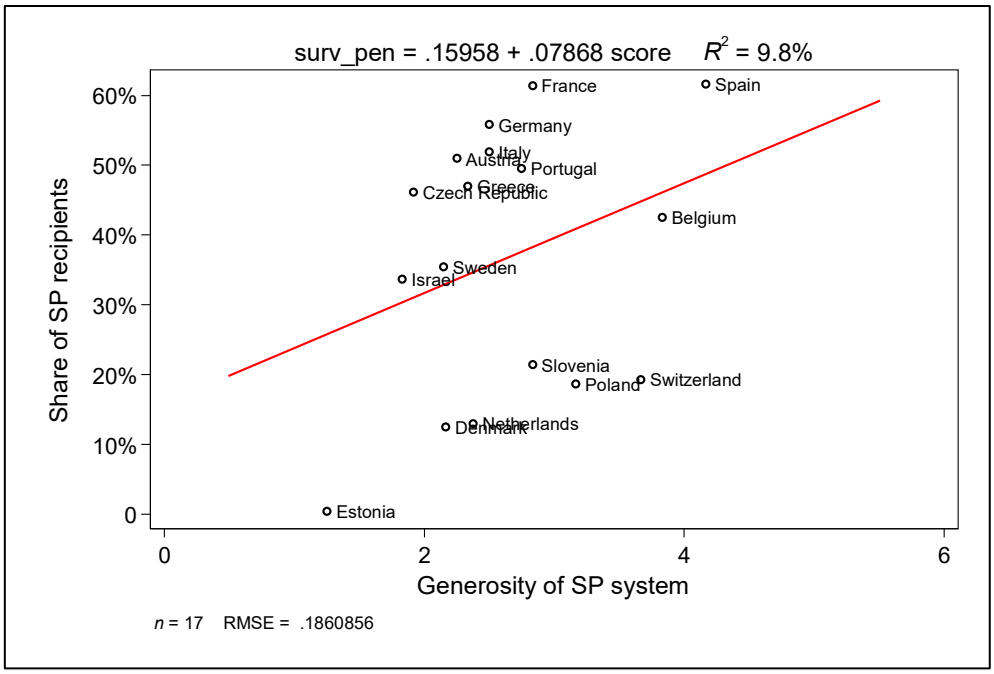

Figure 10: Generosity of survivor pension systems and the share of survivor pension recipients

The picture shows that there is a positive correlation between the generosity of a survivor pension system and the share of recipients in a country. However, only a low part of the variation in the population shares can be explained by this relationship (R^2=9.8%), therefore the association between these two variables is not very strong. Still, there are no clear outliers disturbing the picture. Estonia has the least

generous system as well as the lowest share of recipients. Spain with the most generous system has the second highest share of survivor pension recipients. Germany, France and Italy show high shares of recipients, but their generosity score is average. The contrary holds for Poland and Switzerland with an above-average generosity score, but a rather low share of recipients. Overall, our results show that there is a positive relationship between the generosity of a system and the share as well as the amount of survivor pensions.

Figure 11 shows the relationship between the generosity and the annual average amount of survivor pension payments. As before, we observe a positive relationship meaning that the higher the generosity score, the higher the amount of pensions paid. The picture looks more straightforward this time and the R^2 of 51.0% indicates that the generosity score explains almost half of the variation in the amount of survivor pension payments. Estonia with the least generous system reveals one of the lowest average amount of survivor pensions, while Belgium and Switzerland fit in the picture of the highest average amount since they have the most generous systems. While there is a surprisingly high share of survivor pension recipients in the Czech Republic (Figure 10), the payments are very low and in line with the low generosity score.

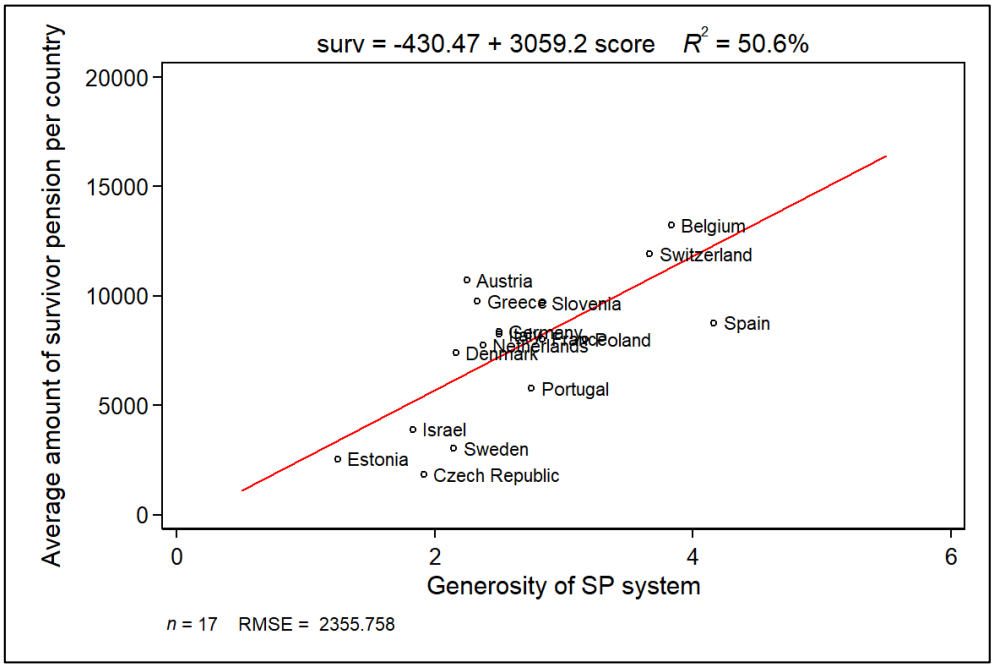

Figure 11: Generosity of survivor pension systems and the average annual amount of survivor pension

