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by

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Yours, mine & ours - The role of gender and (equivalent) income in preferences for redistribution and public spending*

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Abstract

Using survey data from the International Social Survey Program, we investigate how individual preferences for redistribution and public spending are affected by gender, income and expected future living standard. Applying the concept of the equivalent income, we find that some respondents obtain a higher living standard when living in a multiperson household – due to sharing income within the household – compared to the living standard they could obtain when living as a single. Our results suggest that these individuals may precautionary favor an increase in redistribution and public spending as to insure themselves against the ever present risk of future downward mobility e.g. in case of separation, divorce or widowhood. As on average women obtain a lower income than men, this situation is more likely to apply to women. In that sense our analysis may represent a further step towards understanding the gender gap in preferences for redistributive spending.

JEL-Classification: D12, D31, J12, J16
Keywords: Redistributive preferences, Gender gap, Household equivalence scale

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1 Introduction

Traditionally, economists explain preferences for redistributive spending by income differences and diverging labor market opportunities (see e.g. the seminal work of Meltzer and Richard 1981). Given a utility maximizing behavior, policies that redistribute from the rich to the poor can be expected to be preferred by the poor and opposed by the rich. However, even after controlling for socio-economic characteristics, there is empirical evidence for the existence of a gender gap in these preferences. Typically, it is found that women favor more redistribution and public spending than men (see e.g. Corneo and Grüner 2002, Alesina and Giuliano 2009, Funk and Gathmann 2014).

One possible explanation for the gender gap in preferences may be that there are differences in psychological attributes (Bertrand 2010). Results of experimental studies point into the direction that women are more risk averse (e.g. Eckel and Grossman 2008, Dohmen et al. 2011), dislike competition (e.g. Gneezy et al. 2003, Niederle and Vesterlund 2008) and are more socially minded than men (e.g. Andreoni and Vesterlund 2001). However, we argue that the gender gap in preferences could yet be a result of economic differences and that it might be also worthwhile to take a closer look on how economic differences between men and women are captured in empirical analyses.

In order to estimate preferences for redistribution of survey respondents from twelve different countries, Corneo and Grüner (2002) control for the respondents' income in two ways. First, they relate a respondent's gross income to the respective country's average personal income. As assessing the income data is different in the surveyed countries and as many respondents did not state their income, Corneo and Grüner (2002) additionally proxy income by a survey question on how individuals think their income would change if incomes became more equal in the respondent's country. Either income variable significantly confirms the Meltzer and Richard (1981) hypothesis. Interestingly, the gender dummy is significant and positive when using the income proxy but insignificant when controlling for actual income. Funk and Gathmann (2014) exploit surveys conducted after federal ballot votes in Switzerland to explore gender gaps in preferences for different public spending categories. Their analysis shows that women are more likely to support spending for public health and general redistributive policies. Since they only observe voters' income in some votes, they use house ownership as a proxy. With this, their estimated gender gap remains statistically significant. In a robustness check, however, they perform their estimation with observed household income for a small subset. Their results remain qualitatively the same. Using data from the General Social Survey and the World Value Survey, Alesina and Giuliano (2009) also provide evidence that women seem to favor redistribution. They control for individual and household income, however, based on information to which decile of a country's household income distribution the respondent belongs. Given that women obtain on average a lower income than men OECD (2012), we argue that inappropriately controlling for income differences might falsely attribute some of the effects to gender instead of income differences. On the one hand, the use of the individual or household income neglects that individuals live in households that differ in size and composition and, thus, increasing returns to scale. On the other hand, the income of other household members may matter as this determines the living standard that can be obtained within the household.

Additionally, not only current income but also expected future income may matter for preferences for redistribution (Piketty 1995, Bénabou and Ok 2001). The underlying argument of the so called "prospect of upward mobility" is that today's perceptions about future social upward or downward mobility may shape individual attitudes towards redistribution. Currently poor people may favor a decrease in redistribution when expecting to move up in the income ladder later in life. Expecting future downward mobility, individuals may favor an increase in redistribution (Alesina and La Ferrara 2005). Social mobility has been taken into account in

various ways: First, in terms of subjective expectations. On the one hand subjective measures are based on the past, such as whether the respondent has a higher standard of living, higher occupational prestige score or obtained more years of schooling, respectively, than his or her father (see e.g. Corneo and Grüner 2002, Alesina and La Ferrara 2005, Alesina and Giuliano 2009). On the other hand measures are based on the future, such as whether a respondent expects an increase in the future standard of living (Ravallion and Lokshin 2000, Alesina and La Ferrara 2005, Cojocaru 2014) or, more specifically, in employment mobility (Rainer and Siedler 2008). Second, social mobility can be measured by more objective measures such as a country's average yearly transition matrix between income deciles (Bénabou and Ok 2001, Alesina and La Ferrara 2005). Interestingly, Bénabou and Ok (2001) find in the empirical investigation of this theory with US data, that a sizable fraction of the respondents do anticipate an upward mobility, but the risk of downward mobility counter-balances this effect. Similar results can be found in Cojocaru (2014), who shows that only at low levels of risk-aversion individuals who expect upward mobility prefer less redistribution compared to individuals who do not expect upward mobility. With high levels of risk aversion, however, there is no statistically significant difference in preferences between the two groups.

Edlund and Pande (2002) also address the problem of future income prospects but with respect to the gender gap. They make use of U.S. survey data to examine women's observed shift to the political left, hence, to stronger preferences for larger redistribution after the 1980s. The underlying argument is that male to female income inequality is determined by their marital status. As women on average are poorer than men, marriage decreases male to female income inequality as the richer man shifts financial resources to his poorer wife. In turn, divorce makes women on average poorer. Edlund and Pande (2002) proxy the ever present risk of marital termination (Iversen and Rosenbluth 2006) by the proportion of the adult population that is currently divorced as well as the passage of unilateral divorce laws by U.S. states. They find that divorce tends to make women more democratic as preferences for an increase in redistribution become stronger.

In this paper we follow to a large extent Edlund and Pande (2002) but extend their work in several respects. First, we use data from the International Social Survey Program on Germany which enables us to employ the respondents' actual individual and household income. We concentrate on individuals living in multiperson households and argue that there is a difference in the relative living standard that can be obtained from individual income and from (shared) household income, respectively. We can identify whether individuals obtain a higher or lower living standard when sharing their income within a household compared to the living standard they could obtain from their individual income. Individuals who gain from sharing income within the household face the ever present risk to lose this benefit in case of e.g. separation, divorce or widowhood. Rather than assuming that respondents have precise ideas about their future well-being, we only assume that the probability to lose the household benefit may already make them favor more redistributive spending. After controlling for the household's living standard, we find that respondents who are monetarily better off in the household than they would be as singles significantly favor an increase in redistribution as well as health care and unemployment spending. Since this situation more often applies to women, gender gaps so far found in the literature may be in fact wrongly attributed to gender instead of income differences. The paper proceeds as follows: Section 2 presents the data of the regression analysis combined with descriptive statistics. Section 3 gives the estimation strategy and reports the results for the baseline estimations and some robustness checks. Finally, Section 4 concludes.

2 Data and descriptive statistics

The data is taken from the International Social Survey Programme (ISSP 1996, ISSP 2006), which has annually conducted cross-national surveys covering topics important for social science research in 49 countries since 1985. In this paper we use data of the 1996 and 2006 Role of Government Modules (III and IV). They mainly deal with attitudes toward government responsibilities and government spending, state intervention in the economy, civil liberties, political interest, trust and efficacy.[1] For reasons of data comparability, we only use data for one country, namely Germany.[2] Since we are interested in the role of gender, individual and household income regarding preferences for redistribution and public spending, we focus on a subsample of respondents who live in a multiperson household. In order to ensure the comparability between spending categories, we additionally restrict the sample to respondents who answered to all five spending categories. Table A.1 presents summary statistics of the sample used in this paper.

