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Thrifty Wives and Lavish Husbands? – Bargaining Power and Financial Decisions in Germany

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Matthias Keese

Thrifty Wives and Lavish Husbands?

Bargaining Power and Financial Decisions
in Germany

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Matthias Keese¹

Thrifty Wives and Lavish Husbands? – Bargaining Power and Financial Decisions in Germany

Abstract

Numerous contributions in the literature show that household outcomes are influenced by the distribution of intra-household decision power expressed by bargaining indicators such as relative income of the spouses. Since women can expect a longer retirement period, increased female bargaining power could lead to higher savings and wealth accumulation. In contrast, a household could consume more in the current period (e.g., to the benefit of the children) if gender differences in saving preferences had other rationales. Using two German datasets and different measures of bargaining power, my analysis gives evidence that female bargaining power has no or a negative influence on saving and wealth even when controlling for expectations of future support by public pension schemes of the spouses. In some specifications, I also find positive associations between the wife's bargaining power and attitudes towards current consumption proxied by repayments of consumer loans. Different results for subsamples of couples with and without dependent children support the validity of the “kids-do-better hypothesis” which indicates that mothers use their bargaining power to enforce higher current consumption in favor of the children.

JEL Classification: D1; D91; J16

Keywords: Intra-household allocation; bargaining power; saving, debt, SOEP, SAVE

May 2011

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1 Introduction

Intra-household decision processes and their impact on consumption and saving decisions are a topic of high relevance for policy analysis. Reforms in childcare provision, high human capital accumulation by women, and rising labor force participation of mothers tend to increase female economic power and, consequentially, could lead to rearrangements of intra-household decision processes. At the same time, the demographic change has induced far-reaching adjustments in the social security systems of European countries. It is still an unsolved issue how households react to the shift in economic power in favor of women and to the simultaneous change in pension systems which requires a combined analysis of the two developments.

The empirical literature shows that household outcomes such as expenditure are influenced by indicators of bargaining power of household members (e.g., Phipps and Burton, 1998; Lundberg et al., 2003; Friedberg and Webb, 2006). As regards savings and debt, there are good reasons to argue that differences in preferences and income sources of the spouses could influence financial decisions. An important consideration relates to the life-cycle of a typical couple. Wives are often younger than their husbands and they have a higher life expectancy. As a consequence, increased female bargaining power can be expected to increase household savings and to lower consumption in the years before retirement (Browning, 1995). In contrast, spouses could have different savings preferences due to other reasons. That women might favor higher expenditure for current consumption can possibly be explained with the “kids-do-better hypothesis” (Lundberg and Pollak, 1996, p.155). This hypothesis states that women want higher spending for the benefit of their children (Lundberg and Ward-Batts, 2000) so that the children’s outcomes will improve if more household resources are attributed to women. Hence, the household saves less and is more likely to spend or even indebt for consumption purposes.

The empirical literature on the impact of increased female control of resources on saving and debt yields mixed results (e.g., Browning, 1995; Friedberg and Webb, 2006; Lundberg and Ward-Batts, 2000; Gibson et al., 2006; Phipps and Woolley, 2008). Therefore, it is not straightforward to argue that increasing labor market participation of women leads to higher private savings. This issue would be of minor importance if wives were able to avoid old-age provision gaps by collecting their own pension claims. However, replacement rates of the German public pension system are most likely to decline so that increasing saving efforts are desirable, in particular for low- and middle-incomes. Taking the interaction between public and private old-age provision into account, an ideal investigation of bargaining power and household savings is able to consider future retirement incomes out of public pension schemes

as well.

This paper analyzes the impact of intra-household bargaining power on the financial decisions of German households, namely on the savings ratio and household wealth. In addition, I investigate the relation between the distribution of bargaining power and attitudes toward consumer debt.

Special features of two German datasets, the Socio-Economic Panel (SOEP) and the SAVE Study¹ offer a comprehensive set of bargaining measures for my analysis. In addition to information on relative income and differences in education of the spouses which is included in both datasets, I use individual wealth information in the SOEP to calculate the relative wealth of each spouse. Furthermore, I rely on a direct question in the SAVE Study that asks for the decision maker in financial affairs within the household.

My paper has several contributions to the existing literature. First, an empirical analysis of bargaining power on financial decisions has not been conducted for Germany before. Second, some of the various measures of bargaining power applied in this study have not been used in the literature on savings and old-age provision before. As regards relative income, I deal with potential endogeneity by using two different instrumental variable (IV) approaches. Third, I address the recent changes in the German pension system by controlling for self-assessed statements on future retirement incomes. Fourth, I focus on attitudes towards current consumption proxied by the usage of consumer credit in addition to household savings.

The main findings of this paper can be summarized as follows: (1) Higher female bargaining power does not come along with higher household savings and wealth which contradicts rational life-cycle considerations of wives. There is even some evidence for a negative association between female bargaining power and private savings. (2) Correspondingly, some bargaining measures show a positive influence of female decision power on consumer debt. (3) Different results for subsamples of couples with or without dependent children living in the same household support the validity of the “kids-do-better hypothesis” which indicates that mothers use their bargaining power to enforce higher current consumption in favor of their children. (4) The expected future coverage by the German public pension scheme of the spouses has no significant association with the saving behavior. A bad self-assessed

¹The Socio-Economic Panel (SOEP), located at the German Institute for Economic Research (DIW Berlin), has been collected since 1984 and surveys more than 20,000 persons in about 11,000 households per year. For a detailed introduction to the SOEP, refer to Haisken-DeNew and Frick (2005), or the SOEP homepage at <http://www.diw.de/en/soep>. See also Wagner et al. (2007). The SAVE Study has been conducted on behalf of the Mannheim Research Institute for the Economics of Aging (MEA) since 2001. As a panel survey, it includes (amongst other) detailed information on savings, wealth, as well social and personal circumstances. For details, see Börsch-Supan et al. (2008).

support by public pension schemes does not come along with higher private saving efforts. Consequently, potential future provision gaps, especially for wives, cannot be ruled out.

In Section 2, I provide a literature overview on the links between intra-household allocation and financial decisions of private households. Section 3 provides a description of the data samples and explains the econometric methodology. The empirical results are discussed in Section 4. Section 5 concludes.

2 Literature review

Traditional or *unitary* models of household behavior in the spirit of Becker (1974) or Samuelson (1956) assume a single household utility function and a joint budget constraint.² In this setting, income is pooled and different preferences of household members cannot be accounted for. This type of models has been challenged by numerous authors showing links between consumption expenditure and bargaining power of the spouses. For instance, Phipps and Burton (1998) find that the income-pooling hypothesis only holds for some categories of household expenditure (such as housing) while other types (such as childcare) are related to the source of income (male vs. female earnings).³ In contrast, *collective* models (e.g., Chiappori, 1992) consider heterogeneous preferences explicitly and predict that outcomes vary with income sources and characteristics of the household members. Similarly, game-theoretic approaches (cooperative and non-cooperative) allow for bargaining among household members and stress the impact of individual characteristics on *threat points* and, thus, on determining household outcomes.⁴

With respect to savings and portfolio choice, Browning (2000) provides a theoretical two-person household model with differing saving preferences of husband and wife due to age and life expectancy. Showing that the relative income of the spouses is a determinant of current savings and portfolio choice, he states that the husband prefers to save in annuities while the wife prefers life-insurance policies and private savings. However, life-cycle considerations are only one possible source of differences in household savings. In contrast, other sources could drive differences in saving preferences of the spouses as well. For instance, wives

²For an overview and a discussion of household behavior models, see, e.g., Bourguignon and Chiappori (1992), Doss (1996a), Garcia et al. (2009), or Phipps and Burton (1996).

³Phipps and Burton (1996) provide a literature overview with empirical testings of the validity of the unitary household model.

⁴See Lundberg et al. (2003) as well as Friedberg and Webb (2006) who summarize contributions on the impact of *threat points* on expenditure, leisure choice, and child outcomes. For implications of the different game-theoretic models of household behavior, refer to the overview by Lundberg and Pollak (1996).

could wish to spend more resources in the current period in favor of their children (“kids-do-better hypothesis”, Lundberg and Pollak, 1996). Browning (1995) lists further reasons why household savings could differ with the source of income: possible correlations of income and labor supply (costs of going to work, dissaving in case of unemployment of one spouse), precautionary savings (which will be lower if both spouses work), correlations of saving preferences and income distribution in the household, as well as disagreement on future uncertainty and divorce (asset distribution after separation or possibilities after split-up).

There are only a few empirical investigations that deal explicitly with saving decisions and intra-household bargaining power. Browning (1995) uses data from the Canadian Family Expenditure Survey. His main explanatory variable (ratio of the wife’s gross income to the couple’s gross income) is significantly negative (however, only if the household income is excluded from the estimation equation) which suggests a declining saving ratio if the bargaining power of the wife increases (with a stronger effect for younger households).

Friedberg and Webb (2006) use the Health and Retirement Study (HRS). They find that households with male decision makers are more likely to invest in equities and that household wealth increases with the age of the spouse with the *final say*. Their interpretation of the latter result is that life-cycle plannings of the decision-making spouse dominate the savings outcome of the couple. However, the last argument is not convincing since the older spouse should have an interest to dissave rather than to accumulate further wealth. Only if assuming that relative age is a good proxy for bargaining power, wealth accumulation ought to be higher in households with older women since they can expect a longer retirement. Again, this does not hold for older husbands.

Working with the same dataset (HRS), Lundberg and Ward-Batts (2000) find only weak evidence for a positive relationship between saving for retirement (net wealth) and female bargaining power.

For New Zealand, Gibson et al. (2006) construct a power index consisting of age, education, and potential heritage. They find a negative relation between household net worth and female bargaining power. This result is explained by the design of the New Zealand pension system that offers higher replacement rates for pre-retirement income to women.