These two graphs show that there is a positive relationship between the generosity of a system and the share and the amount of the survivor pensions. This is not surprising, but rather showing that our condensed indicator of the generosity of a system reflects the occurrences in the data and justifies the usage of the indicator in trying to answer the question what role the survivor pensions play in the financial wellbeing after the death of a partner. A first impression is given by the relationship between the generosity of a system and the question on how well a household is able to make ends meet after widowhood. Figure 12 graphically illustrates whether surviving partners on average make ends meet

more easily or with more difficulty after the death of the spouse and how this is connected to the generosity of a country. Around 8% of the variation of the financial well-being of a widow(er) can be explained by the generosity of the survivor pension system. In many countries (Sweden, Netherlands, Italy, Slovenia, Poland, France, Czech Republic), the households on average do not face any changes in being able to make ends meet before and after becoming widowed. In other words, in these countries, the standard of living can on average be maintained after the widowhood. In other countries (Germany, Austria, Belgium, Switzerland, Spain), the widows and widowers are on average able to make ends meet more easily after the death of the partner. Among these countries, Spain, Switzerland and Belgium have the most generous survivor pension systems. In Denmark, Estonia, Greece and Portugal, people on average are making ends meet with more difficulties after the partner dies. Estonia has the least generous system in terms of survivor pensions. Greece, Portugal and Israel are outliers in the sense that they have a moderate generous system, but people on average have the biggest financial difficulties after the partner dies compared to the situation before. This might be the result of other institutional factors, cultural circumstances or simply because the number of observations in these two countries are particularly low. If we leave out these two countries, the R^2 rises up to 43.7 % (Figure A1 in the appendix).

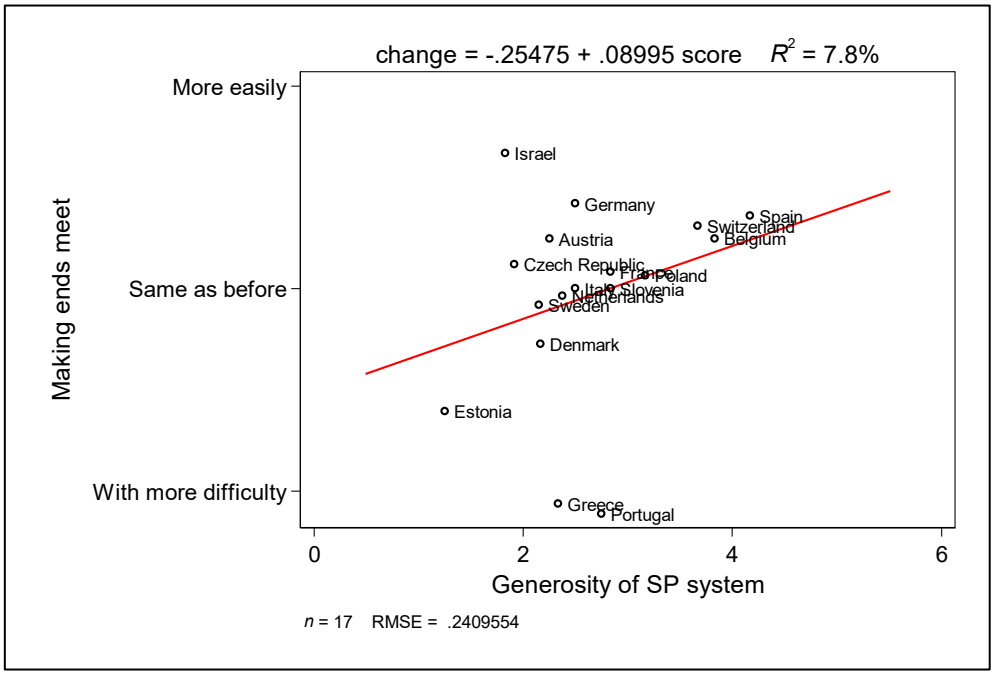

Figure 12: Generosity of survivor pension systems and financial difficulties of widows/widowers

Overall, we see that a survivor pension system supports widows and widowers to ensure the livelihood or even the standard of living after the death of the partner. However, we also see that in some countries, people are able to make ends meet more easily after becoming widowed. This leads to the question whether in some countries the survivor pension system is too generous. It is difficult to assess on an individual level whether the targets of survivor pensions either to prevent poverty or to ensure the same living standard as before widowhood are met. Based on the SHARE data, it is not possible to quantify

the exact expenditures of a household, so we cannot compare the needs and the financial basis. Alternatively, we compare the financial situation of persons who were never married and widowed persons to assess whether widowed persons are better off due to the support of the survivor pension payments. We divide the countries into two groups: the first group are the countries with a generosity score below the average (Estonia, Czech Republic, Sweden, Denmark, Austria, Greece, Netherlands, Germany, Italy) and the second group consisting of countries with a generosity score above the average (Portugal, France, Slovenia, Poland, Switzerland, Belgium, Spain). Figure 13 and Figure 14 show the financial situation of never married and widowed persons for both country groups respectively.