2.1 Key measures

Preferences. In the ISSP's Role of Government Modules, participants are asked, among others, about their preferences for general redistribution but also regarding different public spending categories. In order to measure attitudes towards redistribution, we use the respondent's answers to the following survey question: "On the whole, do you think it should be or should not be the government's responsibility to reduce income differences between the rich and poor.". Respondents could chose from four answer categories: "Definitely should not be'", "Probably should not be", "Probably should be" and "Definitely should be". Similar questions are used by Corneo and Grüner (2002), Alesina and La Ferrara (2005) and Guillaud (2013).

Attitudes towards spending on education, health care, retirement and unemployment are captured by the following survey question: "Listed below are areas of government spending. Please show whether you would like to see more or less government spending in each area. Remember that if you say 'much more', it might require a tax increase to pay for it." Respondents could express their opinion by picking one of the five following items: "Spend much less", "Spend less", "Spend the same as now", "Spend more" and "Spend much more".[3]

It is worth noticing, that these four spending items are differently financed. Health care, retirement and unemployment payments are part of Germany's social security system – organized as a pay-as-you-go system. Benefits are financed directly by social security contributions of the currently employed persons and their employers (Breyer 1989). Premiums are income based and independent of individual risk. In turn, contributors acquire entitlements to benefits. Despite the tight link between contributions and benefits, the social security system has a redistributive character. Especially within the health care system, there is evidence on redistribution from good to bad risks but also from the rich to the poor (Breyer and Haufler 2000). In contrast, education is financed by income taxes. Public provision could thus lead to implicit transfers from the rich to the poor (Besley and Coate 1991). However, Germany is characterized by a comparatively low intergenerational mobility which means that the childrens' position in the income distribution is highly correlated with that of the parents (see e.g. Dustmann 2004). Especially regarding tertiary education it may well be that poorer parents anticipate that the probability for their children to obtain a higher degree is lower than for children of richer parents. With this, richer parents may favor an increase in public education spending whereas poorer parents may oppose it.

[1] For a more detailed documentation, see http://www.gesis.org/issp/issp-modules-profiles/role-of-government/.

[2] Income data has been surveyed differently in the different countries, e.g. as income per month or year, before or after tax. German respondents report (net) earnings per month after taxes and social insurance contributions.

[3] Pairwise correlations of the spending categories redistribution, education, health, retirement and unemployment paper range from 0.07 to 0.46 which makes us confident that they represent different types of preferences.

Gender and Income. A voter's preference for redistribution is guided by the position of the individual income relative to the population's median income (Meltzer and Richard 1981).[4] In the ISSP's Role of Government Modules, respondents are asked to report their individual and their household net income. In order to ensure the comparability between income data in the years 1996 (reported in *Deutsche Mark*) and 2006 (reported in *Euro*) we, first, apply the exchange rate and, second, account for inflation by the use of the consumer price index provided by the Deutsche Bundesbank (2014). We relate individual and household income to the German median income provided by the European Commission (2014). One drawback is that we cannot distinguish the sources of income, hence, we e.g. cannot divide the stated income into labor earnings and transfer payments.

Figure 1 shows the distribution of the individual income (left panel) and household income (right panel) for men (solid line) and women (dashed line).

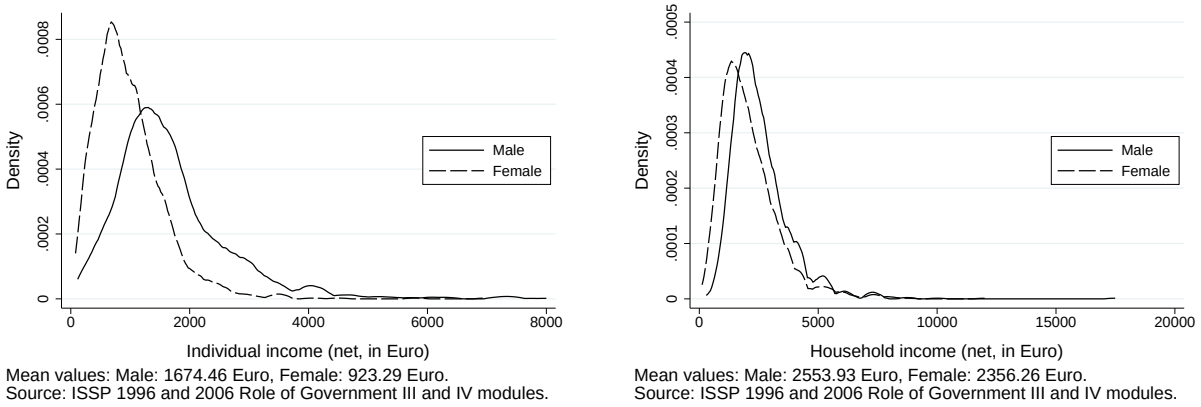


Figure 1: Distribution of individual and household income by gender.

Female respondents in our sample obtain an individual average net income of 923€ while male respondents on average earn 1,674€ – distinctly more than female respondents. However, male and female income distributions approach one another when considering their household income. Whereas female respondents report an average net household income of 2,356€, male respondents report an average income that is roughly 200€ higher. This may be a first hint that female respondents seem to live in households with richer partners while male respondents apparently share their income with poorer partners.

Table 1 displays the share of individuals who are in favor of more redistribution and public spending for the whole sample as well as by gender and whether the individual or household income lies above or below the German median. Altogether, more than 50% of the respondents favor more redistribution and more spending on education, health care and retirement. Female respondents show significantly higher preferences for redistribution as well as more spending on health care, retirement and unemployment. However, there is no significant difference regarding spending on education. As expected, respondents that obtain an individual or household income that is lower than the median income favor significantly more redistribution and spending on the income dependent social security items than those above the median.

[4] In their model, Meltzer and Richard (1981) use the voter's gross income in the initial stage. Then, the voter decides optimally how much income to devote for redistribution, given the government's budget constraint and the income of the median voter. Here, we observe the net income (net of taxes and social security). However, the correlation between the German gross income distribution and the income distribution net of the progressive income tax is strong (Statistisches Bundesamt 2009).

Table 1: Descriptive statistics
Survey questions on preferences for redistribution and government spending on education, health, retirement and unemployment.

	Agreement (in percent)									
	All	Gender			Individual income			Household income		
		Male	Female	F-Test	> Median	< Median	F-Test	> Median	< Median	F-Test
Reduce income differences	71.5	68.2	75.7	0.000	59.5	79.7	0.000	59.9	79.2	0.000
More spending on education	65.2	65.3	65.1	0.903	65.6	64.9	0.698	65.8	64.8	0.611
More spending on health care	62.0	57.6	67.8	0.000	50.9	69.7	0.000	52.5	68.4	0.000
More spending on retirement	51.0	47.5	55.4	0.000	41.2	57.7	0.000	39.9	58.3	0.000
More spending on unemployment	38.4	34.7	43.1	0.000	24.7	47.8	0.000	23.8	48.2	0.000

Notes: The table reports the share of individuals who answered "Probably should be" or "Definitely should be" on the survey question regarding redistribution or "Spend more" or "Spend much more" on the survey question regarding spending on education, health, retirement and unemployment.
Source: ISSP 1996 and 2006 Role of Government III and IV modules.

2.2 Controls

Next to gender and income, we include several control variables from the dataset that can be expected to influence the respondents' preferences for redistributive spending. Summary information on our explanatory variables by gender is displayed in Table 2. Whereas we do not observe significant age differences between male and female respondents, significant differences in the employment status are evident. In our sample, women are more often unemployed and employed in the public sector but less often self-employed – the latter being well known from the entrepreneurship literature (see e.g. Verheul et al. 2012). A significantly larger share of male respondents obtained a university degree. Interestingly, women in our sample are more frequently divorced, separated and widowed.