For Canada, Phipps and Woolley (2008) investigate whether contributing to a subsidized retirement savings plan (so-called *RRSP*) is influenced by spousal control of financial resources. Their findings show negative associations between female power in financial affairs and the likelihood to contribute to these savings plans. Thereby, female control of money is negatively related to wealth holdings in these plans, irrespective of whether the plan is held by the husband or by the wife. The authors discuss different possible explanations for this

finding. On the one hand, they refer to the “kids-do-better-hypothesis” (which they call the “‘good mom’ explanation”, p. 607) . On the other hand, they argue that differences in saving behavior might root in traditional role behavior of the spouses. While women appear to be more reluctant to engage in financial planning, men (as the *breadwinner* of the household) might feel obliged to care for their wives’ old-age provision.

3 Discussing measures of household bargaining power

Several measures of bargain power are motivated in the literature. Numerous contributions use the relative earnings or the relative income of the wife to study the impact of income sources on household outcomes (e.g., Browning et al., 1994, Euwals et al, 2004, Gibson et al., 2006, Lundberg and Ward-Batts, 2000). Both measures root in the theory that decision power is determined by the relative resources the spouses contribute (Blood and Wolfe, 1960).⁵ As an example, Euwals et al. (2004) find that the influence of the wife’s attitude towards saving is positively linked to her relative income share. However, the correlation between wages and income leads to a potential endogeneity problem that is sometimes addressed but frequently ignored. In the later regressions, I use the relative income as a bargaining measure for my analysis but I account for possible endogeneity by using two different instrumental variables. To calculate the relative income share of the couples in the SOEP, I include all income components that can directly be attributed to the individual, such as gross earnings, pensions, unemployment benefits, payments during maternity leave, or support payments by people outside the household. The proceeding with the SAVE data is different since the respondents are directly asked how large their relative share of the household (net) income is.

Furthermore, education has been used as an indicator of bargaining power (e.g., Beegle et al., 2001, Gibson et al., 2006). With respect to wealth accumulation, formal education could serve as a proxy for financial literacy. Meier et al. (1999) show that households assign more decision power in financial affairs to the spouse with the higher skills. As regards the exogeneity of this measure, educational differences are usually set before or at the beginning of marriage. Therefore, this measure has already been determined long before current savings and consumption patterns are observed. In addition, differences in education can hardly be the outcome of an intra-household bargaining process themselves (in contrast to, e.g., the

⁵Doss (1996b) proposes a different view stating that a wife might decide not to work in the labor market and to be supported by other household members so that her relative income is very low *because* she has high bargaining power.

Table 1. Correlations: Measures of bargaining power

| | | | |
|------------------|------------------|---------------------|------------------|
| SOEP: | Wife: more educ. | Husband: more educ. | Rel. wealth wife |
| Rel. income wife | 0.0928* | -0.0959* | 0.1542* |
| SAVE: | Wife: more educ. | Husband: more educ. | Rel. income wife |
| Rel. income wife | 0.0873* | -0.0871* | |
| Wife: decider | 0.0280 | -0.0684* | 0.0702* |
| Husband: decider | -0.0478* | 0.0840* | -0.1222* |

Note. Own calculations. *Significance at the 0.01-level. Correlations for relative wealth and SAVE bargaining measures are averages obtained from multiply imputed datasets.

relative income share) as soon as the marriage has been concluded. In my analysis, I use dummy variables indicating whether the wife or the husband is better educated than the partner. I define a spouse as being *better educated* if her formal degree (university entrance qualification or university degree) is higher than the one of the other spouse. Since I have information on years in education in the SOEP, I also assign a value of one if the difference in years in education is three years or larger. The education levels of the spouses are similar. In my SOEP household sample, the correlation coefficients for years in education, university entrance, and university degree are 0.60, 0.48, and 0.43, respectively. However, one third of the households in the SOEP sample have different education levels, and more than one fifth in the SAVE data sample.

In addition to the more standard bargaining measures discussed so far, I exploit special features of the two datasets. A further potential bargaining measure could be the relative wealth of the spouses. The SOEP waves 2002 and 2007 have detailed questions on wealth of different types which are surveyed on an individual basis: property primary residence, other real estate, financial assets, private insurances, business assets, tangible assets, and consumer debt.⁶ For jointly owned assets (e.g., the main residence), the SOEP provides information on market value, debt, and the personal share of the spouses. This allows me to calculate the relative wealth of the spouses as a measure of intra-household bargaining power as used by, e.g., Beegle et al. (2001), Doss (1996b), or Gibson et al. (2006) (who use differences in inherited wealth). For each household, I calculate the ratio of the wife's personal assets and the personal assets of both spouses. In case of zero or negative added personal wealth, I assign a bargaining power of one half. If one spouse has positive and the other spouse has negative wealth, the former receives a bargaining power of one. Wealth owned by children is

⁶Frick et al. (2007a) provide a detailed documentation on the 2002 Wealth Module of the SOEP. Frick et al. (2007b) discuss how distribution and inequality differ with respect to the aggregation unit of wealth.

not observed in the SOEP but does not have high relevance (Frick et al., 2007b). For several reasons, the relative wealth position of the spouses is an adequate bargaining measure and it is appropriate for my analysis. Relative wealth might serve as a *threat point* to dissolve the marriage. Furthermore, differences in relative wealth reveal contributions a spouse has ceded at the begin of or during marriage. The main sources of these variations (e.g., bequests or a former marriage) can be treated as exogenous.

Moreover, I have a direct look on the financial decision-making process in the household. The SAVE Study asks for the financial decision-maker in the household (one spouse or both spouses together). I use this information as a direct but rough measure of financial bargaining power since it only reveals whether one spouse dominates the decision process or whether both decide jointly, however with an unknown share of power. A similar measure has been applied by Friedberg and Webb (2006) using the Health and Retirement Study (HRS). In contrast to the SAVE data, the HRS has two sources of information on the *final say* in financial affairs since both spouses are surveyed separately. The authors address a potential problem arising from measurement error (since they find that only 63% of the spouses give conform answers to the question of who has the *final say*). This is an issue in my analysis that cannot be solved, though. Admittedly, financial decision-making cannot be treated as being determined exogenously. The question of whether the spouses decide jointly on financial affairs might be somehow correlated with preferences for savings in general so that the estimated coefficients might be biased. Nevertheless, I use this bargaining measure to complement the results from the other specifications.

Some authors (Browning et al., 1994; Gibson et al., 2006) use age differences of the spouses to explain differences in household outcomes. Obviously, the direction of the effect is ambiguous. On the one hand, younger wives (and husbands) can exhibit a stronger bargaining power since they can opt out of the marriage more easily. On the other hand, age comes along with experience and can therefore induce higher bargaining power within the household. I therefore refrain from using this measure.

To sum up, I use six measures of bargaining power in the two different datasets. Table 1 shows the applied measures and some important correlations. The signs of the correlation coefficients are as expected. The bargaining measure *relative income* shows a significantly positive correlation with the wife's education and a significantly negative correlation with a higher educational level of the husband in both datasets. Moreover, the relative wealth position is positively correlated with the income share of the wife (SOEP). One additional aspect is worth being mentioned. The higher the relative income of the wife, the less likely is the husband to be the exclusive financial decider of the household (SAVE). The same holds

if the wife is better educated than her husband. Similarly, the higher the income share of the wife, the more likely is she to be the only financial decision maker in the household. In contrast, there is no significant correlation between a wife's higher education level and her probability of being the only financial decider. I argue that a higher education of the wife primarily breaks the husband's dominance in financial decisions (expressed by a significantly negative correlation with the dummy *husband: decider*) which leads to joint decisions instead of giving her the sole decision power. In a similar manner, Friedberg and Webb (2006) investigate the determinants of having *the final say* in financial affairs (HRS data). The informational value of their variable is close to the SAVE statement on the financial decider in the household. They find that the husband's likelihood of having *the final say* is negatively influenced by the wife's relative (current and past) earnings as well as by the cultural and educational background.

4 Data and econometric methodology

4.1 Descriptions of the datasets

I use the SOEP waves 2002 and 2007 (when wealth was surveyed) and SAVE data from 2003 to 2008. The proceedings are similar for both datasets. I build a sample consisting of married and cohabiting couples in which both spouses are aged below 55. From the SOEP data, I merge characteristics of the household and the spouses in one single dataset while the SAVE questionnaire is answered by one respondent only who gives statements on themselves, the partner, and the household. The final samples include characteristics of the wife and the husband (e.g., age, education, employment status, risk attitudes), characteristics of the household (household income, number of children⁷, wealth), as well as the calculated measures of bargaining power as discussed in the previous section. In the SOEP regressions, household income is controlled for by the current household income and a measure of permanent income. Similar to Bauer and Sinning (2011) as well as to Chiteji and Stafford (1999), this permanent income measure is the average household net income (in real terms) of the preceding five periods. In the SAVE regressions, only current net household income (of the previous period) is at my disposal.

The two datasets also include expectations on future retirement incomes. From the SOEP, I take the respondents' self-assessment on their future support by the public pension scheme.

⁷I use SOEP households with cohabiting children up to the age of 16.

The possible answers are *very well*, *well*, *ok*, *badly*, or *very badly*. I group the former two categories in the dummy variable *public pension: well* and the latter two in the dummy variable *public pension: badly*. In the later regressions, the reference group consists of individuals with the answer *ok*. For the SAVE subsample, I create dummy variables which indicate whether the respective spouse has public pension claims for the statutory pension insurance system (including pensions for civil servants and farmers) or for a different, non-private pension scheme (additional pension scheme for public employees, occupational pensions, or pensions funds of freelancer associations). The skewness of the wealth distribution and the existence of outliers require particular attention. I therefore eliminate observations with a net wealth below the lowest percentile and above the highest percentile.