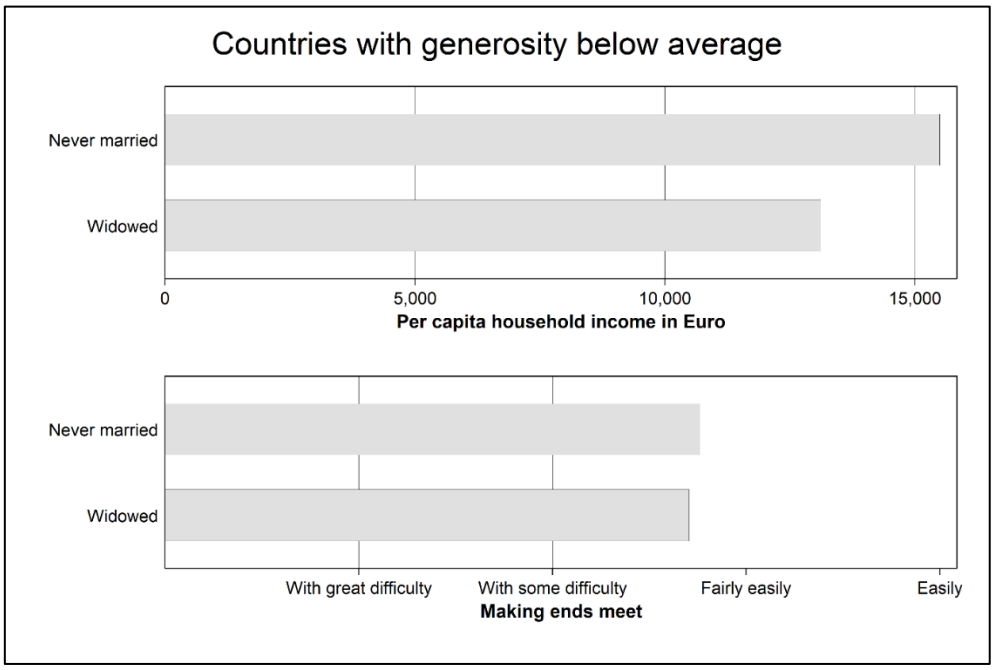

Figure 13: Generosity of survivor pension systems and financial difficulties of widows/widowers

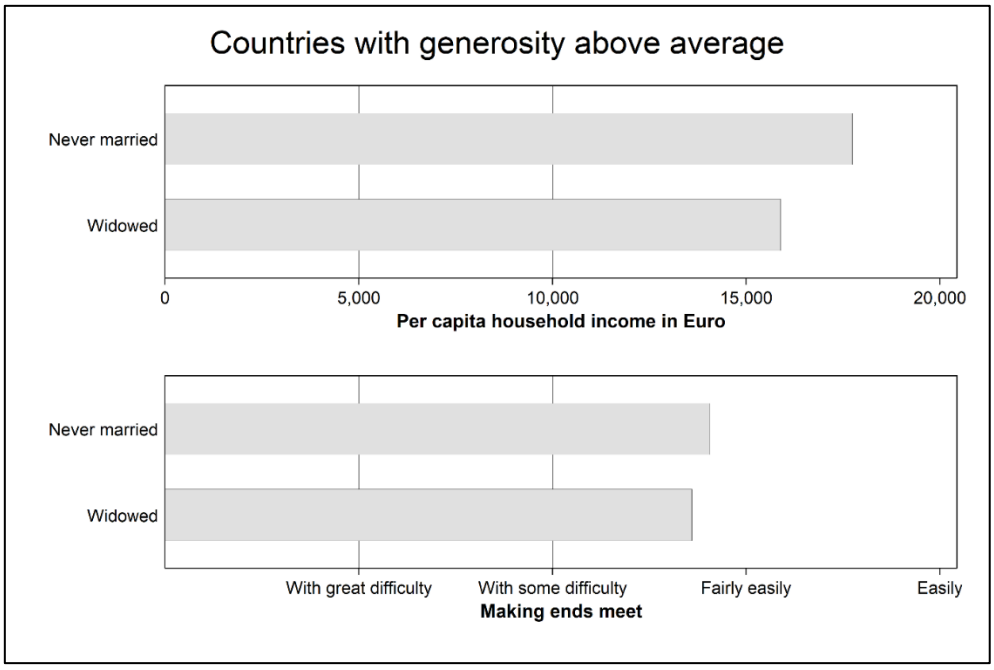

Figure 14: Generosity of survivor pension systems and financial difficulties of widows/widowers

The pattern is similar for both groups of countries. Persons that were never married have higher per capita household income and are able to make ends meet slightly more easily. However, these differences are not significant. Therefore, based on these graphs we cannot draw any conclusions on the targeting quality of the survivor pension systems.