Table 2: Descriptive statistics controls

Variable	Category	Male	Female	F-Test	Variable	Category	Male	Female	F-Test
Age	Age	47.26	46.80	0.466	State	Baden Wuerttemb.	0.098	0.101	0.808
	Age^2 (*100)	24.76	24.36	0.535		Bavaria	0.129	0.106	0.080
Employment	Unemployed	0.086	0.185	0.000		Berlin	0.036	0.046	0.206
	Private sector	0.475	0.327	0.000		Brandenburg	0.068	0.077	0.386
	Public sector	0.122	0.189	0.000		Bremen	0.009	0.011	0.671
	Self-employed	0.077	0.050	0.007		Hamburg	0.013	0.008	0.260
	Retired	0.241	0.250	0.622		Hesse	0.072	0.051	0.034
Education	Without qualification	0.017	0.020	0.694		Mecklenburg West. Pomer.	0.033	0.048	0.064
	University degree	0.107	0.071	0.001		Lower Saxony	0.104	0.072	0.004
	Higher secondary	0.114	0.095	0.116		North Rhine Westfalia	0.153	0.136	0.217
	Secondary	0.761	0.815	0.001		Rhineland Palatinate	0.031	0.042	0.163
Marital status	Single, never married	0.160	0.127	0.022		Saarland	0.008	0.004	0.162
	Married	0.811	0.748	0.000		Saxony	0.090	0.104	0.257
	Divorced	0.020	0.071	0.000		Saxony Anhalt	0.071	0.072	0.947
	Separated, but married	0.004	0.017	0.004		Schleswig Holstein	0.025	0.018	0.231
	Widowed	0.005	0.037	0.000		Thuringia	0.059	0.104	0.000
Children	Children	0.625	0.628	0.887	Year	1996	0.691	0.649	0.026
	No children	0.375	0.372	0.887		2006	0.309	0.351	0.026
Living in	Rural area	0.496	0.483	0.530	Region	West	0.659	0.569	0.000
	Small city	0.284	0.299	0.415		East	0.341	0.431	0.000
	Large city	0.220	0.217	0.889					

Notes: The table reports percentage shares.
Source: ISSP 1996 and 2006 Role of Government III and IV modules.

3 Estimation strategy and results

3.1 Estimation strategy

We estimate in what follows a logit model of individual attitudes towards redistribution and public spending. Our empirical model is:

$$y^* = \alpha_0 + \alpha_1 \text{Female} + \alpha_2 \frac{\text{Income}}{\text{Median income}} + \alpha_3 \text{Controls} + \alpha_4 \text{Year} + \alpha_5 \text{State} + u,$$

where y^* is a latent variable, i.e. an unmeasured level of support for redistributive spending. The actual support for our five redistributive spending categories is measured by the respondents' observed answer, equal to 1 for those individuals who either answer "Probably should be" or "Definitely should be" to the question about preferences for redistribution or "Spend more" and "Spend much more", respectively, to the question about preferences for public spending items, and 0 otherwise. This transformation is done primarily to ease the interpretation of the coefficients.[5]

"Female" is one of our main explanatory dummy variables, equal to one for female respondents and zero for males. "$\frac{\text{Income}}{\text{Median income}}$" is the respondents' income relative to the German median income and "Controls" encompasses a vector of control variables that we describe in Table 2 such as age, employment status, marital status, whether there are children in the household and size of the place of residence. Additionally we include state dummies to account e.g. for regional labor market heterogeneity of the 16 federal states as well as year dummies for the two surveys in 1996 and 2006.

In our analysis we will proceed as follows: We, first, estimate our model with the respondents' individual income relative to the German median income and all control variables (see Table 2) to assess the significance of the gender dummy and the income variable (Section 3.2).

In a second step (Section 3.3), we re-estimate our model but use the respondents' equivalent income to capture pecuniary differences between individuals more precisely. In our view, the equivalent income reflects the economic situation of an individual living in a household in a more realistic manner as both, household size and increasing returns to household size, are taken into account.

Finally, we construct a dummy variable *'better off in the HH'* equal to one if the respondent obtains a higher equivalent income (i.e. living standard) when living in a household compared to living as a single (and zero otherwise). We do so as we aim at understanding whether the gender gap in preferences for redistribution may be in fact driven by individuals who fear future economic downward mobility, which may simply apply more often to women than to men.

3.2 Individual income

To begin with, let us focus on possible gender gaps when taking individual income differences into account. For this, we control for the respondents' individual income relative to the German median income. Table 3 reports the results of the logit estimation.[6]

Let us, first, focus on the female dummy. With the median voter framework of Meltzer and Richard (1981) in mind, we would expect the gender gap to be small or even not to exist when we control for individual income relative to the German median income. Table 3 shows that indeed we do not find a significant gender gap in either specification. This is consistent with the results obtained by Corneo and Grüner (2002) who's female dummy is positive and significant

[5] We also ran ordered logit regressions on the original variables and the results do not change significantly. Additionally, we applied the survey weights for East and West German participants provided by the ISSP and obtain similar results which can be obtained on request.

[6] Throughout the different regressions in this paper, the effects of our control variables (other than gender and income) remain relatively similar which is why we will comment on these in the next Section 3.3 where we run the same specification again but include the respondent's equivalent income.

when controlling for an income proxy but insignificant when using the actual individual income relative to the respective country's average income.

Table 3: Preferences for public spending – Individual income

	Redistribution		Education		Health		Retirement		Unemployment	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Female	−0.129	(-1.11)	−0.080	(-0.74)	0.041	(0.38)	−0.013	(-0.13)	−0.114	(-1.09)
Individual income	−0.570***	(-5.40)	0.067	(0.71)	−0.465***	(-4.23)	−0.451***	(-4.74)	−0.824***	(-6.78)
Controls	✓		✓		✓		✓		✓	
Constant	1.480**	(2.25)	−0.707	(-1.25)	0.899	(1.61)	1.303**	(2.40)	0.414	(0.75)
Observations	2,364		2,364		2,364		2,364		2,364	
Log-Likelihood	−1270.969		−1360.233		−1451.079		−1517.133		−1408.552	
AIC	2611.938		2790.467		2972.158		3104.265		2887.104	

Notes: Logit regression. For "Redistribution" the dependent variable equals one if the respondent reports "Definitely should be" or "Probably should be" to the question of whether it is the government's responsibility to reduce income differences between the rich and poor (and zero otherwise). For the other categories the dependent variable equals one if the respondent reports "Spend much more" or "Spend more" to the question of whether the respondent would like to see more or less government spending in each area (and zero otherwise). Included as controls are age and age^2 as well as dummies on employment status, education, marital status, children, city size, survey year and states. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Our income variable influences preferences for redistribution, health care, retirement and unemployment spending significantly negatively. This result corresponds to the theoretical arguments, i.e. the lower the net income relative to the median income the larger the preference for more redistribution and public spending. The strongest effect of the income variable is found for unemployment spending whereas the magnitude of the income coefficients for redistribution, health and retirement is somewhat smaller.[7]

3.3 Equivalent income

The use of the individual income within the redistribution context may be problematic as it neglects that individuals live in households which differ in composition and size. Within a household, some goods such as housing and furniture can be used collectively by all household members. Other goods such as clothes are privately used by the individual (Koulovatianos et al. 2005). Obviously, a couple needs more income than a single person in order to reach the same level of welfare but, due to 'increasing returns to household size', not necessarily twice as much (Ebert 1999, Jenkins 2000). Utilizing absolute household income would take into account that there may be additional income earners in the household, but, however, not the sharing opportunities between them.