Table 2 displays the sample means of the households and the spouses in the two datasets. The SOEP sample consists of 3,091 couple observations from the years 2002 and 2007. The SAVE sample includes 3,717 observations from the years 2003-2008. The samples show similarities in most characteristics. To begin with the bargaining measures, the average relative income share of the wife lies below a third (SOEP: 24 percent; SAVE: 30 percent). In 20 percent of the SOEP households, the husband is better educated than his wife (and 14 percent vice versa). In the SAVE sample, 12 percent of the husbands are better educated (and ten percent of the wives). The relative wealth share of wives ranges around 43 percent. Moreover, many couples under investigation own a similar share of wealth. About 20 percent have equal shares of exactly one half and in 40 percent of the households, the wife's share ranges between 0.45 and 0.55. The SAVE sample reveals that a minority of couples have only one financial decider. In nine percent of the cases, financial decisions are taken by the husband, in about seven percent by the wife. The picture is similar when assuming that the spouse with the higher education dominates the decision process.

Total household net wealth ranges around 155,000 euros (SOEP) and 140,000 euros (SAVE). Private wealth with old-age purpose amounts to about 28,000 euros (SOEP) and 17,000 euros (SAVE), respectively. This wealth variable comprises life-insurances, private, and occupational pension schemes (SAVE) but also building loan contracts in the SOEP data since the single asset types cannot be separated in the 2002 wave. About 30 percent of the SOEP sample and 28 percent of the SAVE sample have regular consumer credit repayments. Indeed, the relative share of household income used to repay the debt burden is notably lower in the SAVE sample: 1.6 percent compared to 3.8 percent, respectively. As regards the characteristics of the spouses, the wives in both samples are younger than their husbands. The age difference is 2.3-2.5 years with an average age of the wife of 37.9 years (SOEP) and 39.6 years (SAVE). Comparing the public pension claims of the spouses reveals

Table 2. Sample means

| | SOEP | SAVE |
|-------------------------------------|--------|--------|
| Relative income (wife) | 0.235 | 0.304 |
| More education (wife) | 0.142 | 0.103 |
| More education (husband) | 0.197 | 0.121 |
| Relative wealth (wife) | 0.425 | |
| Financial decider (wife) | | 0.074 |
| Financial decider (husband) | | 0.090 |
| Household income in 1,000 (defl) | 3.040 | 2.732 |
| Permanent HH income in 1,000 (defl) | 2.840 | |
| Savings ratio | 0.078 | 0.072 |
| Net wealth in 10,000 (defl) | 14.332 | 14.025 |
| Wealth (old-age) in 10,000 (defl) | 2.782 | 1.694 |
| Home loan | 0.439 | 0.437 |
| Consumer credit | 0.306 | 0.282 |
| Share of consumer credit repayments | 0.038 | 0.016 |
| Number of children in HH | 1.38 | 1.37 |
| Unemployed in HH | 0.091 | 0.129 |
| Self-employed in HH | 0.130 | 0.108 |
| Civil servant in HH | 0.105 | 0.099 |
| Migrant (respondent) | | 0.033 |
| Risk aversion (respondent) | | 2.22 |
| Female (respondent) | | 0.515 |
| Characteristics of the wife | | |
| Age | 37.9 | 39.6 |
| Migrant | 0.113 | |
| Higher education | 0.307 | 0.284 |
| Risk aversion | 2.18 | |
| Public pension: well | 0.129 | |
| Public pension: badly | 0.482 | |
| Public pension: yes | | 0.943 |
| Other pension: yes | | 0.248 |
| Characteristics of the husband | | |
| Age | 40.2 | 42.1 |
| Migrant | 0.102 | |
| Higher education | 0.330 | 0.297 |
| Risk aversion | 3.16 | |
| Public pension: well | 0.203 | |
| Public pension: badly | 0.375 | |
| Public pension: yes | | 0.957 |
| Other pension: yes | | 0.307 |
| Observations | 3,091 | 3,717 |

Note. Own calculations. Data sources: SOEP (2002, 2007) and SAVE (2003-2008). SOEP wealth and SAVE data: averages obtained from five multiply imputed datasets.

a gender gap. While 94-96 percent of both wives and husbands expect retirement income from public pension systems, only 25 percent of the women but 31 percent of the men have access to an additional, non-private pension scheme (SAVE). The difference is even more drastic when comparing self-assessed future support by public pension schemes. 20 percent of the husbands but only 13 percent of the wives expect a good coverage. A bad support is declared by 38 percent of the husbands but 48 percent of the wives.

4.2 Econometric methodology

I estimate random-effects panel models for five different dependent variables. Each regression set consists of seven specifications which make use of different bargaining measures. The first set of regressions analyzes the savings ratio (monthly savings as a share of monthly net household income). Specification (1), (2), and (5) are linear models which include the bargaining measure *relative income* and use one of the two instruments (described in the following subsection). In the remaining specifications of the savings ratio regressions, I apply a tobit model to account for censoring at the zero-percent level.

The second set of regressions uses total household net wealth (assets minus debt) as dependent variable and in the third set, wealth with a special focus on old-age provision is the dependent variable.

With the fourth and fifth regression sets, I study the households' attitude toward current consumption in a direct way by using statements on consumer indebtedness. I argue that using consumer credit and the share of the household income that is spent for the repayments of consumer loans reveal preferences for current consumption. In the fourth set of regressions, the likelihood of having consumer loan repayments is analyzed with a linear probability model⁸. Lastly, the fifth set of regressions uses repayments as a share of household income as the dependent variable.

As a benchmark, the estimations are first executed by using all observations from the sample. Subsequently, I split the sample into households with and without dependent children.

⁸I refrain from using a special binary-choice model (such as probit or logit) since there is no STATA command at hand that would allow for endogenous regressors in a random-effects specification. To facilitate the comparison of the resulting bargaining coefficients, I use the same model type in all model specifications.

4.3 Instrument variables to address endogeneity of relative income

The relative share of income is probably influenced by productivity and wage differentials of the spouses. Moreover, it can reflect preferences on the intra-household division of labor that cannot be controlled for with the data at hand. If these preferences are somehow correlated to preferences on savings and consumption, the regression results could suffer from endogeneity bias. For instance, it could be argued that couples with high preferences for a *breadwinner household* have a higher propensity to save compared to households in which the spouses agree on a more equal distribution of intra-household and market labor.

However, to finally exclude that my results are biased and to make sure that I estimate indeed an effect of *relative income* on savings instead of a simple correlation, I use two different instrument variable specifications to address this endogeneity issue. First, for the SOEP data I rely on a dummy variable which indicates the presence of a small child (between one and six years) in the household as an instrument for *relative income*. Indeed, the number of children is likely to affect savings decisions. However, I argue that, controlling for the number of children in the household, the age of a child should not influence the savings decision. This may not hold for newborns since a recent birth has an influence on household debt (Keese, 2009) so that my instrument does not cover small babies. Unfortunately, the information needed to create this instrument variable is not included in the SAVE data.

Second, I rely on childcare supply in the near surroundings. The availability of day care for infants and older children differs notably between regions and between town-country. Furthermore, it cannot be directly influenced by the parents. Obviously, childcare supply influences the parents' decision to work and the extent of hours worked. Moreover, it is a well-known fact that the availability of childcare mostly affects the labor choice of the mother. I therefore expect a strong correlation with the relative income of the spouses. In addition, a direct influence of regional or local childcare policies on consumption and savings decisions is unlikely. To construct the childcare indicator which is finally used as the instrument variable, I take data on childcare availability on the county and federal-state level. The detailed proceeding to calculate this indicator is described in the appendix.

Furthermore, the potential instruments have to fulfill the criterion of strength. That is, the instruments need high explanatory power at the first stage of the two-stage-least-squares regressions. Usually, this can be assured by checking whether the F-values of the instruments at the first stage exceed the critical rule-of-thumb threshold to avoid weakness of instrumental variables of 10 (Staiger and Stock, 1997).

To begin with the SOEP data, weakness of the instruments can be excluded for both instruments (*infant* and *childcare*) in the overall sample as well as in the subsample of

couples with dependent children. Furthermore, *childcare* is a strong instrument even for couples without dependent children. The picture looks somewhat different for the SAVE data. I use *childcare* (on a regional base) as an instrument that shows strong explanatory power for the overall sample and the subsample of couples with children only. In contrast, regional variations in childcare availability cannot explain variations in *relative income* of couples without children in the household.

5 Regression results

5.1 The impact of bargaining power on savings and wealth

Table 3 displays selected results of the savings-ratio regressions. A list of all coefficients is presented in the appendix (Table A1). Female bargaining power shows hardly any association with the savings ratio, with one exception. Households in which the wife is the single financial decision maker have a significantly⁹ lower saving ratio. This contradicts the hypothesis that households with higher female bargaining power save more. The findings are conditional on expectations of future retirement incomes. Household savings are significantly higher if the wife expects a good coverage by public pension schemes or if the husband can rely on an additional, non-private pension. Furthermore, households in which the husband expects a bad coverage by public pension schemes save significantly less in most specifications. This negative association hints at a possible risk of future provision gaps.

As regards expectations of future pensions, the findings for the savings ratio are confirmed by the regressions with total wealth (Table 4) and wealth with old-age purpose (Table 5) as dependent variables. Households in which the couples expect a bad future coverage by public pension schemes tend to have lower wealth holdings. In contrast, couples with pension claims for public and other (non-private) pension schemes have more assets.

However, female bargaining power has a significantly negative influence on wealth. This holds for both wealth measures (total net wealth as well as long-term and presumably old-age-related asset types) and for different specifications. To be more precise, the coefficient of *relative income* carries a significantly negative sign in the IV-regressions (*childcare*) in both datasets. Moreover, the higher the relative wealth share of the wife, the lower is the

⁹Here and in the following, I use the term *significant* if the p-value lies below the 5%-threshold, and *weakly significant* if it lies between the 5%- and the 10%-threshold.

household wealth. Interestingly, households in which the husband dominates the financial decisions also own less wealth (for old-age). The coefficients can directly be interpreted as marginal effects. As regards the *relative income* specification, an increase of the wife's income share by ten percentage points comes along with a wealth reduction of about 49,400 euros. The effect in the SAVE sample is even higher. Increasing the wife's share of household wealth by ten percentage points results in a decrease in total net wealth of about 89,300 euros. Similarly, wealth directed toward old-age is about 8,200 (SOEP) and 5,700 (SAVE) euros lower if relative income increases by ten percentage points (*relative wealth*: 1,000 euros). Households with a male financial decider have on average 400 euros fewer assets.