Another way to find out whether the survivor pensions are targeted to the right persons is to look at the group of widowed persons and differentiate between those receiving survivor pensions and those not receiving survivor pensions. Most of the differences between the groups are small, but significant and as expected. Those who receive survivor pensions are on average six months younger, female and are living in a slightly bigger household. The age difference corresponds most likely to the gender difference. The larger household size indicates that caring for children and in some countries for other relatives increase the probability for a survivor pension. Fewer recipients of survivor pensions are still employed and have on average less years of education, which both reflect the effectuation of the income-tested granting of survivor pensions. The total household income (including survivor pensions) is significantly higher for the recipients of survivor pensions. However, if they would not receive the 6.682€ of average survivor pensions payments, their total household income would be significantly lower. The differences in terms of household expenditures, financial problems and self-reported health are not significant. This table shows that overall, the design of the pension systems are such that they target the widowed persons in need. However, the payments might be too generous since the total household income of recipients exceeds the income of the non-recipients even though the share of man is higher in the group of widowed persons not receiving survivor pensions. Thus, the evaluation of the appropriateness of the survivor pensions systems really depends on whether the aim is to prevent poverty or if the living standard should be maintained.

Table 5: Group differences conditional on being widowed

	(1) receiving survivor pensions		(2) not receiving survivor pensions		(3) difference	
	mean	sd	mean	sd	b	t
Age	75.05	9.66	75.69	9.56	0.63***	(5.56)
Female	0.94	0.24	0.73	0.44	-0.21***	(-53.22)
Household size	1.19	0.39	1.18	0.38	-0.01**	(-2.61)
Being employed	0.05	0.22	0.07	0.25	0.02***	(5.74)
Years of education	8.93	4.00	9.53	4.06	0.61***	(12.76)
Hh income	15029	10771	13647	11542	-1382***	(-10.54)
Survivor pension	6682	8456	0.00	0.00	-6682***	(-85.20)
Hh expenditures	5966	4294	6036	4562	69.97	(1.34)
Financial problems	0.40	0.49	0.40	0.49	0.01	(1.50)
Self-reported health	3.50	1.01	3.53	1.04	0.02	(1.93)
N	11624		18481		30105	

7. Discussion and Conclusions

Our research purpose was to examine the effect of widowhood on the financial situation of the surviving partner and on the role of survivor programs on the financial security. Our main results show that the total household income indeed decreases due to the death of the partner. Nevertheless, the main part of the income drop should be irrelevant since the number of household members also decreases. Therefore, it is more reasonable to look at the per capita income, which only slightly decreases over all countries. However, there are some exceptions (in both directions) if we are looking at the changes from a country wise and a gender wise perspective.

Similar to the per capita income, the probability to make ends meet does not change remarkably. Overall, more individuals report a better financial situation than a worse financial situation. Again, this does not hold true for all countries. Some of these country differences can be explained by our generosity index.

All in all, survivors' pensions continue to be necessary if the standard of living ought to be maintained. In addition, the survivor programs seem to keep the risk of old-age poverty among widows low. However, we could not conclusively clarify to what extent the survivors' programs cause the undesirable incentives and redistribution effects mentioned in the introduction. Overall, the role of the survivor pensions changed from the indispensable co-family insurance to an additional income source in old age. Many countries reacted to the changing requirements and adapted their survivor pension systems by introducing stricter eligibility rules and income-tests. However, the circumstances for the next generations of survivor pension recipients will be different again given the permanent change of family structures, labor market conditions, financial literacy and shift to private funds and insurances. Thus, the survivor pension systems need constant revision and modernization, especially under the prerequisite of avoiding labor market disincentives.

Two main issues make the research on survivor pensions and especially on the role of the institutional background challenging. First, it is difficult on an individual level to quantify the needs for financial support after becoming widowed. Although the SHARE dataset offers detailed information on the income sources, the risk of misreporting is high for financial variables. Moreover, there is no detailed information on the total household expenditures, so that the need for financial support cannot be calculated directly by comparing household income and household expenditures. Therefore, we base our analysis on the financial well-being of a household on the question how well a household is able to make ends meet, which is a subjective assessment of the situation and might be influenced by personal and cultural factors.

The second challenge is on the institutional level. The survivor pension systems are very complex and there are many exceptions and rules, which are difficult to condense into a single country indicator. Even though our analysis showed that part of the variation found in the data concerning the occurrence and magnitude of survivor pensions in a country can be explained by our generosity score, there are

many other influencing factors. These can be on the institutional level (support from alternative social security pathways), on a cultural level (family support) or on a personal level (private financial sources, financial literacy, living standard). This variety of influencing factors makes it difficult to assess the role of survivor pensions in the financial situation of a widow or widower. Furthermore, survivor pension systems are not only complex, they also change over time and new regulations and reforms are implemented for different cohorts. Different age cohorts are connected to different concepts of life and to different social norms. It would be interesting to study the impact of survivor pensions for different age cohorts taking into account their life history. This would shed light especially on the need of survivor pensions for different generations mainly depending on the labor market activities of women. This could be a future project using the SHARELIFE data.