Here, we apply the so called equivalence scale to assign each household a weighting factor according to its size and composition. The underlying assumption is that income is equally distributed among household members. We utilize the modified OECD equivalence scale (Hagenaars et al. 1996) which assigns a value of 1.0 to the household head, 0.5 to each additional adult member and 0.3 to each child. Then, overall household income can be divided by the sum of weights of the household members so as to obtain the respondents' household equivalent income – the living standard of the equivalent adult. Obviously the equivalent income can change if (i) the income of the household members changes or (ii) if there is a change in the household's demographic structure or composition (Jenkins 2000).

Figure 2 shows the distribution of the equivalent income for men (solid line) and women (dashed line). Whereas women individually achieve an average income of 929 €, their equivalent income, hence, their standard of living in the household, is distinctly higher (corresponding to 1,329.76 €). Male respondents, however, on average obtain a lower equivalent income than their

[7] We also tested all of our regressions with logarithmic income variables to allow for nonlinearities between income and preferences. Our results do not change significantly.

individual income (1,401.33 € vs. 1,672.00 €). With this income concept, gender differences in income are much smaller such that male and female income distributions become – as expected – more equal. As these income differences so far were one of the determinants of differences in public spending preferences, a gender gap may appear when incomes are more equal.

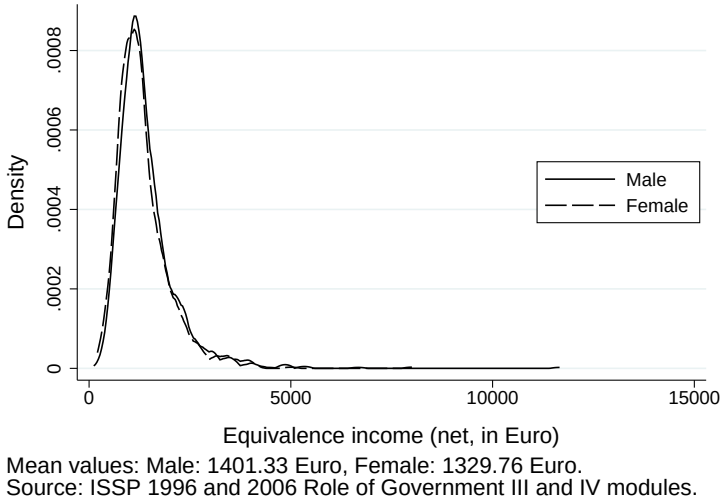


Figure 2: Distribution of equivalent income by gender

We run our logit model from Table 3 again, but include the respondents' equivalent income, assuming that income is equally shared between household members. The results are presented in Table 4. We find that the female dummy affects preferences for redistribution, health care, retirement and unemployment in a significantly positive way. Empirically this result is not too surprising as using the equivalent income decreases gender differences in income considerably. Similar to the effect of individual income, the coefficients of the equivalent income are highly significant and negatively associated with preferences for redistribution and spending on health care, retirement and unemployment.

Before having a closer look at possible causes of the significant female dummy (see Section 3.4), let us, first, consider the effects of our further control variables. The employment variable encompasses being unemployed (reference group), being employed in the private sector or in the public sector, being self-employed or retired. The employment status can to some extent be seen as a proxy for risk aversion (Alesina and La Ferrara 2005, Guillaud 2013). Whereas dependent employees in the public sector are supposed to be relatively risk averse, self employed workers are more risk loving. Risk averse individuals should therefore prefer redistribution as it constitutes a form of security (see e.g. Sinn 1995). We find the expected signs for preferences for redistribution, however, the coefficients are not significant. On the contrary, especially preferences for an increase in spending on retirement and unemployment but also partially on health care are significantly correlated with our employment covariates. Being self-employed has the anticipated strong negative effect. Interestingly, being employed in the public sector also exerts a negative effect on preferences for public retirement and unemployment spending. A very likely explanation of the latter is that civil servants, judges or military personnel – who account for almost half of all publicly employed individuals – do not contribute to the general statutory social security and pension scheme but are entitled to claim their pensions from the respective relevant authority (e.g. the state or federal government). Additionally, being employed in the public sector in most cases comes along with permanent contracts and therefor a very low probability to become unemployed. Not surprisingly, retirees prefer increases in public spending on pensions since they are directly affected.

Table 4: Preferences for public spending – Equivalent income

	Redistribution		Education		Health		Retirement		Unemployment	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Female	0.197*	(1.87)	−0.112	(-1.12)	0.271***	(2.86)	0.200**	(2.17)	0.247**	(2.57)
Equivalent income	−0.838***	(-6.74)	0.049	(0.46)	−0.427***	(-3.03)	−0.440***	(-3.03)	−0.990***	(-6.14)
Age	−0.014	(-0.62)	0.022	(1.06)	−0.006	(-0.32)	−0.038**	(-1.99)	−0.016	(-0.81)
Age^2 (*100)	0.022	(0.91)	−0.023	(-1.08)	−0.003	(-0.17)	0.028	(1.43)	0.012	(0.59)
Employment										
Private sector	−0.120	(-0.69)	0.206	(1.33)	−0.297*	(-1.85)	−0.151	(-0.99)	−0.278*	(-1.84)
Public sector	0.168	(0.81)	0.294	(1.58)	−0.224	(-1.20)	−0.426**	(-2.36)	−0.440**	(-2.42)
Self-employed	−0.301	(-1.25)	−0.071	(-0.31)	−0.468**	(-2.00)	−0.500**	(-2.16)	−0.671***	(-2.66)
Retired	−0.055	(-0.24)	0.433**	(2.13)	0.122	(0.60)	0.426**	(2.21)	−0.038	(-0.19)
Education										
University	−0.664	(-1.55)	0.994**	(2.55)	−0.747**	(-2.06)	−1.006***	(-2.80)	−0.531	(-1.48)
Higher secondary	−0.510	(-1.22)	0.349	(0.96)	−0.619*	(-1.76)	−0.348	(-1.02)	−0.220	(-0.65)
Lowest qualification	−0.235	(-0.60)	−0.005	(-0.02)	−0.011	(-0.03)	0.017	(0.05)	−0.130	(-0.43)
Marital status										
Married	−0.131	(-0.69)	−0.314*	(-1.67)	0.219	(1.27)	0.175	(1.03)	0.055	(0.30)
Divorced	−0.138	(-0.44)	−0.436	(-1.49)	0.313	(1.10)	0.672**	(2.44)	0.028	(0.10)
Separated but married	1.156	(1.51)	−0.595	(-1.18)	0.494	(1.02)	−0.425	(-0.96)	0.320	(0.68)
Widowed	0.346	(0.70)	−0.269	(-0.71)	0.304	(0.77)	0.257	(0.70)	0.449	(1.24)
Children	−0.190	(-1.51)	0.479***	(3.85)	−0.048	(-0.41)	−0.050	(-0.44)	−0.065	(-0.54)
Small city	−0.056	(-0.45)	0.069	(0.59)	0.043	(0.38)	−0.006	(-0.05)	−0.106	(-0.93)
Large city	−0.140	(-0.95)	0.408***	(2.96)	0.191	(1.47)	0.145	(1.13)	−0.028	(-0.20)
Constant	1.972***	(2.96)	−0.742	(-1.31)	1.210**	(2.15)	1.595***	(2.89)	1.009*	(1.82)
Year dummies	✓		✓		✓		✓		✓	
State dummies	✓		✓		✓		✓		✓	
Observations	2,364		2,364		2,364		2,364		2,364	
Log-Likelihood	−1260.948		−1360.366		−1455.335		−1519.871		−1405.634	
AIC	2591.896		2790.731		2980.669		3109.742		2881.267	