5.2 Attitudes towards consumer indebtedness

The above findings that household savings and wealth accumulation are lower or unaffected by female bargaining power can be explained with differences in preferences for current consumption. Thus, the wives' interest to bargain for higher old-age provision is neutralized or even overcompensated by their willingness to spend money, e.g., for child-related purposes. A high propensity to consume can be proxied by consumer credit. The corresponding regression results are displayed in Table 6 (consumer credit: yes/no) and Table 7 (share of household income used to repay consumer loans). The findings are even more clear-cut than those for savings and wealth. Female bargaining power has a significantly positive influence on the likelihood and the degree of indebtedness for consumption purposes. In four of seven specifications in Table 6, the wife's bargaining power carries a significantly positive sign. An increase of *relative income* by ten percentage points comes along with a probability of having consumer credit repayments that is six (SOEP, IV infant), eight (SOEP, IV childcare), or even twenty (SAVE, IV childcare) percentage points higher. The corresponding effect for *relative wealth* is notably lower (less than one percentage point). Similar to the likelihood to use consumer credit, the share of income used for repayments rises significantly with *relative income* in all specifications and with *relative wealth*. In contrast, differences in education and financial decision-making are not associated with consumer debt.

5.3 Comparing couples with and without children

Up to this point, my analysis gives some evidence for a negative influence of female bargaining power on household savings and wealth as well as a positive influence on consumer indebted-

Table 3. Bargaining power and savings ratio

| Savings ratio | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|----------------------------|--------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
| | SOEP IV | SOEP IV | SOEP | SOEP | SAVE IV | SAVE | SAVE |
| | (infant) | (childcare) | GLS | GLS | (childcare) | GLS | GLS |
| Rel. income (wife) | 0.026 (0.048) | 0.068 (0.044) | | | -0.072 (0.107) | | |
| More educ.: husband | | | 0.009 (0.009) | | | -0.006 (0.021) | |
| More educ.: wife | | | -0.010 (0.009) | | | 0.021 (0.020) | |
| Rel. wealth (wife) | | | | -0.002 (0.009) | | | |
| Finan. decider: husband | | | | | | | 0.010 (0.010) |
| Finan. decider: wife | | | | | | | -0.023** 0.011 |
| Characteristics (wife) | | | | | | | |
| Public pension: well | 0.014** (0.006) | 0.015** (0.006) | 0.013* (0.007) | 0.013* (0.007) | | | |
| Public pension: badly | 0.002 (0.005) | 0.005 (0.005) | 0.001 (0.005) | 0.001 (0.005) | | | |
| Public pension: yes | | | | | 0.009 (0.012) | 0.005 (0.013) | 0.006 (0.013) |
| Other pension: yes | | | | | 0.007 (0.012) | 0.012 (0.008) | 0.013* (0.008) |
| Characteristics (husband) | | | | | | | |
| Public pension: well | 0.006 (0.005) | 0.006 (0.005) | 0.004 (0.006) | 0.004 (0.006) | | | |
| Public pension: badly | -0.006 (0.005) | -0.009** (0.005) | -0.012** (0.005) | -0.012** (0.005) | | | |
| Public pension: yes | | | | | -0.004 (0.015) | -0.009 (0.016) | -0.010 (0.015) |
| Other pension: yes | | | | | 0.021** (0.010) | 0.036*** (0.007) | 0.035*** (0.007) |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table 4. Bargaining power and household wealth

| Net wealth | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|----------------------------|----------------------------|-------------------------------|---------------------|---------------------|-------------------------------|---------------------|---------------------|
| Rel. in come (wife) | 2.270 (9.043) | -49.393*** (8.629) | | | -89.339** (35.643) | | |
| More educ.: husband | | | -1.396 (1.197) | | | 0.856 (2.569) | |
| More educ.: wife | | | -0.605 (1.249) | | | -1.260 (2.137) | |
| Rel. wealth (wife) | | | | -2.460** (1.229) | | | |
| Finan. decider: husband | | | | | | | 1.091 (0.891) |
| Finan. decider: wife | | | | | | | -0.807 (0.961) |
| Characteristics (wife) | | | | | | | |
| Public pension: well | 0.384 (0.922) | 1.934 (1.180) | 0.359 (0.869) | 0.445 (0.868) | | | |
| Public pension: badly | -0.171 (0.805) | -2.917*** (0.936) | -0.415 (0.602) | -0.436 (0.599) | | | |
| Public pension: yes | | | | | 3.057 (3.277) | 0.210 (1.382) | 0.185 (1.371) |
| Other pension: yes | | | | | 4.816* (2.587) | 0.083 (0.920) | 0.085 (0.924) |
| Characteristics (husband) | | | | | | | |
| Public pension: well | -0.300 (0.843) | -1.371 (1.070) | -0.418 (0.767) | -0.470 (0.769) | | | |
| Public pension: badly | -1.648** (0.724) | 0.432 (0.898) | -1.519** (0.648) | -1.494** (0.647) | | | |
| Public pension: yes | | | | | -2.021 (2.826) | 0.192 (1.400) | 0.177 (1.396) |
| Other pension: yes | | | | | -1.283 (2.110) | 2.162*** (0.784) | 2.133*** (0.785) |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table 5. Bargaining power and household wealth (old-age provision)

| Wealth (old-age) | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|----------------------------|----------------------------|-------------------------------|--------------------|----------------------|-------------------------------|---------------------|---------------------|
| Rel. income (wife) | 1.017 (2.808) | -8.169*** (2.487) | | | -5.725* (3.247) | | |
| More educ.: husband | | | -0.139 (0.364) | | | -0.287 (0.370) | |
| More educ.: wife | | | 0.204 (0.410) | | | -0.325 (0.382) | |
| Rel. wealth (wife) | | | | -1.008*** (0.336) | | | |
| Finan. decider: husband | | | | | | | -0.398** (0.175) |
| Finan. decider: wife | | | | | | | -0.253 (0.199) |
| Characteristics (wife) | | | | | | | |
| Public pension: well | 0.122 (0.339) | 0.231 (0.362) | 0.123 (0.352) | 0.153 (0.302) | | | |
| Public pension: badly | 0.040 (0.282) | -0.480* (0.269) | 0.034 (0.272) | 0.030 (0.189) | | | |
| Public pension: yes | | | | | 0.395 (0.332) | -0.069 (0.220) | -0.083 (0.220) |
| Other pension: yes | | | | | 0.961*** (0.328) | 0.278* (0.147) | 0.272* (0.147) |
| Characteristics (husband) | | | | | | | |
| Public pension: well | 0.349 (0.267) | 0.042 (0.284) | 0.207 (0.245) | 0.195 (0.245) | | | |
| Public pension: badly | -0.101 (0.244) | 0.253 (0.258) | -0.083 (0.213) | -0.065 (0.212) | | | |
| Public pension: yes | | | | | 0.341 (0.406) | 0.565** (0.262) | 0.551** (0.262) |
| Other pension: yes | | | | | -0.035 (0.268) | 0.475*** (0.132) | 0.486*** (0.132) |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table 6. Bargaining power and consumer credit

| Consumer credit yes/no | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|----------------------------|----------------------------|-------------------------------|--------------------|--------------------|-------------------------------|--------------------|--------------------|
| Rel. income (wife) | 0.622** (0.247) | 0.777*** (0.229) | | | 2.022*** (0.803) | | |
| More educ.: husband | | | -0.014 (0.032) | | | 0.002 (0.053) | |
| More educ.: wife | | | 0.030 (0.033) | | | -0.053 (0.052) | |
| Rel. wealth (wife) | | | | 0.082** (0.033) | | | |
| Finan. decider: husband | | | | | | | 0.022 (0.026) |
| Finan. decider: wife | | | | | | | 0.031 (0.028) |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table 7. Bargaining power and credit repayments

| Share: credit/ repayments HH income | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|---|----------------------------|-------------------------------|--------------------|---------------------|-------------------------------|--------------------|--------------------|
| Rel. income (wife) | 0.114*** (0.042) | 0.056 (0.037) | | | 0.172*** (0.049) | | |
| More educ.: husband | | | -0.001 (0.005) | | | 0.004 (0.006) | |
| More educ.n: wife | | | 0.006 (0.006) | | | -0.001 (0.005) | |
| Rel. wealth (wife) | | | | 0.017*** (0.006) | | | |
| Finan. decider: husband | | | | | | | 0.003 (0.003) |
| Finan. decider: wife | | | | | | | 0.003 (0.003) |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

ness. However, it is still an open issue whether the higher propensity to consume is mainly driven by the existence of children (this would support the “kids-do-better hypothesis”) or whether it roots in other fundamental and gender-related differences in saving preferences. Therefore, I split the household samples into subsamples of couples with and without children who live in the same household. Then I run separate regressions for the two groups. Similar results for the two subsamples would indicate that differences in saving preferences are unrelated to the existence of children. In contrast, different results would support the “kids-do-better hypothesis”.