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APPENDIX

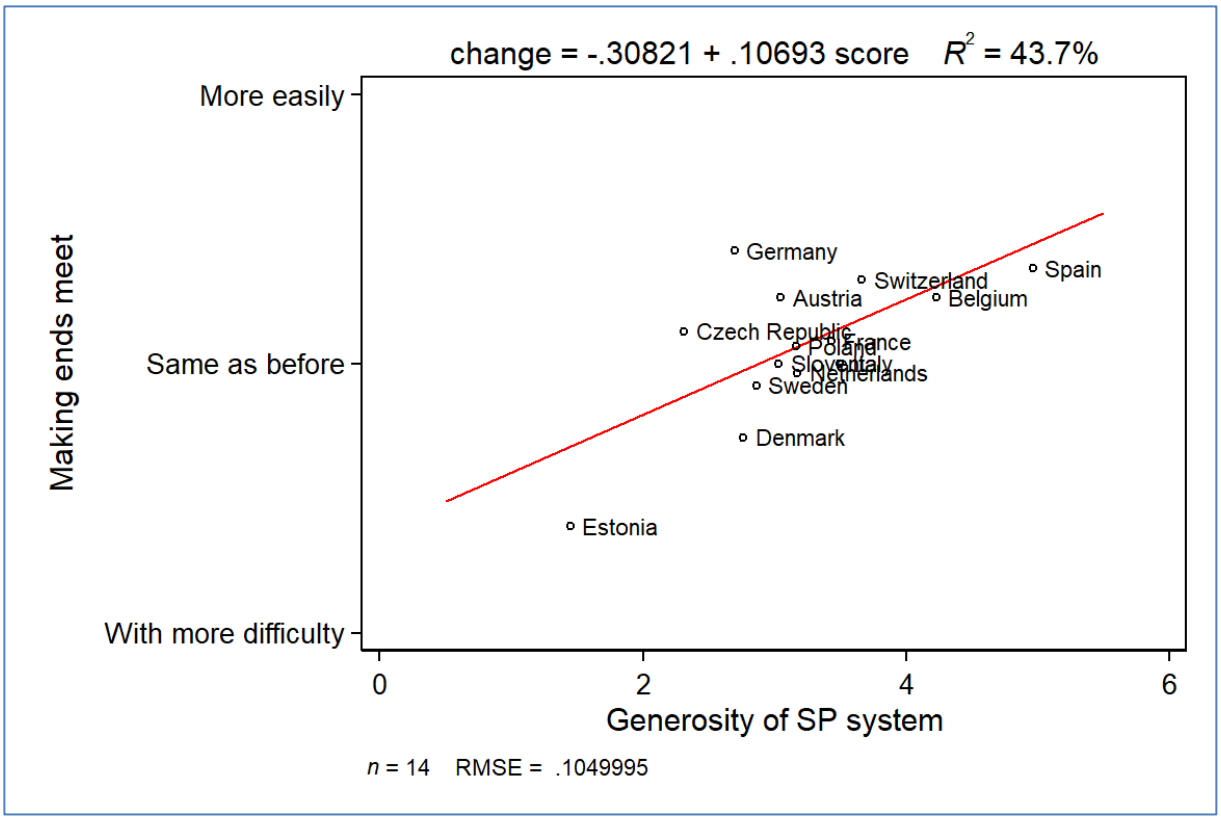

Figure A1: Generosity of survivor pension systems and financial difficulties without Greece and Portugal

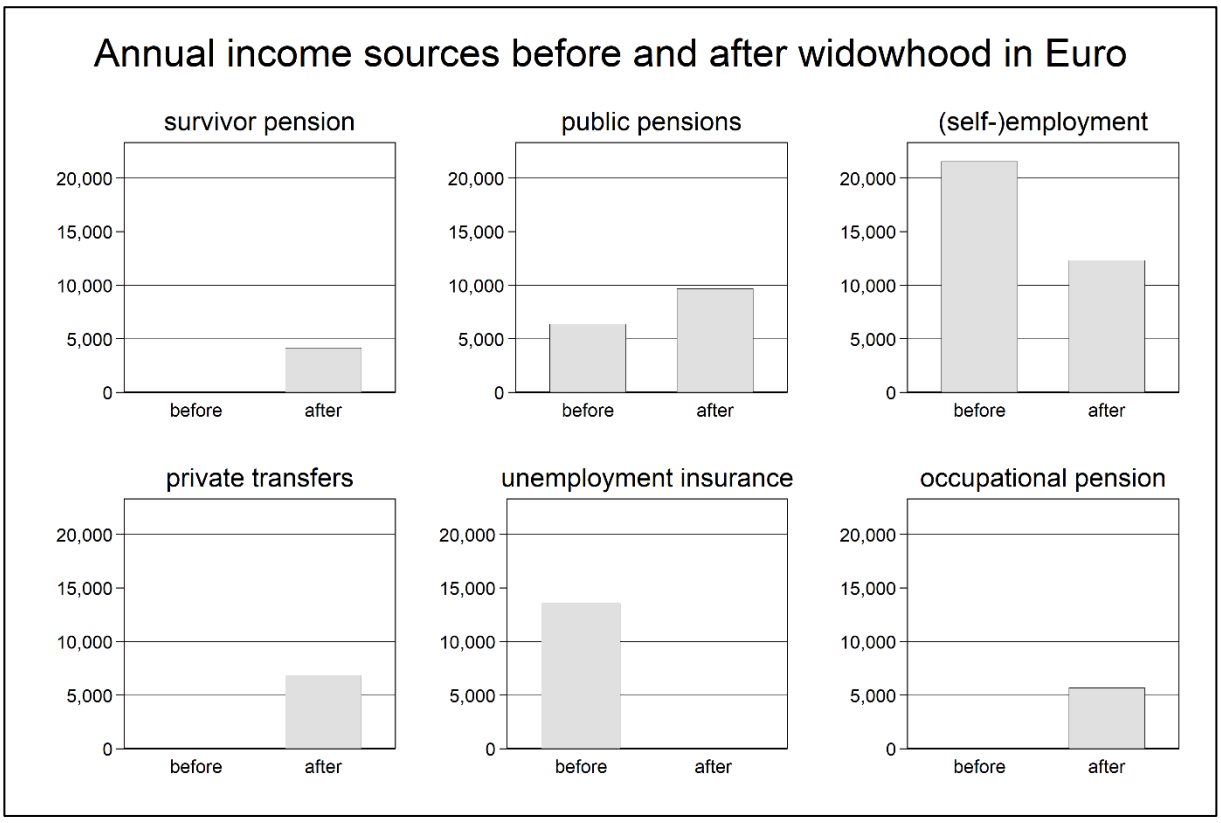

Figure A2: Income sources conditional on being retired before and after widowhood (n=899)