Notes: Logit regression. For "Redistribution" the dependent variable equals one if the respondent reports "Definitely should be" or "Probably should be" to the question of whether it is the government's responsibility to reduce income differences between the rich and poor (and zero otherwise). For the other categories the dependent variable equals one if the respondent reports "Spend much more" or "Spend more" to the question of whether the respondent would like to see more or less government spending in each area (and zero otherwise). Omitted categories are unemployed, without qualification, single and rural area. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Having a university degree decreases the preference for more spending on health care and retirement. Similar result have been found in several papers investigating the determinants of preferences for redistribution (see e.g. Alesina and La Ferrara 2005, Alesina and Giuliano 2009, Yamamura 2012, Guillaud 2013). After controlling for income differences, this effect cannot be due to the fact that tertiary educated people on average earn comparatively higher wages. However, it seems plausible that people who obtained higher education may expect future upward mobility (Alesina and Giuliano 2009). Spending on education, however, is favored by tertiary educated respondents. For an appropriate interpretation we should, first, keep in mind that spending on education is no (income-dependent) contribution, but financed by income taxes. Second, the German education system is predominantly publicly financed. Given the comparatively low intergenerational mobility in Germany (Dustmann 2004), higher educated individuals may assume that their children are more likely to benefit from an increase in (tertiary) education spending. The strong positive and significant coefficient of having children supports this reasoning. Alesina and Giuliano (2009) argue, that highly educated individuals may also generally favor an increase of education spending as they rather anticipate an increase in education to lead to an increase in positive externalities and overall aggregate productivity.

The strong significant and positive effect of living in a large city (compared to living in a rural area) on preferences for education spending is also found in the education spending literature. Grob and Wolter (2007) argue that especially highly-qualified parents may base their location decision, among others, on the quality and diversity of the schooling system in that area. As diversity and quality of education in larger cities are typically higher, the median voter in a larger city may prefer an increase in education spending.

As to marital status, we find that being divorced enhances the preference for an increase in retirement spending. Similar to the argumentation of Edlund and Pande (2002), support for an

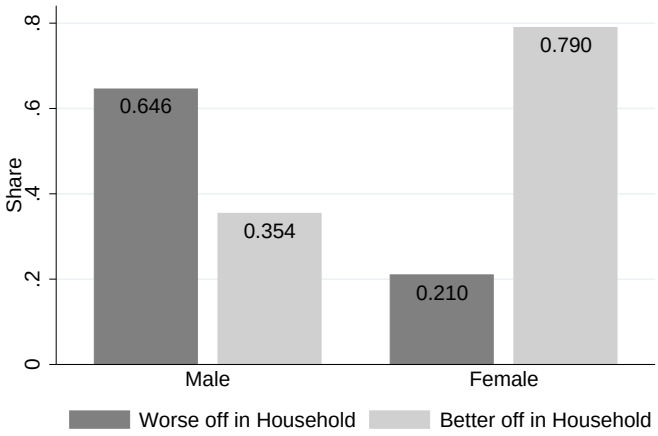
increase in public pensions may increase after divorce as a sort of insurance against a possibly of a lower living standard in the future.

3.4 Being female or being poorer?

There is an additional dimension to consider when using the equivalent income: Apart from the economies of scale that can be realized within the household, the equivalent income depends on the income of other household members. Given the household's weighting factor, the equivalent income increases with overall household income. With this, the living standard obtained in the household is likely to differ from the living standard a respondent could obtain when living as a single.

Consider a couple with a woman earning 1.000 € and a men earning 3.000 €. According to the OECD-modified scale, their sum of weights is 1.5, hence, the living standard of the equivalent adult in this household equals 2.667 €. With this, the woman monetarily benefits from living in the household – not only because of sharing commodities but also because of the income of her spouse. Moreover, this benefit is uncertain as future changes in the household situation, e.g. in case of separation, are an ever present possibility (Iversen and Rosenbluth 2006). Following Edlund and Pande (2002), we assume respondents to understand that their living standard may differ when living in a multiperson household compared to living as a single. Respondents who monetarily gain from their household situation may then fear the risk of possible future downward mobility, i.e. to lose the current living standard. We do not expect respondents to have precise ideas about their future well-being. We only assume that the probability to lose the household benefit may already make them favor more redistributive spending as it can constitute a desirable means of insuring against this risk (Alesina and La Ferrara 2005).

In order to address this issue, we create a dummy variable *'better off in HH'*, that equals one if the respondent obtains a higher equivalent income than individual income, that it, he or she monetarily benefits from living in the household and zero otherwise. Figure 3 visualizes this dummy by gender. Living in a household improves the living standard in terms of monetary income for almost 80% of the female respondents in our sample. On the contrary, almost 65% of the male respondents are financially worse off when sharing their income within the household compared to living as a single. Only 35% of them can gain monetarily from living in a multiperson household.



Source: ISSP 1996 and 2006 Role of Government III and IV modules.

Figure 3: Household vs. individual living standard

Estimation results including the 'better off in HH' dummy are provided in Table 5. Taking into account both, the gender dummy and the 'better off' dummy, we aim at disentangling the

gender effect from the pecuniary effect. Once the 'better off' dummy is included, the coefficient of the female dummy in every specification decreases in size and becomes insignificant. However, the 'better off' dummy exerts a positive and significant effect on support for redistribution as well as spending on health care and unemployment. Note that the inclusion if this variable does not substantially change the coefficients of our other control variables.

Table 5: Preferences for public spending – Equivalent income

	Redistribution		Education		Health		Retirement		Unemployment	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Female	0.030	(0.25)	−0.142	(-1.28)	0.161	(1.51)	0.131	(1.29)	0.158	(1.50)
Better off in HH	0.374***	(3.04)	0.070	(0.62)	0.262**	(2.34)	0.165	(1.55)	0.223**	(1.98)
Equivalent income	−0.919***	(-7.09)	0.034	(0.32)	−0.485***	(-3.28)	−0.479***	(-3.18)	−1.060***	(-6.29)
Age	−0.006	(-0.28)	0.024	(1.12)	−0.000	(-0.02)	−0.035*	(-1.77)	−0.011	(-0.54)
Age^2 (*100)	0.016	(0.68)	−0.024	(-1.13)	−0.008	(-0.39)	0.025	(1.27)	0.008	(0.38)
Employment										
Private sector	−0.038	(-0.22)	0.220	(1.40)	−0.240	(-1.46)	−0.114	(-0.74)	−0.223	(-1.46)
Public sector	0.254	(1.22)	0.309*	(1.66)	−0.162	(-0.86)	−0.384**	(-2.10)	−0.373**	(-2.02)
Self-employed	−0.202	(-0.84)	−0.053	(-0.23)	−0.399*	(-1.70)	−0.453*	(-1.95)	−0.603**	(-2.38)
Retired	−0.047	(-0.20)	0.435**	(2.14)	0.128	(0.62)	0.431**	(2.23)	−0.028	(-0.14)
Education										
University	−0.585	(-1.35)	1.011***	(2.59)	−0.694*	(-1.90)	−0.974***	(-2.69)	−0.483	(-1.33)
Higher secondary	−0.445	(-1.06)	0.361	(0.99)	−0.573	(-1.62)	−0.319	(-0.93)	−0.178	(-0.52)
Lowest qualification	−0.202	(-0.51)	0.001	(0.00)	0.011	(0.03)	0.031	(0.10)	−0.110	(-0.36)
Marital status										
Married	−0.106	(-0.56)	−0.309	(-1.64)	0.235	(1.36)	0.184	(1.10)	0.069	(0.38)
Divorced	−0.039	(-0.13)	−0.414	(-1.41)	0.381	(1.35)	0.716***	(2.60)	0.088	(0.32)
Separated but married	1.252*	(1.68)	−0.574	(-1.14)	0.560	(1.15)	−0.375	(-0.84)	0.385	(0.83)
Widowed	0.390	(0.78)	−0.259	(-0.69)	0.336	(0.84)	0.280	(0.75)	0.480	(1.31)
Children	−0.115	(-0.89)	0.493***	(3.87)	0.005	(0.04)	−0.016	(-0.14)	−0.023	(-0.19)
Small city	−0.053	(-0.42)	0.070	(0.60)	0.045	(0.41)	−0.004	(-0.04)	−0.104	(-0.91)
Large city	−0.133	(-0.89)	0.409***	(2.97)	0.195	(1.49)	0.146	(1.14)	−0.027	(-0.20)
Constant	1.561**	(2.30)	−0.818	(-1.40)	0.913	(1.59)	1.410**	(2.49)	0.772	(1.36)
Year dummies	✓		✓		✓		✓		✓	
State dummies	✓		✓		✓		✓		✓	
Observations	2,364		2,364		2,364		2,364		2,364	
Log-Likelihood	−1256.281		−1360.180		−1452.514		−1518.679		−1403.698	
AIC	2584.562		2792.359		2977.028		3109.357		2879.395	