Table 8. Couples with children: Saving, wealth, and consumer debt

| | Savings ratio | Wealth | Wealth (old-age) | Credit yes/no | Share: re-payments | Obs. |
|-------------------------|---------------|----------------|------------------|---------------|--------------------|-------|
| SOEP | | | | | | |
| Rel. inc. ♀ (infant) | 0.001 | -22.398 | -1.026 | 1.294 | 0.188 | 2,048 |
| Rel. inc. ♀ (childcare) | 0.029 | -37.746 | -4.966 | 0.746 | 0.054 | 2,021 |
| More education ♂ | 0.013 | -1.698 | -0.352 | -0.014 | -0.002 | 2,332 |
| More education ♀ | -0.014 | 0.034 | -0.397 | -0.002 | 0.000 | |
| Rel. wealth ♀ | -0.004 | -0.820 | <i>0.711</i> | 0.086 | 0.015 | 2,332 |
| SAVE | | | | | | |
| Rel. inc. ♀ (childcare) | -0.034 | -64.963 | -3.475 | 1.755 | 0.166 | 1,586 |
| More education ♂ | 0.007 | 0.144 | -0.317 | -0.038 | -0.003 | 2,810 |
| More education ♀ | 0.017 | -2.723 | -0.568 | -0.054 | -0.001 | |
| Financial decider ♂ | 0.014 | 0.881 | -0.314 | 0.006 | -0.002 | 2,810 |
| Financial decider ♀ | <i>-0.025</i> | -0.363 | -0.236 | 0.028 | -0.002 | |

Note. Figures printed in bold: significance at the 5%-level; figures printed in italics: significance at the 10%-level. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

The results of the bargaining measures are reported in Table 8 (couples with children) and Table 9 (couples without children living in the same household). Statistically significant coefficients (5-percent level) are printed in bold, weakly significant coefficients (10-percent level) are printed in italics.

The results differ in some respect between the subsamples. The findings for couples with children are broadly in line with those obtained for the entire sample. In both datasets, the amount of total assets is negatively affected by *relative income* (specification with childcare as instrument). For wealth (old-age), the picture is not unambiguous. In one case, the coefficient of the bargaining measure is significantly positive (SOEP, *relative income* with the

Table 9. Couples without children: Saving, wealth, and consumer debt

| | Savings ratio | Wealth | Wealth (old-age) | Credit yes/no | Share: re-payments | Obs. |
|-------------------------|---------------|----------------|------------------|---------------|--------------------|------|
| SOEP | | | | | | |
| Rel. inc. ♀ (childcare) | 0.155 | -71.533 | -12.553 | 0.793 | 0.093 | 657 |
| More education ♂ | -0.005 | -0.319 | 0.441 | -0.026 | -0.005 | 759 |
| More education ♀ | 0.005 | -2.206 | -0.053 | <i>0.111</i> | <i>0.019</i> | |
| Rel. wealth ♀ | -0.002 | -8.062 | -1.955 | 0.064 | 0.013 | 759 |
| SAVE | | | | | | |
| Rel. inc. ♀ | -0.027 | -4.523 | 0.085 | -0.022 | -0.018 | 559 |
| More education ♂ | -0.042 | -1.573 | -0.330 | 0.169 | 0.020 | 907 |
| More education ♀ | 0.040 | 6.698 | 0.504 | -0.145 | -0.007 | |
| Financial decider ♂ | 0.000 | 1.934 | -0.490 | 0.085 | 0.021 | 907 |
| Financial decider ♀ | -0.020 | -2.526 | -0.414 | 0.066 | <i>0.013</i> | |

Note. Figures printed in bold: significance at the 5%-level; figures printed in italics: significance at the 10%-level. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

IV *childcare*). However, the contrary is true for *relative wealth* (but only weakly significant). Nevertheless, households have a significantly lower savings ratio if the wife is the only financial decider (weak significance). As regards household indebtedness, female bargaining power has certainly a clear influence on consumer debt with significantly positive coefficients in seven specifications. In a nutshell, the overall impression suggests an interpretation that is consistent with the findings discussed for the entire sample. Female bargaining power affects saving activities in a negative way and appears to induce higher consumer indebtedness.

In contrast, the results for couples without children in the same household are less clear. Most bargaining coefficients are statistically insignificant. However, overall wealth and wealth (old-age) decrease significantly with the relative wealth share and the relative income share (IV *childcare*) of the wife. Interestingly, households have significantly higher consumer debt repayments if the husband is the single financial decision-maker.

If at all, female bargaining power appears to have a notably lower impact on financial decisions in households without children. This overall finding supports the validity of the “kids-do-better hypothesis”. Thus, female bargaining power is translated into lower savings and into higher consumer debt in order to possibly increase the benefit of the children. The countervailing hypothesis, namely fundamental gender differences in preferences toward consumption shifting, cannot be confirmed since the impact of bargaining power on financial decisions is less existent in households without children.

6 Conclusion

This contribution investigates how intra-household bargaining power affects saving decisions. Given that wives have a higher life-expectancy and are usually younger than their husbands, women have a strong incentive to insist on higher savings before retirement. Therefore, increasing female bargaining power should result in higher household savings and wealth accumulation. In contrast, if preferences for current consumption (e.g., for the benefit of the children) differ notably among the spouses, changes in intra-household bargaining power could leave household savings unaffected or even reduce wealth accumulation.

I rely on different measures of intra-household bargaining power as introduced by previous studies, such as relative income, relative wealth, differences in education, as well as financial decision-making in the household. Using two German datasets (the SOEP and the SAVE Study), my analysis yields several findings. Some bargaining measures indicate a negative influence of female decision power on the propensity to save. The results are most pronounced for total household wealth and for asset types with a special importance for the retirement period. I conclude that gender differences in saving preferences tend to result in higher consumption in the current period and in lower savings. To a large part, these findings are confirmed by an analysis of consumer indebtedness. While some bargaining measures show an insignificant influence on consumer debt, the probability of having consumer credit rises significantly with the female share of income and her relative wealth. Furthermore, these two bargaining measures also affect the ratio of consumer debt repayments and income in a significantly positive manner. To a large extent, the results for the overall sample are similar to the results for a subsample of couples with dependent children, but there are clear differences to a subsample of couples without children in the same household. In a nutshell, higher female bargaining power is associated with a stronger attitude towards current consumption of couples with children living in the same household while the distribution of bargaining power plays a minor role for saving and debt decisions of couples without children. I interpret these findings as support for the “kids-do-better hypothesis” which states that mothers use their bargaining power to realize higher current spending to the benefit of their children.

The results are conditional on expectations of future retirement incomes of the spouses. Expecting a bad coverage by the German public pension system does not lead to higher savings. Usually, active saving and wealth accumulation is higher in households in which the spouses expect a good coverage by public pensions or in which the spouses can rely on an additional, non-private pension scheme. First, these findings suggest complementarity of saving vehicles for those who are already well supported by public pensions. Second, if saving efforts do not respond to expectations of low or even non-existent future retirement

incomes, future provision gaps and claims of basic security in old-age cannot be excluded.¹⁰ This will affect women more than men if they use their bargaining power to enforce a higher current consumption level even if their expected retirement phase and their prospects of life expectancy would suggest a differing behavior.

It is not straightforward to formulate unambiguous policy implications out of these findings. On the one hand, when focusing on children's outcomes, policy measures targeted at increasing female bargaining power should be promoted. This captures the entire field of the reconciliation of family and work life. In addition, child-related transfers and tax reliefs could be directed to the mother. One prominent example is the conversion of the child allowance into a cash payment to the mother which was done in the United Kingdom in the 1970s (see the discussion in Lundberg and Pollak, 1996). Consequently, one can expect that current consumption in favor of the children increases which will then lead to lower savings and to increasing consumer debt. On the other hand, when focusing on the adequacy of old-age provision and resulting retirement incomes, the overall trend toward higher female bargaining power has a different implication. While the savings behavior of childless couples will mostly be unaffected by changes in bargaining power, households with dependent children will increase current consumption and could neglect to provide adequately for retirement. In any case, it seems unlikely that households increase their private savings efforts due to higher female bargaining power which is a worrisome development given the declining generosity of public pension schemes.

¹⁰Gender differences in public pension claims in Germany and the link to old-age poverty today and in the future are discussed by Himmelreicher and Frommert (2006).

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Appendix

Construction of childcare variables. I use regional and county data on childcare provision provided by the Federal Statistical Office (various issues) and by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR, former: Federal Research Institute for Regional Geography and Regional Planning, BfLR) (various issues). The SOEP data contain the federal state and the county type of the respondents. Each German municipality is classified by the degree of urbanization, rurality, and concentration, in one of 17 types; these municipality types can be aggregated to nine county types (for details, refer to the BBSR homepage at <http://www.bbsr.bund.de> and to Goebel et al., 2007). By county type and federal state, I calculate weighted averages of childcare availability and match these figures to the SOEP respondents. To give an example, nucleated towns in agglomerations form one county type. All respondents living in such a county type in a certain federal state (be it North Rhine-Westphalia) receive the respective weighted average. This allows a large variation between regions and town-country. Lastly, I create childcare indicators that are the values the household faces relative to the mean of all other households in the sample.

Unfortunately, county data on childcare availability are not available for each year and the measures vary. To be more specific, I have data on the relation of places in day care facilities and the number of children in the year 2002 as well as information on the shares of children in childcare facilities for several later years at my disposal. Both variable sets are available for children below the age of three and for the age of three to six. To find the most adequate instrument (which is, in my case, the childcare variable with the highest explanatory power for *relative income*), I estimate the full two-stage least square models and compare the values of an F-test of the instruments at the first stage. Thereby, the relation of places in day care facilities and the number of children as of 2002 performs better than the other childcare variables or combinations of them.

The proceeding for the SAVE data is similar. However, the aggregation unit is the federal state since the local provenience of the respondents is not at my disposal. The respective childcare data for different age groups are available on the regional level for 2002 and 2006-2008. Similar to the proceedings for the SOEP, I finally use the instrument with the strongest correlation to *relative income*. This is the relation of places in day care facilities and the number of infants (below the age of three) as of 2002.