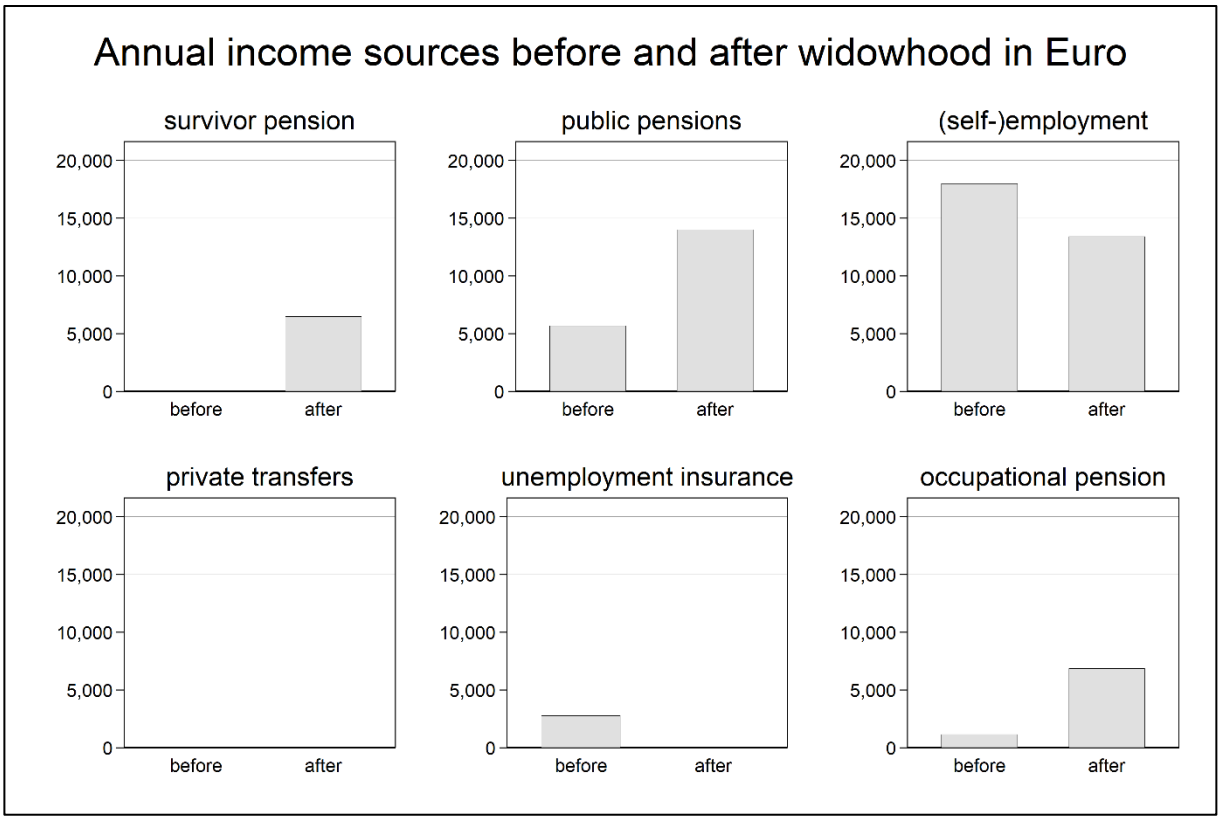

Figure A3: Income sources conditional on being employed before and after widowhood (n=60)