Notes: Logit regression. For "Redistribution" the dependent variable equals one if the respondent reports "Definitely should be" or "Probably should be" to the question of whether it is the government's responsibility to reduce income differences between the rich and poor (and zero otherwise). For the other categories the dependent variable equals one if the respondent reports "Spend much more" or "Spend more" to the question of whether the respondent would like to see more or less government spending in each area (and zero otherwise). Omitted categories are unemployed, without qualification, single and rural area. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

We interpret our findings based on the "prospect of upward mobility" hypothesis of Piketty (1995) and Bénabou and Ok (2001) as follows: Being aware that the current living standard is – due to sharing income within the household – higher than the living standard one could obtain when living as a single, individuals may precautionary favor an increase in redistribution and public spending as to insure themselves against future downward mobility in case of separation, divorce or widowhood. As on average women obtain a lower income than men, this situation is more likely to apply to women. In that sense the estimates from our regression may represent a further step towards understanding the often found gender gap in preferences for redistributive spending.

An additional determinant of preferences for redistributive spending may be social preferences, i.e. the individual belief about whether hard work or luck cause income differences (Fong 2001). Whereas individuals who believe that luck is needed to be economically successful are supposed to favor redistribution, believing in effort as a source of success should decrease preferences for redistribution (Alesina and La Ferrara 2005). Unfortunately, no information on this opinion is available in the ISSP's Role of government module which prevents us from examining its effect. Empirical results (see e.g. Alesina and La Ferrara 2005), however, point into the direction that although individual beliefs in equal opportunities can be a significant determinant, future income prospects maintain an independent and sizable effect on preferences for redistributive spending.

3.5 Sensitivity analysis

3.5.1 Robustness check 1: Married respondents only

So far, we have treated all respondents in our sample as a homogeneous group. But we are interested in whether married respondents differ in their preferences on redistributive spending. Based on legal regulations, marriage may imply benefits (such as the possibility of joint tax deductions) but potentially also a greater financial dependence of one spouse on the other (e.g. because social security entitlements in Germany depend on the spouse's income). According to Becker (1981) one could treat a family as a unitary actor with fully aligned interests and, with this, preferences for redistributive spending. Hence, poor families would favor redistribution whereas rich families would oppose it. However, with divorce being a possible future scenario, both spouses may have conflicting preferences. They can be assumed to prefer social policies that maximize long-term welfare as a means of securing their future living standard (Iversen and Rosenbluth 2006).[8]

In our sample, 78.3% of the respondents are married. Table 6 reports the estimation results on this restricted sample. Our results seem robust: An increase in the equivalent income is significant at the 1%-level and positively related to respondents' preferences for an increase in redistribution but also spending on the income dependent contributions health care, retirement and unemployment. But there are slight differences in the effect of the better off in HH dummy when comparing the results in Table 6 with those in Table 5. Being better off in the household significantly influences individual support for public health care spending, now even at the 1%-level. On the other hand, the effect of being better off in the household on preferences for general redistribution and unemployment spending is somewhat smaller but still significant at the 5%-level and 10%-level, respectively. To conclude, we do not find that married individuals differ much overall in their support for redistributive spending.

Table 6: Preferences for public spending – Married respondents

	Redistribution		Education		Health		Retirement		Unemployment	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Female	−0.023	(-0.16)	−0.213	(-1.61)	0.007	(0.05)	0.106	(0.86)	0.115	(0.92)
Better off in HH	0.333**	(2.26)	0.140	(1.04)	0.403***	(3.03)	0.156	(1.23)	0.225*	(1.71)
Equivalent income	−0.904***	(-6.13)	0.130	(1.05)	−0.418***	(-2.58)	−0.427**	(-2.43)	−1.029***	(-5.24)
Controls	✓		✓		✓		✓		✓	
Constant	1.875**	(2.09)	−1.718**	(-2.11)	1.302	(1.63)	1.709**	(2.20)	0.678	(0.83)
Observations	1,853		1,853		1,853		1,853		1,853	
Log-Likelihood	−976.464		−1070.557		−1128.024		−1184.212		−1089.286	
AIC	2016.927		2205.114		2320.049		2432.424		2242.572	

Notes: Logit regression. For "Redistribution" the dependent variable equals one if the respondent reports "Definitely should be" or "Probably should be" to the question of whether it is the government's responsibility to reduce income differences between the rich and poor (and zero otherwise). For the other categories the dependent variable equals one if the respondent reports "Spend much more" or "Spend more" to the question of whether the respondent would like to see more or less government spending in each area (and zero otherwise). Included as controls are age and age^2 as well as dummies on employment status, education, marital status, children, city size, survey year and states. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

3.5.2 Robustness check 2: East/West

There is a growing body of literature that deals with the question whether political regimes can shape demand for redistribution and whether these attitudes may persist even if the regime is no longer existent. Exploiting the reunification of East and West Germany as a natural experiment, Alesina and Fuchs-Schündeln (2007) find that the socialist regime caused former East Germans to favor more state interventions than their West German counterparts. This result is based on

[8] Legal marriage may bring about a claim to alimony after the divorce. Unfortunately, we have no information whether respondents are eligible for these payments or not.

the argumentation that East Germans were more used to governmental indoctrination but also more dependent on redistribution. Being developed over years or even decades, preferences can be assumed not to change overnight (Bauernschuster et al. 2012). In contrary to Alesina and Fuchs-Schündeln (2007), unfortunately we do not observe whether a respondent lived in East or West Germany before the reunification, but only observe where they lived in 1996 and 2006.

In order to be able to compare their results with ours, we follow Alesina and Fuchs-Schündeln (2007) and include an *East* dummy, equal to one for respondents who lived in the former East Germany (zero otherwise) in our estimation. Additionally, we interact it with our *Year 2006* dummy which equals one for the survey in year 2006 (zero otherwise). Table 7 gives the results.