Table A1. Regression results: Savings ratio

| Savings ratio | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP Tobit | (4) SOEP Tobit | (5) SAVE IV (childcare) | (6) SAVE Tobit | (7) SAVE Tobit |
|-------------------------------|----------------------------|-------------------------------|----------------------|----------------------|-------------------------------|----------------------|----------------------|
| Relative income (wife) | 0.026 (0.048) | 0.068 (0.044) | | | -0.072 (0.107) | | |
| More education: husband | | | 0.009 (0.009) | | | -0.006 (0.021) | |
| More education: wife | | | -0.010 (0.009) | | | 0.021 (0.020) | |
| Relative wealth (wife) | | | | -0.002 (0.009) | | | |
| Finan. decider: husband | | | | | | | 0.010 (0.010) |
| Finan. decider: wife | | | | | | | -0.023** (0.011) |
| Household income (log) | 0.040*** (0.009) | 0.037*** (0.009) | 0.075*** (0.011) | 0.075*** (0.011) | 0.021*** (0.008) | 0.026*** (0.008) | 0.025*** (0.008) |
| Permanent income (log) | 0.050*** (0.010) | 0.051*** (0.010) | 0.061*** (0.012) | 0.061*** (0.012) | | | |
| Home loan | -0.029*** (0.004) | -0.029*** (0.004) | -0.036*** (0.005) | -0.036*** (0.005) | -0.011* (0.006) | -0.006 (0.008) | -0.006 (0.008) |
| Number of children | -0.013*** (0.004) | -0.009** (0.004) | -0.022*** (0.003) | -0.022*** (0.003) | -0.004 (0.005) | -0.008** (0.003) | -0.008** (0.003) |
| Unemployed in HH | -0.017** (0.007) | -0.022*** (0.008) | -0.048*** (0.009) | -0.048*** (0.009) | -0.017* (0.010) | -0.047*** (0.010) | -0.047*** (0.010) |
| Self-employed in HH | -0.017*** (0.006) | -0.018*** (0.006) | -0.023*** (0.007) | -0.023*** (0.007) | 0.019 (0.012) | 0.004 (0.011) | 0.004 (0.011) |
| Civil servant in HH | -0.009 (0.006) | -0.008 (0.006) | -0.003 (0.008) | -0.004 (0.008) | 0.016 (0.010) | 0.030*** (0.011) | 0.029*** (0.011) |
| Migrant (respondent) | | | | | 0.006 (0.018) | -0.021 (0.017) | -0.022 (0.017) |
| Risk aversion (respondent) | | | | | 0.002* (0.001) | 0.003** (0.001) | 0.003** (0.001) |
| Female (respondent) | | | | | -0.002 (0.006) | -0.006 (0.007) | -0.005 (0.007) |
| Characteristics (wife) | | | | | | | |
| Age | 0.002 (0.004) | 0.001 (0.004) | 0.006 (0.004) | 0.006 (0.004) | 0.005 (0.005) | 0.005 (0.006) | 0.006 (0.006) |
| Age (squared) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Migrant | -0.002 (0.008) | -0.001 (0.008) | -0.012 (0.010) | -0.012 (0.010) | | | |
| Higher education | 0.007 (0.005) | 0.003 (0.005) | 0.016* (0.008) | 0.008 (0.006) | 0.020** (0.008) | 0.014 (0.019) | 0.028*** (0.008) |
| Risk attitude (finan) | 0.001 (0.001) | 0.000 (0.001) | 0.002 (0.001) | 0.002 (0.001) | | | |

Table continues.

Table A1 (cont.). Regression results: Savings ratio

| Savings ratio | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|----------------------|------------------------|----------------------|----------------------|------------------------|---------------------|---------------------|
| | SOEP IV (infant) | SOEP IV (childcare) | SOEP Tobit | SOEP Tobit | SAVE IV (childcare) | SAVE Tobit | SAVE Tobit |
| Characteristics (wife) <i>(continued)</i> | | | | | | | |
| Public pension: well | 0.014** (0.006) | 0.015** (0.006) | 0.013* (0.007) | 0.013* (0.007) | | | |
| Public pension: badly | 0.002 (0.005) | 0.005 (0.005) | 0.001 (0.005) | 0.001 (0.005) | | | |
| Public pension: yes | | | | | 0.009 (0.012) | 0.005 (0.013) | 0.006 (0.013) |
| Other pension: yes | | | | | 0.007 (0.012) | 0.012 (0.008) | 0.013* (0.008) |
| Characteristics (husband) | | | | | | | |
| Age | -0.003 (0.004) | -0.004 (0.004) | -0.009* (0.005) | -0.009* (0.005) | -0.012** (0.005) | -0.007 (0.006) | -0.008 (0.006) |
| Age (squared) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000** (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Migrant | -0.016* (0.008) | -0.016** (0.008) | -0.031*** (0.011) | -0.032*** (0.011) | | | |
| Higher education | 0.016*** (0.005) | 0.016*** (0.005) | 0.008 (0.009) | 0.017*** (0.006) | 0.002 (0.008) | 0.023 (0.019) | 0.012 (0.009) |
| Risk attitude (finan) | 0.001 (0.001) | 0.001 (0.001) | 0.001 (0.001) | 0.001 (0.001) | | | |
| Public pension: well | 0.006 (0.005) | 0.006 (0.005) | 0.004 (0.006) | 0.004 (0.006) | | | |
| Public pension: badly | -0.006 (0.005) | -0.009* (0.005) | -0.012** (0.005) | -0.012** (0.005) | | | |
| Public pension: yes | | | | | -0.004 (0.015) | -0.009 (0.016) | -0.010 (0.015) |
| Other pension: yes | | | | | 0.021*** (0.010) | 0.036*** (0.007) | 0.035*** (0.007) |
| Year dummies | yes | yes | yes | yes | yes | yes | yes |
| Constant | -0.575*** (0.074) | -0.551*** (0.075) | -0.884*** (0.096) | -0.888*** (0.096) | 0.088 (0.108) | -0.117 (0.106) | -0.11 (0.106) |
| Sigma_u | | | 0.075*** (0.004) | 0.075 (0.004) | | 0.099*** (0.004) | 0.098*** (0.004) |
| Sigma_e | | | 0.090*** (0.003) | 0.090 (0.003) | | 0.115*** (0.003) | 0.115*** (0.003) |
| Rho | 0.214 | 0.000 | 0.410 | 0.411 | 0.430 | 0.426 | 0.423 |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table A2. Regression results: Net wealth

| Net wealth | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|-------------------------------|----------------------------|-------------------------------|----------------------|----------------------|-------------------------------|---------------------|---------------------|
| Relative income (wife) | 2.270 (9.043) | -49.393*** (8.629) | | | -89.339** (35.643) | | |
| More education: husband | | | -1.396 (1.197) | | | 0.856 (2.569) | |
| More education: wife | | | -0.605 (1.249) | | | -1.260 (2.137) | |
| Relative wealth (wife) | | | | -2.460** (1.229) | | | |
| Finan. decider: husband | | | | | | | 1.091 (0.891) |
| Finan. decider: wife | | | | | | | -0.807 (0.961) |
| Household income (log) | 6.394*** (1.552) | 7.223*** (1.780) | 7.172*** (1.275) | 7.218*** (1.278) | 4.860*** (1.737) | 5.512*** (0.891) | 5.533*** (0.890) |
| Permanent income (log) | 13.531*** (1.863) | 12.542*** (2.013) | 12.110*** (1.541) | 12.017*** (1.551) | | | |
| Number of children | 2.137*** (0.821) | -1.927** (0.806) | 1.789*** (0.332) | 1.796*** (0.332) | -2.306 (1.596) | 1.292*** (0.373) | 1.294*** (0.374) |
| Unemployed in HH | 0.627 (1.272) | 3.391** (1.466) | 0.383 (0.970) | 0.543 (0.970) | 0.306 (2.116) | -1.116 (0.822) | -1.112 (0.824) |
| Self-employed in HH | 8.305*** (1.002) | 9.901*** (1.176) | 8.521*** (0.927) | 8.413*** (0.929) | 9.449*** (3.476) | 6.049*** (1.145) | 6.062*** (1.160) |
| Civil servant in HH | 0.989 (1.192) | 2.163* (1.248) | 0.921 (1.093) | 1.054 (1.088) | 4.319 (3.120) | 1.713 (1.439) | 1.726 (1.453) |
| Migrant (respondent) | | | | | -2.998 (5.151) | -2.141 (1.622) | -2.136 (1.627) |
| Risk aversion (respondent) | | | | | 0.126 (0.204) | 0.165 (0.114) | 0.167 (0.114) |
| Female (respondent) | | | | | -1.965 (1.955) | -1.159 (0.881) | -1.092 (0.882) |
| Characteristics (wife) | | | | | | | |
| Age | -0.071 (0.619) | 1.584** (0.697) | -0.066 (0.547) | -0.030 (0.547) | 0.620 (1.591) | 0.246 (0.690) | 0.255 (0.692) |
| Age (squared) | 0.002 (0.008) | -0.016* (0.009) | 0.003 (0.007) | 0.002 (0.007) | -0.005 (0.020) | -0.002 (0.009) | -0.002 (0.009) |
| Migrant | -1.794 (1.532) | -5.528*** (1.590) | -1.950 (1.362) | -2.283 (1.360) | | | |
| Higher education | -1.638 (1.025) | 1.792* (1.042) | -1.561 (1.166) | -1.305 (0.804) | 5.408** (2.202) | 3.324 (2.190) | 2.401** (1.005) |
| Risk attitude (finan) | -0.044 (0.192) | 0.095 (0.197) | 0.048 (0.187) | 0.078 (0.186) | | | |

Table continues.