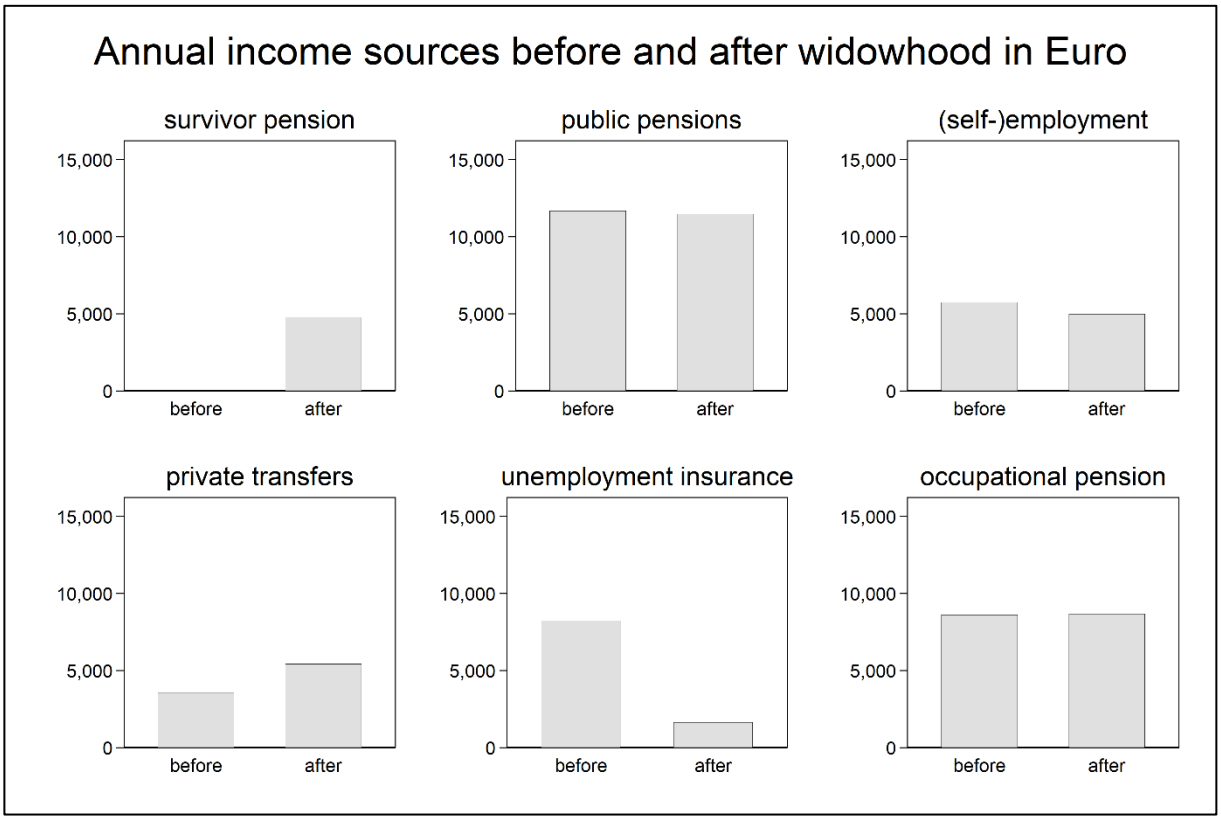

Figure A4: Income sources conditional on being employed before widowhood and retired after widowhood (n=35)

A2. Institutional Details of Survivor Pension Systems.[4]

	Ranking	Austria	Germany	Sweden		Netherlands	Spain	Italy	France	Denmark
				married before 1990	married after 1990					
Beneficiaries	0: widowers married to deceased person at time of death 1/3: registered partnerships / living together permanently 2/3: divorced spouses with financial dependence or other special regulations 1: divorced spouses	spouse, registered partners; divorced spouse if receiving maintenance from deceased person at time of death	spouse, registered partner; divorced spouse if financially dependent on deceased	spouse widow's pension only for married women	spouse person who lived with deceased permanently	surviving partner, divorced spouse	spouse, separated and divorced if not remarried	surviving spouse, partner, divorced spouse with financial maintenance	surviving spouse, divorced spouse, invalid spouse	spouse, partner, cohabitant (at least 2 years), divorced spouse with financial maintenance
		2/3	***2/3***	***0***	***1/3***	***1***	***1***	***2/3***	***1***	***2/3***
Contribution time	0: 60 insurance months 1/2: 36 insurance months 1: basic pension without contributions or deceased had to be only insured	deceased having 60 insurance months within last 120 calendar months; after age 50 gradually increase to 180 insurance month in past 30 years	deceased having 60 months of insurance or 36 month in last 5 years	Guaranteed pension: Resident in Sweden for 3 years income-related pension: Resident in Sweden with pensionable income for 3 years Remarriage: Pension ceases	Guaranteed pension: Resident in Sweden for 3 years income-related pension: Resident in Sweden with pensionable income for 3 years Remarriage: Pension ceases	deceased must have been insured at time of death	500 days (16,5 months) within 5 years before death or contribution of at least 15 years	deceased must receive a pension already; otherwise indirect pension if deceased had at least 5 years of contribution with 3 in last 5 years or 15 contribution years in total if requirement for indirect not met, there is one-off allowance	contribution for at least 3 months in year prior to death	2 years of full contribution
		0	***1/2***	***1/2***	***1/2***	***1***	***1***	***0***	***1/2***	***3/4***
Amount of benefits	0: low flat-rate 1/3: 50%-65% 2/3: 65%-80% or 50%-65% + flat-rate 1: >80% or 65%-80% + flat-rate	up to 60% of invalidity/old-age pension	before reform: 60% after reform: 55% of pension	income-related: 55% of pension (as long as child under 12; for 24 month if child under 18, else for 12 months only) guaranteed: 2.13 price base amounts (after age 65) 40% of old ATP system (permanent)	income-related: 55% of pension (as long as child under 12, for 24 month if child under 18, else for 12 months only) guaranteed: 2.13 price base amounts (after age 65)	70% of minimum wage	70% if i) there are dependent hh-members ii) survivor pension is greater than 50% of survivors total income iii) other minimum income test else 52%	60% of pension	54% of pension	survivor allowance (before retirement age) 2021 €/year social pension: 3 month previous payment than recalculation of own pension to single terms, which increases the pension by 35%. ATP: 35 % of pension, after 2002 a lump-sum payment of 6050€ gradually reduced to zero between deceased age 66 to 69
		1/3	***1/3***	***2/3***	***1/6***	***0***	***2/3***	***1/3***	***1/3***	***0***
Eligibility ages	0: no permanent payment 1/4: payment as long as taking care for child or unable to work or eligible for pension 1/2: permanent payment if 45 or older 3/4: permanent payment if 30 or older 1: no min age for permanent payment	35 or older	45/47 or older	no limitations	as long as child under 12, but only until age 65	until statutory retirement age if: taking care for child or 45% incapacitated to work	no limitations	no limitations	55 or older	no age limit for survivor allowance but relevant compensation not before retirement age
		3/4	***1/2***	***1***	***1/8***	***1/8***	***1***	***1***	***1/2***	***1/4***
Limit of total benefits	0: no work allowed 1/2: income test 1: no income test	Yes, 60% reduces by Y(Dead)/Y(Spouse) + Y(SP)+Y(Spouse)<=1956.12€ per month	Yes Exempt: 26.4 times actual pension value Reduction: 40% of surplus net income	yes	yes	Exempt: 50% of minimum wage+ 1/3 of all earnings in excess of this amount No benefits if income is higher than 2109€ + 45% incapacitated to work	Yes but indirect.(52% vs. 70%)	Yes reduction by 25%, 40%, 50% if total income exceeds 3, 4, 5 times minimum wage	Yes gross annual income must not exceed 20862,4€ (33379€)	income is considered (at least before retirement age)
		1/2	***1/2***	***1/2***	***1/2***	***1/4***	***1/2***	***1/2***	***1/2***	***1/2***
	Generosity Score (0 to 5)	2,25	2,50	2,67	1,63	2,38	4,17	2,50	2,83	2,17