Table 7: Preferences for public spending – East/West

	Redistribution		Education		Health		Retirement		Unemployment	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Female	0.030	(0.25)	−0.145	(-1.33)	0.159	(1.50)	0.112	(1.12)	0.135	(1.29)
Better off in HH	0.357***	(2.91)	0.068	(0.61)	0.272**	(2.44)	0.177*	(1.68)	0.210*	(1.89)
Equivalent income	−0.893***	(-7.03)	0.017	(0.17)	−0.492***	(-3.39)	−0.493***	(-3.31)	−1.063***	(-6.38)
East	1.044***	(7.39)	0.554***	(4.76)	0.529***	(4.46)	0.522***	(4.52)	1.071***	(9.10)
Year 2006	0.369***	(2.74)	1.424***	(10.23)	0.275**	(2.21)	0.443***	(3.55)	0.126	(0.93)
East # Year 2006	−0.444*	(-1.90)	0.116	(0.48)	0.143	(0.70)	−0.731***	(-3.86)	−0.649***	(-3.31)
Controls	✓		✓		✓		✓		✓	
Constant	1.597**	(2.42)	−0.832	(-1.49)	0.709	(1.26)	1.120**	(2.06)	0.689	(1.25)
Observations	2,364		2,364		2,364		2,364		2,364	
Log-Likelihood	−1259.876		−1374.653		−1463.746		−1526.287		−1402.593	
AIC	2565.751		2795.306		2973.493		3098.574		2851.186	

Notes: Logit regression. For "Redistribution" the dependent variable equals one if the respondent reports "Definitely should be" or "Probably should be" to the question of whether it is the government's responsibility to reduce income differences between the rich and poor (and zero otherwise). For the other categories the dependent variable equals one if the respondent reports "Spend much more" or "Spend more" to the question of whether the respondent would like to see more or less government spending in each area (and zero otherwise). Included as controls are age and age^2 as well as dummies on employment status, education, marital status, children and city size. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

The coefficients of the gender dummy and our income variable virtually do not change compared to those in Table 5. Interestingly, now even in the regression with preferences for spending on retirement as the dependent variable, the better off dummy is positive and significant on the 10%-level. For the east and year dummy and their interaction we, generally spoken, find similar results compared with those of Alesina and Fuchs-Schündeln (2007). Living in former East Germany strongly and significantly increases preferences for all our spending categories compared to living in the former West. Between 1996 and 2006, however, differences in preference for governmental interventions regarding redistribution, retirement and unemployment decrease, represented by the negative and significant interaction coefficient. For education and health care we do not find similar significant convergence effects.

We can even take a closer look at each state in order to investigate how local labor market heterogeneity influences preferences for redistributive spending. It is reasonable to assume that individual preferences are not only determined by individual characteristics but also by the economic environment, e.g. of the federal state in which they live. We follow Bauernschuster et al. (2012) and include the unemployment rate and GDP per capita for each state in the years 1996 and 2006, provided by the Statistisches Landesamt Baden-Württemberg (2014). Table A.2 in the Appendix displays the data. East German states are characterized by a GDP per capita that on average corresponds to around 70% of the average GDP per capita in the former West. On the contrary, unemployment rates are around 60% higher in former East Germany than in West Germany. One would expect individuals who live in economically poor states (low GDP per capita and/or high unemployment rate) to favor redistributive spending and individuals who live in more prosperous regions to oppose it. Moreover, individuals who live in states which are characterized by relatively high unemployment rates may have a greater fear of unemployment which makes them more likely to prefer an enlargement of public unemployment spending.

Table 8 re-estimates our regression in Table 7 with GDP per capita and the unemployment rate (by state and survey year) being included. We do not find that preferences vary systematically with the GDP per capita of the home state. However, preferences on unemployment and education spending are significantly positively correlated with the states' unemployment rate. The first result confirms that respondents may prefer an increase in unemployment spending as a sort of insurance against the comparatively high unemployment rate in their home state. The latter perhaps reflects that individuals anticipate education to be a good prevention against unemployment in the future.

Table 8: Preferences for public spending – East/West with GDP per capita and unemployment rate

	Redistribution		Education		Health		Retirement		Unemployment	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Female	0.031	(0.26)	−0.138	(-1.26)	0.161	(1.52)	0.114	(1.14)	0.135	(1.29)
Better off in HH	0.357***	(2.91)	0.069	(0.61)	0.271**	(2.43)	0.175*	(1.66)	0.213*	(1.91)
Equivalent income	−0.890***	(-6.99)	0.024	(0.22)	−0.493***	(-3.40)	−0.494***	(-3.32)	−1.050***	(-6.32)
East	0.916***	(3.83)	0.378*	(1.65)	0.570***	(2.60)	0.591***	(2.77)	0.758***	(3.34)
Year 2006	0.354*	(1.82)	1.177***	(5.91)	0.160	(0.84)	0.310*	(1.68)	0.127	(0.65)
East # Year 2006	−0.479**	(-1.99)	0.060	(0.24)	0.149	(0.71)	−0.720***	(-3.72)	−0.726***	(-3.65)
Unemployment rate	0.020	(0.75)	0.059**	(2.27)	0.010	(0.41)	0.008	(0.35)	0.044*	(1.67)
GDP per capita (*10000)	0.009	(0.06)	0.264	(1.63)	0.128	(0.81)	0.150	(1.00)	−0.023	(-0.14)
Controls	✓		✓		✓		✓		✓	
Constant	1.381*	(1.68)	−2.027***	(-2.70)	0.321	(0.43)	0.696	(0.97)	0.293	(0.39)
Observations	2,364		2,364		2,364		2,364		2,364	
Log-Likelihood	−1259.571		−1371.558		−1463.356		−1525.774		−1400.997	
AIC	2569.142		2793.116		2976.711		3101.548		2851.994	

Notes: Logit regression. For "Redistribution" the dependent variable equals one if the respondent reports "Definitely should be" or "Probably should be" to the question of whether it is the government's responsibility to reduce income differences between the rich and poor (and zero otherwise). For the other categories the dependent variable equals one if the respondent reports "Spend much more" or "Spend more" to the question of whether the respondent would like to see more or less government spending in each area (and zero otherwise). Included as controls are age and age^2 as well as dummies on employment status, education, marital status, children and city size. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

3.5.3 Robustness check 3: Political affiliation

In the literature it has been found that the validity of responses is questionable, that is, there are concerns whether stated preferences actually reflect individual believes (see e.g. Bertrand and Mullainathan 2001, Ravallion and Lokshin 2000). Although we already control for a wide range of individual characteristics and some environmental issues such as living in a rural area or small or large area, we are aware that we cannot completely rule out biases. However, we can employ strategies to detect whether preferences correlate with further related attitudes.

In order to test this relationship, we follow Bauernschuster et al. (2012) and investigate the relationship between stated voting behavior and preferences. In the ISSP's Role of Government Modules, respondents are asked "If there is a general election next Sunday, which party would you elect with your second vote?". As different parties pursue different objectives regarding redistributive policies, we would expect a party affiliation to be correlated with preferences towards redistribution and public spending. Respondents who prefer an increase in redistributive spending are expected to vote for more leftist ("PDS/ Die Linke") or center left and liberal parties ("SPD", "Bündnis 90/ Die Grünen", "FDP"). On the other hand, we would assume to observe a negative correlation between our dependent variables and voting for conservative ("CDU/CSU") or rightist parties ("NPD", "Die Republikaner").

We re-run the logit regressions of Table 5 but include dummies for respondents who would vote for far right, conservative, center, left and far left parties. Table 9 displays the results. Again, our results on gender, the equivalent income and being monetarily better off in the household are robust against specification changes. Regarding the voting behavior, we generally find the expected relationship: Favoring an increase in redistribution is positively associated with voting for the left and far left parties but significantly negatively related with voting for center or conservative parties. Counter-intuitively, although not significant, is the positive coefficient of

the far right dummy. However, far-right parties are not necessarily against redistribution in general but rather discriminate according to the recipients. We find similar, partially significant, results for the income dependent contributions health, retirement and unemployment spending.