Table A2 (cont.). Regression results: Net wealth

| Net wealth | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|------------------------------------|----------------------------|-------------------------------|-------------------------|-------------------------|-------------------------------|------------------------|------------------------|
| Characteristics (wife) (continued) | | | | | | | |
| Public pension: well | 0.384 (0.922) | 1.934 (1.180) | 0.359 (0.869) | 0.445 (0.868) | | | |
| Public pension: badly | -0.171 (0.805) | -2.917*** (0.936) | -0.415 (0.602) | -0.436 (0.599) | | | |
| Public pension: yes | | | | | 3.057 (3.277) | 0.210 (1.382) | 0.185 (1.371) |
| Other pension: yes | | | | | 4.816* (2.587) | 0.083 (0.920) | 0.085 (0.924) |
| Characteristics (husband) | | | | | | | |
| Age | -0.516 (0.649) | -0.226 (0.737) | -0.210 (0.613) | -0.231 (0.616) | -0.501 (1.734) | 0.258 (0.708) | 0.229 (0.707) |
| Age (squared) | 0.010 (0.008) | 0.007 (0.009) | 0.006 (0.007) | 0.006 (0.007) | 0.012 (0.021) | 0.001 (0.009) | 0.002 (0.009) |
| Migrant | -2.754* (1.527) | -0.571 (1.577) | -2.484* (1.402) | -2.286 (1.401) | | | |
| Higher education | 1.775* (0.945) | -1.041 (0.982) | 2.608** (1.240) | 1.968** (0.821) | -0.971 (1.954) | 0.613 (2.234) | 1.465* (0.884) |
| Risk attitude (finan) | 0.137 (0.168) | -0.005 (0.173) | 0.115 (0.164) | 0.105 (0.163) | | | |
| Public pension: well | -0.300 (0.843) | -1.371 (1.070) | -0.418 (0.767) | -0.470 (0.769) | | | |
| Public pension: badly | -1.648** (0.724) | 0.432 (0.898) | -1.519** (0.648) | -1.494** (0.647) | | | |
| Public pension: yes | | | | | -2.021 (2.826) | 0.192 (1.400) | 0.177 (1.396) |
| Other pension: yes | | | | | -1.283 (2.110) | 2.162*** (0.784) | 2.133*** (0.785) |
| Year dummies | yes | yes | yes | yes | yes | yes | yes |
| Constant | -144.552*** (12.769) | -166.441*** (14.426) | -144.256*** (12.030) | -143.587*** (12.072) | -13.294 (28.948) | -53.910*** (12.253) | -53.756*** (12.234) |
| Rho | 0.649 | 0.000 | 0.672 | 0.672 | 0.820 | 0.716 | 0.715 |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table A3. Regression results: Net wealth (old-age)

| Wealth (old-age) | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP IV GLS | (5) SAVE (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|-------------------------------|----------------------------|-------------------------------|---------------------|-----------------------|----------------------------|----------------------|----------------------|
| Relative income (wife) | 1.017 (2.808) | -8.169*** (2.487) | | | -5.725* (3.247) | | |
| More education: husband | | | -0.139 (0.364) | | | -0.287 (0.370) | |
| More education: wife | | | 0.204 (0.410) | | | -0.325 (0.382) | |
| Relative wealth (wife) | | | | -1.008*** (0.336) | | | |
| Finan. decider: husband | | | | | | | -0.398** (0.175) |
| Finan. decider: wife | | | | | | | -0.253 (0.199) |
| Household income (log) | 1.859*** (0.450) | 2.336*** (0.469) | 2.041*** (0.392) | 2.063*** (0.392) | 1.545*** (0.201) | 1.407*** (0.135) | 1.397*** (0.135) |
| Permanent income (log) | 1.600*** (0.516) | 1.092** (0.518) | 1.383*** (0.451) | 1.328*** (0.450) | | | |
| Number of children | 0.181 (0.249) | -0.543** (0.229) | 0.051 (0.101) | 0.043 (0.100) | -0.228 (0.152) | -0.010 (0.071) | -0.010 (0.071) |
| Unemployed in HH | -0.038 (0.391) | 0.558 (0.399) | -0.056 (0.318) | 0.025 (0.318) | 0.178 (0.275) | 0.072 (0.171) | 0.070 (0.170) |
| Self-employed in HH | 0.865*** (0.308) | 0.956*** (0.334) | 0.912*** (0.268) | 0.855*** (0.268) | 0.920** (0.359) | 0.795*** (0.223) | 0.782*** (0.224) |
| Civil servant in HH | -0.620* (0.374) | -0.272 (0.378) | -0.469 (0.337) | -0.437 (0.329) | -0.387 (0.291) | -0.069 (0.235) | -0.060 (0.234) |
| Migrant (respondent) | | | | | -0.212 (0.576) | -0.456 (0.325) | -0.459 (0.325) |
| Risk aversion (respondent) | | | | | -0.004 (0.029) | -0.032 (0.021) | -0.030 (0.021) |
| Female (respondent) | | | | | -0.522*** (0.186) | -0.513*** (0.148) | -0.526*** (0.149) |
| Characteristics (wife) | | | | | | | |
| Age | 0.207 (0.194) | 0.429** (0.197) | 0.251 (0.175) | 0.261 (0.175) | -0.153 (0.154) | -0.105 (0.120) | -0.111 (0.121) |
| Age (squared) | -0.003 (0.002) | -0.005** (0.003) | -0.003 (0.002) | -0.003 (0.002) | 0.002 (0.002) | 0.002 (0.002) | 0.002 (0.002) |
| Migrant | -0.498 (0.441) | -1.134** (0.473) | -0.571 (0.375) | -0.673* (0.374) | | | |
| Higher education | -0.492 (0.307) | 0.123 (0.296) | -0.540 (0.371) | -0.366* (0.216) | 0.536** (0.246) | 0.497 (0.367) | 0.423** (0.179) |
| Risk attitude (finan) | 0.035 (0.054) | 0.055 (0.058) | 0.041 (0.048) | 0.048 (0.048) | | | |

Table continues.

Table A3 (cont.). Regression results: Net wealth (old-age)

| Wealth (old-age) | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|---|----------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|----------------------|----------------------|
| Characteristics (wife) <i>(continued)</i> | | | | | | | |
| Public pension: well | 0.122 (0.339) | 0.231 (0.352) | 0.123 (0.304) | 0.153 (0.302) | | | |
| Public pension: badly | 0.040 (0.282) | -0.480* (0.272) | 0.034 (0.190) | 0.030 (0.189) | | | |
| Public pension: yes | | | | | 0.395 (0.332) | -0.069 (0.220) | -0.083 (0.220) |
| Other pension: yes | | | | | 0.961*** (0.328) | 0.278* (0.147) | 0.272* (0.147) |
| Characteristics (husband) | | | | | | | |
| Age | -0.303 (0.194) | -0.236 (0.208) | -0.278 (0.181) | -0.290 (0.181) | 0.100 (0.169) | -0.004 (0.126) | 0.005 (0.127) |
| Age (squared) | 0.005* (0.002) | 0.004 (0.003) | 0.004* (0.002) | 0.004* (0.002) | -0.001 (0.002) | 0.000 (0.002) | 0.000 (0.002) |
| Migrant | -0.206 (0.419) | 0.161 (0.456) | -0.133 (0.383) | -0.062 (0.381) | | | |
| Higher education | 0.329 (0.310) | -0.076 (0.307) | 0.346 (0.422) | 0.215 (0.238) | -0.373 (0.230) | 0.175 (0.336) | 0.123 (0.159) |
| Risk attitude (finan) | 0.009 (0.048) | -0.009 (0.052) | -0.005 (0.045) | -0.006 (0.045) | | | |
| Public pension: well | 0.349 (0.267) | 0.042 (0.284) | 0.207 (0.245) | 0.195 (0.245) | | | |
| Public pension: badly | -0.101 (0.244) | 0.253 (0.258) | -0.083 (0.213) | -0.065 (0.212) | | | |
| Public pension: yes | | | | | 0.341 (0.406) | 0.565** (0.262) | 0.560** (0.262) |
| Other pension: yes | | | | | -0.035 (0.268) | 0.475*** (0.132) | 0.486*** (0.132) |
| Year dummies | yes | yes | yes | yes | yes | yes | yes |
| Constant | -24.480*** (3.862) | -27.254*** (4.140) | -25.147*** (3.739) | -24.484*** (3.736) | -9.352*** (3.124) | -8.984*** (2.180) | -8.925*** (2.187) |
| Rho | 0.114 | 0.312 | 0.184 | 0.184 | 0.554 | 0.615 | 0.615 |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table A4. Regression results: Consumer credit

| Consumer credit yes/no | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|-------------------------------|----------------------------|-------------------------------|---------------------|---------------------|-------------------------------|---------------------|---------------------|
| Relative income (wife) | 0.622** (0.247) | 0.777*** (0.229) | | | 2.022** (0.803) | | |
| More education: husband | | | -0.014 (0.032) | | | 0.002 (0.053) | |
| More education: wife | | | 0.030 (0.033) | | | -0.053 (0.052) | |
| Relative wealth (wife) | | | | 0.082** (0.033) | | | |
| Finan. decider: husband | | | | | | | 0.022 (0.026) |
| Finan. decider: wife | | | | | | | 0.031 (0.028) |
| Household income (log) | 0.089** (0.044) | 0.081* (0.045) | 0.116*** (0.039) | 0.113*** (0.039) | 0.062 (0.040) | 0.039** (0.019) | 0.040** (0.019) |
| Permanent income (log) | -0.091* (0.049) | -0.083* (0.049) | -0.108** (0.043) | -0.104** (0.043) | | | |
| Number of children | 0.049** (0.022) | 0.062*** (0.021) | -0.002 (0.009) | -0.001 (0.009) | 0.084** (0.036) | 0.006 (0.009) | 0.006 (0.009) |
| Unemployed in HH | -0.043 (0.038) | -0.045 (0.038) | 0.005 (0.030) | 0.000 (0.030) | -0.024 (0.054) | 0.060** (0.025) | 0.060** (0.025) |
| Self-employed in HH | -0.048* (0.029) | -0.050* (0.030) | -0.052** (0.026) | -0.048* (0.026) | -0.133 (0.081) | -0.047 (0.029) | -0.046 (0.029) |
| Civil servant in HH | -0.002 (0.034) | -0.012 (0.034) | 0.010 (0.030) | 0.010 (0.030) | -0.118* (0.068) | -0.023 (0.032) | -0.022 (0.032) |
| Migrant (respondent) | | | | | -0.019 (0.123) | -0.006 (0.043) | -0.006 (0.043) |
| Risk aversion (respondent) | | | | | 0.003 (0.005) | -0.003 (0.003) | -0.003 (0.003) |
| Female (respondent) | | | | | -0.049 (0.045) | -0.038** (0.019) | -0.038** (0.019) |
| Characteristics (wife) | | | | | | | |
| Age | -0.030 (0.018) | -0.035* (0.018) | -0.019 (0.016) | -0.021 (0.016) | -0.045 (0.037) | -0.031** (0.015) | -0.031** (0.015) |
| Age (squared) | 0.000* (0.000) | 0.000* (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.001 (0.000) | 0.000* (0.000) | 0.000* (0.000) |
| Migrant | 0.023 (0.043) | 0.036 (0.043) | -0.017 (0.037) | -0.012 (0.037) | | | |
| Higher education | -0.077*** (0.028) | -0.091*** (0.028) | -0.044 (0.031) | -0.028 (0.022) | -0.173*** (0.055) | -0.024 (0.049) | -0.052** (0.022) |
| Risk attitude (finan) | -0.001 (0.005) | -0.001 (0.005) | 0.004 (0.005) | 0.003 (0.005) | | | |

Table continues.