[4] In some countries, the assignment to the defined categories is not possible. In these cases, we use the average value between two scores. For example, for the eligibility ages in the Netherlands we assign the value 1/8 (average from 0 and ¼) since the payments are restricted to after the statutory retirement age.

	Ranking	Greece	Switzerland	Belgium	Czech Republic	Poland	Portugal	Slovenia	Estonia	Israel
Beneficiaries	0: widowers married to deceased person at time of death 1/3: registered partnerships / living together permanently 2/3: divorced spouses with financial dependence or other special regulations 1: divorced spouses	spouse, divorced spouse under number of conditions (age and work incapacity rule, financial dependence on deceased spouse, duration of marriage 15 years)	spouses (5 years marriage), divorced (after age 45 and 10 years marriage)	spouse (min one year or similar situation, e.g. child, accident), divorced (not remarried)	spouse	spouse, under certain requirements other relatives (e.g. parents) divorced (right to alimony)	surviving spouse divorced if maintenance payments person living together min 2 years	surviving spouse unmarried partner living at least 3 years together divorced if maintenance payments	surviving spouse divorced spouse under conditions	surviving spouse
		2/3	***2/3***	***5/6***	***0***	***2/3***	***2/3***	***2/3***	***2/3***	***1/3***
Contribution time	0: 60 insurance months 1/2: 36 insurance months 1: basic pension without contributions or deceased had to be only insured	contributions for at least 1500 days, 300 in 5 years before death		deceased must have been insured	5 years of insurance periods over 10 years prior to death	5 insured years	contributions for 36 months.	36 contribution months	Required service years increase with age of deceased 3 by 1 year. 25/26=1year 36-38 6years, 48-50 10 years, 60-64= 14years	12 month before death 24 month in last 5 years 60 months in last 10 years 144 month or 60 months since coming to Israel
		1/2	***1***	***1***	***0***	***0***	***1/2***	***1/2***	***0***	***0***
Amount of benefits	0: low flat-rate 1/3: 50%-65% 2/3: 65%-80% or 50%-65% + flat-rate 1: >80% or 65%-80% + flat-rate	before: 70% now: 50%	80% of public pension + 60% of occupational pension	80% of pension	lump sum (CZK 3490=128,68€ in 2020) + 50% of deceased pension	depends of number of persons eligible. In case of 1 person: 85%	60%	70% reduced by 15% if own pension is claimed	50% one person household 80% two person household 100% three or more	flat-rate depending on age of survivor + income tested living allowance
		2/3	***1***	***1***	***2/3***	***1***	***1/3***	***2/3***	***1/3***	***0***
Eligibility ages	0: no permanent payment 1/4: payment as long as taking care for child or unable to work or eligible for pension 1/2: permanent payment if 45 or older 3/4: permanent payment if 30 or older 1: no min age for permanent payment	55 or older or taking care for children	45 or older or taking care for children	45 or older (increasing)	granted for 1 year after death, continues if - caring for child / parent - work incapable - aged 55 (women)/58 (men) or older re-marriage: pension ceases with a lump-sum grant	50 or older or unable to work or bring up children	35 or older or permanently incapacitated for work	53 or older (if insured) (48 at date of death) or 48 or older (if not insured) (45 at date of death) Ages increasing from 2014-2021 to 58 (e.g. in 2019 56 and 6 months)	retirement age or older or incapable of work or caring for child under 3	40 or older
		1/2	***1/2***	***1/2***	***1/2***	***1/2***	***3/4***	***1/2***	***1/2***	***0***
Limit of total benefits	0: no work allowed 1/2: income test 1: no income test	means-test	yes	own pension of survivor and SP combined to max of 110% of SP	high age or caring or work incapable	after 50 nothing found	yes	Yes Income must not exceed 29% of the lowest pension base Both pensions may not exceed the male pension amount measured from the highest pension base for 40 years of pensionable service	no work allowed	only for men (no rules for women)
		0	***1/2***	***1/2***	***3/4***	***1***	***1/2***	***1/2***	***0***	***1/2***
	Generosity Score (0 to 5))	2,33	3,67	3,83	1,92	3,17	2,75	2,83	1,25	1,83