Table 9: Preferences for public spending – Political affiliation

	Redistribution		Education		Health		Retirement		Unemployment	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Female	0.056	(0.46)	−0.139	(-1.25)	0.167	(1.56)	0.146	(1.43)	0.166	(1.55)
Better off in HH	0.358***	(2.90)	0.061	(0.54)	0.251**	(2.22)	0.154	(1.44)	0.205*	(1.81)
Equivalent income	−0.836***	(-6.51)	0.050	(0.45)	−0.435***	(-2.95)	−0.420***	(-2.78)	−1.001***	(-5.83)
Political affiliation										
Far left	0.688**	(2.24)	0.396	(1.58)	0.538**	(2.17)	0.274	(1.32)	0.302	(1.44)
Left, center left	0.204	(1.46)	0.003	(0.02)	−0.220*	(-1.85)	−0.065	(-0.57)	−0.145	(-1.22)
Center, liberal	−0.607***	(-3.10)	−0.083	(-0.41)	−0.407**	(-2.13)	−0.413**	(-2.16)	−0.507**	(-2.46)
Right, conservative	−0.646***	(-4.79)	−0.142	(-1.08)	−0.406***	(-3.20)	−0.447***	(-3.61)	−0.515***	(-4.00)
Far right	0.448	(1.19)	−0.091	(-0.25)	−0.122	(-0.36)	0.638*	(1.85)	0.180	(0.50)
Controls	✓		✓		✓		✓		✓	
Constant	1.598**	(2.30)	−0.801	(-1.37)	1.009*	(1.75)	1.437**	(2.50)	0.830	(1.46)
Observations	2,364		2,364		2,364		2,364		2,364	
Log-Likelihood	−1225.893		−1357.381		−1440.593		−1506.962		−1390.729	
AIC	2533.786		2796.761		2963.185		3095.924		2863.457	

Notes: Logit regression. For "Redistribution" the dependent variable equals one if the respondent reports "Definitely should be" or "Probably should be" to the question of whether it is the government's responsibility to reduce income differences between the rich and poor (and zero otherwise). For the other categories the dependent variable equals one if the respondent reports "Spend much more" or "Spend more" to the question of whether the respondent would like to see more or less government spending in each area (and zero otherwise). Included as controls are age and age^2 as well as dummies on employment status, education, marital status, children, city size, survey year and states. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

4 Conclusion

In this paper we empirically investigate whether the often found gender gap in preferences for redistributive spending may actually result from income differences within the household as these, in turn, shape prospects of future mobility. Our empirical analysis is based on the argumentation that the individual and overall household income, respectively, may not appropriately represent an individual's living standard on which preferences are likely to be grounded. On the one hand, the use of the individual or household income neglects that individuals live in households that differ in size and composition and, thus, increasing returns to scale. On the other hand, the income of other household members may matter as it determines the living standard that can be obtained within the household. Utilizing the 'equivalent income' remedies this problem as it not only takes into account household size but also weights it according to its composition.

Using survey data from the International Social Survey Program on respondents living in multiperson households in Germany, we find that income crucially determines preferences for redistributive spending: Relatively poorer individuals favor an increase in redistribution and public health care, retirement and unemployment spending whereas relative richer individuals oppose it. Moreover, the living standard in a household, as captured by the equivalent income, is likely to differ from the living standard one would obtain if living as a single. Some respondents are monetarily better off when living in a multiperson household compared to the living standard they could obtain as a single. For them, changes in the household situation, e.g. in case of separation, divorce or widowhood, constitute an ever present future risk to lose the benefit. This, in turn, can shape preferences regarding redistributive spending. Our results confirm the idea of 'prospects on future mobility': Being aware of the household benefit, due to sharing income within the household, individuals seem to precautionary favor an increase in redistribution as well as public health care and unemployment spending as to insure themselves against future downward mobility. As on average women obtain a lower income than men, they more likely to be the beneficiaries. In that sense our analysis may represent a further step towards understanding the often found gender gap in preferences for redistributive spending.

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5 Appendix

Table A.1: Summary statistics

Variable	Categories	Mean	SD	Min	Max
Gender	Male	0.56	0.50	0	1
	Female	0.44	0.50	0	1
Income	Ind. income	1,345.76	902.02	79.87	8,000.00
	HH income	2,467.43	1,232.32	291.50	17,490.03
Age	Age	47.06	15.62	18.00	92.00
	Age^2 (*100)	24.58	15.49	3.24	84.64
Employment	Unemployed	0.13	0.33	0	1
	Private sector	0.41	0.49	0	1
	Public sector	0.15	0.36	0	1
	Self-employed	0.07	0.25	0	1
	Retired	0.24	0.43	0	1
Education	Without qualification	0.02	0.13	0	1
	University degree	0.09	0.29	0	1
	Higher secondary	0.11	0.31	0	1
	Secondary	0.78	0.41	0	1
Marital	Single, never married	0.15	0.35	0	1
	Married	0.78	0.41	0	1
	Divorced	0.04	0.20	0	1
	Separated but married	0.01	0.10	0	1
	Widowed	0.02	0.14	0	1
Children	No	0.63	0.48	0	1
	Yes	0.37	0.48	0	1
Living in	Rural	0.49	0.50	0	1
	Small city	0.29	0.45	0	1
	Large city	0.22	0.41	0	1
Year	1996	0.67	0.47	0	1
	2006	0.33	0.47	0	1
State	Baden Wuerttemberg	0.10	0.30	0	1
	Bavaria	0.12	0.32	0	1
	Berlin	0.04	0.20	0	1
	Brandenburg	0.07	0.26	0	1
	Bremen	0.01	0.10	0	1
	Hamburg	0.01	0.10	0	1
	Hesse	0.06	0.24	0	1
	Mecklenburg Western Pomerania	0.04	0.20	0	1
	Lower Saxony	0.09	0.29	0	1
	North Rhine Westfalia	0.15	0.35	0	1
	Rhineland Palatinate	0.04	0.19	0	1
	Saarland	0.01	0.08	0	1
	Saxony	0.10	0.30	0	1
	Saxony Anhalt	0.07	0.26	0	1
	Schleswig Holstein	0.02	0.15	0	1
	Thuringia	0.08	0.27	0	1
Region	West	0.62	0.49	0	1
	East	0.38	0.49	0	1
Party affiliation	No specific party	0.15	0.38	0	1
	Far left	0.07	0.26	0	1
	Left, center left	0.39	0.49	0	1
	Center, liberal	0.08	0.27	0	1
	Right, conservative	0.29	0.45	0	1
	Far right	0.02	0.14	0	1

Source: ISSP 1996 and 2006 Role of Government III and IV modules.

Table A.2: Descriptive statistics controls

	Unemployed (%) of the dependent civil labor force		Gross domestic product per capita (adjusted, 2005=100)	
State	1996	2006	1996	2006
West				
Baden-Württemberg	8.0	7.1	23619.4	33677.8
Bavaria	7.9	7.8	21302.4	32890.4
Berlin	15.2	20.1	24816.4	26359.4
Bremen	15.6	16.3	26339.3	40014.5
Hamburg	11.7	12.6	36608.5	50454.5
Hesse	9.3	10.4	25621.7	36127.0
Lower Saxony	12.1	11.8	19365.2	25682.4
North Rhine Westfalia	11.4	12.6	21546.5	29074.6
Rhineland Palatinate	9.4	9.0	19470.6	25995.5
Saarland	12.4	10.8	17171.3	29107.0
Schleswig-Holstein	10.0	11.3	20574.6	25016.8
East				
Brandenburg	16.2	18.7	13643.7	19909.1
Mecklenburg Western Pomerania	18.0	20.8	13800.2	18991.7
Saxony	15.9	18.8	13701.9	21339.3
Saxony-Anhalt	18.8	19.9	12187.8	20156.9
Thuringia	16.7	17.0	11725.1	19528.9

Source: Statistisches Bundesamt (2014)