Table A4 (cont.). Regression results: Consumer credit

| Consumer credit yes/no | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|------------------------------------|----------------------------|-------------------------------|---------------------|----------------------|-------------------------------|----------------------|----------------------|
| Characteristics (wife) (continued) | | | | | | | |
| Public pension: well | -0.024 (0.029) | -0.030 (0.030) | -0.001 (0.027) | -0.003 (0.027) | | | |
| Public pension: badly | 0.059** (0.024) | 0.066*** (0.024) | 0.024 (0.018) | 0.024 (0.018) | | | |
| Public pension: yes | | | | | -0.106 (0.068) | 0.032 (0.033) | 0.030 (0.033) |
| Other pension: yes | | | | | -0.114* (0.063) | 0.029 (0.020) | 0.028 (0.020) |
| Characteristics (husband) | | | | | | | |
| Age | -0.016 (0.019) | -0.019 (0.019) | 0.004 (0.018) | 0.005 (0.018) | 0.066* (0.039) | 0.039** (0.016) | 0.039** (0.016) |
| Age (squared) | 0.000 (0.000) | 0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.001* (0.000) | -0.001*** (0.000) | -0.001*** (0.000) |
| Migrant | -0.025 (0.042) | -0.030 (0.043) | -0.022 (0.038) | -0.025 (0.038) | | | |
| Higher education | -0.062** (0.026) | -0.055** (0.026) | -0.086** (0.034) | -0.105*** (0.022) | 0.028 (0.050) | -0.046 (0.049) | -0.026 (0.021) |
| Risk attitude (finan) | 0.006 (0.005) | 0.007 (0.005) | 0.002 (0.004) | 0.002 (0.004) | | | |
| Public pension: well | 0.020 (0.026) | 0.024 (0.026) | 0.004 (0.023) | 0.005 (0.023) | | | |
| Public pension: badly | 0.020 (0.023) | 0.013 (0.023) | 0.044** (0.019) | 0.042** (0.019) | | | |
| Public pension: yes | | | | | 0.064 (0.074) | -0.001 (0.041) | 0.002 (0.041) |
| Other pension: yes | | | | | 0.059 (0.052) | -0.014 (0.019) | -0.013 (0.019) |
| Year dummies | yes | yes | yes | yes | yes | yes | yes |
| Constant | 1.139*** (0.369) | 1.228*** (0.377) | 0.626* (0.338) | 0.602* (0.338) | -1.047 (0.691) | -0.175 (0.275) | -0.189 (0.275) |
| Rho | 0.356 | 0.326 | 0.332 | 0.338 | 0.730 | 0.408 | 0.408 |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).

Table A5. Regression results: Share of consumer loan repayments and income

| Share: credit repayments/ HH income | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|--|----------------------------|-------------------------------|--------------------|---------------------|-------------------------------|---------------------|---------------------|
| Relative income (wife) | 0.114*** (0.042) | 0.056 (0.037) | | | 0.172*** (0.049) | | |
| More education: husband | | | -0.001 (0.005) | | | 0.004 (0.006) | |
| More education: wife | | | 0.006 (0.006) | | | -0.001 (0.005) | |
| Relative wealth (wife) | | | | 0.017*** (0.006) | | | |
| Finan. decider: husband | | | | | | | 0.003 (0.003) |
| Finan. decider: wife | | | | | | | 0.003 (0.003) |
| Household income (log) | 0.002 (0.007) | 0.004 (0.007) | 0.008 (0.006) | 0.008 (0.006) | -0.007 (0.005) | -0.006** (0.002) | -0.006** (0.002) |
| Permanent income (log) | -0.009 (0.008) | -0.012 (0.008) | -0.013* (0.007) | -0.012* (0.007) | | | |
| Number of children | 0.008** (0.004) | 0.003 (0.003) | -0.001 (0.002) | -0.001 (0.002) | 0.005** (0.002) | -0.001 (0.001) | -0.001 (0.001) |
| Unemployed in HH | -0.006 (0.006) | -0.001 (0.006) | 0.002 (0.005) | 0.001 (0.005) | -0.012* (0.006) | 0.003 (0.003) | 0.003 (0.003) |
| Self-employed in HH | 0.004 (0.005) | 0.005 (0.005) | 0.002 (0.004) | 0.003 (0.004) | -0.007 (0.006) | 0.001 (0.003) | 0.001 (0.003) |
| Civil servant in HH | -0.008 (0.006) | -0.007 (0.005) | -0.007 (0.005) | -0.007 (0.005) | -0.003 (0.005) | 0.000 (0.003) | 0.000 (0.003) |
| Migrant (respondent) | | | | | 0.010 (0.009) | 0.005 (0.004) | 0.005 (0.004) |
| Risk aversion (respondent) | | | | | 0.000 (0.001) | 0.000 (0.000) | 0.000 (0.000) |
| Female (respondent) | | | | | -0.003 (0.003) | -0.002 (0.002) | -0.002 (0.002) |
| Characteristics (wife) | | | | | | | |
| Age | -0.007** (0.003) | -0.006* (0.003) | -0.004 (0.003) | -0.004 (0.003) | -0.003 (0.002) | -0.002 (0.002) | -0.002 (0.002) |
| Age (squared) | 0.000** (0.000) | 0.000** (0.000) | 0.000 (0.000) | 0.000* (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Migrant | 0.015** (0.007) | 0.011* (0.007) | 0.006 (0.006) | 0.007 (0.006) | | | |
| Higher education | -0.013*** (0.005) | -0.010** (0.004) | -0.008 (0.005) | -0.005 (0.004) | -0.013*** (0.004) | -0.002 (0.005) | -0.004** (0.002) |
| Risk attitude (finan) | 0.000 (0.001) | 0.000 (0.001) | 0.001 (0.001) | 0.001 (0.001) | | | |

Table continues.

Table A5 (cont.). Regression results: Share of consumer loan repayments and income

| Share: credit repayments/ HH income | (1) SOEP IV (infant) | (2) SOEP IV (childcare) | (3) SOEP GLS | (4) SOEP GLS | (5) SAVE IV (childcare) | (6) SAVE GLS | (7) SAVE GLS |
|---|----------------------------|-------------------------------|---------------------|----------------------|-------------------------------|--------------------|--------------------|
| Characteristics (wife) <i>(continued)</i> | | | | | | | |
| Public pension: well | -0.006 (0.005) | -0.007 (0.005) | -0.002 (0.004) | -0.003 (0.004) | | | |
| Public pension: badly | 0.007 (0.004) | 0.003 (0.004) | -0.000 (0.003) | -0.000 (0.003) | | | |
| Public pension: yes | | | | | -0.012 (0.007) | 0.002 (0.003) | 0.002 (0.003) |
| Other pension: yes | | | | | -0.019*** (0.007) | 0.003 (0.002) | 0.003 (0.002) |
| Characteristics (husband) | | | | | | | |
| Age | 0.001 (0.003) | 0.002 (0.003) | 0.003 (0.003) | 0.003 (0.003) | 0.004 (0.003) | 0.002 (0.002) | 0.002 (0.002) |
| Age (squared) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | 0.000* (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Migrant | -0.001 (0.007) | 0.002 (0.007) | 0.000 (0.006) | -0.001 (0.006) | | | |
| Higher education | -0.005 (0.004) | -0.007* (0.004) | -0.009 (0.006) | -0.012*** (0.004) | 0.010** (0.004) | -0.002 (0.005) | 0.000 (0.002) |
| Risk attitude (finan) | 0.001* (0.001) | 0.001* (0.001) | 0.001 (0.001) | 0.001 (0.001) | | | |
| Public pension: well | 0.008* (0.004) | 0.006 (0.004) | 0.005 (0.004) | 0.006 (0.004) | | | |
| Public pension: badly | 0.005 (0.004) | 0.007* (0.004) | 0.008*** (0.003) | -0.008** (0.003) | | | |
| Public pension: yes | | | | | 0.014* (0.008) | 0.003 (0.004) | 0.003 (0.004) |
| Other pension: yes | | | | | 0.012** (0.005) | -0.001 (0.002) | -0.001 (0.002) |
| Year dummies | yes | yes | yes | yes | yes | yes | yes |
| Constant | 0.187*** (0.062) | 0.168*** (0.061) | 0.107* (0.056) | 0.102* (0.056) | 0.008 (0.063) | 0.075** (0.033) | 0.074** (0.033) |
| Rho | 0.337 | 0.245 | 0.335 | 0.340 | 0.000 | 0.209 | 0.210 |
| Observations | 2,723 | 2,678 | 3,091 | 3,091 | 2,145 | 3,717 | 3,717 |

Note. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Results based on five multiply imputed datasets for SOEP wealth data and SAVE data. Coefficients and standard errors calculated in accordance with Rubin (1987).