Income sharing and spending decisions of youth living with parents

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Introduction[1]:

The economic crises has hit particularly hard the young, thus understanding youth poverty has become particularly important from social policy point of view. Analysis of poverty among the youth show that living arrangement is correlated with income situation and poverty of young adults: poverty rates tend to be higher for those who have left the parental home (Aassve et al. 2006, EC 2012). Aassve et al. (2007) argue that leaving home does have a causal effect on poverty, by increasing the probability of falling into poverty in EU countries. In the case of the US, Kahn et al. (2013) asserts that young adults have become the more financially dependent generation in multigenerational households. This evidence shows that coresidence with parents might protect the young from falling in poverty.

Analysis of income distribution and poverty however generally assume that income (or well-being) is shared equally among members of the same household and an individual cannot be poor when living in a household, which has adequate income. Several studies suggest however, that significant inequalities might exist within the same family (eg. Haddad and Kanbur 1990). These studies draw the attention to the importance of studying patterns of intrahousehold sharing of resources and that the neglect of intrahousehold inequalities can seriously bias estimates of income inequality and poverty. Patterns of intrahousehold sharing of resources are most often studied in couples while the evidence – especially quantitative – is scarce for other household types, including households where parents live together with adult children.

This paper studies income sharing and financial dependence of young adults living at the parental home. The papers studies the extent to which young adults living with their parents pool their incomes with other members of the household and the extent to which they are able to decide about expenses on personal consumption and leisure activities based on data from the EU-SILC 2010 special module on intrahousehold sharing of resources. Here we study income sharing patterns in these households and the effects on intrahousehold inequalities.

Literature and hypotheses

The literature on intrahousehold inequality examines to what extent is there „income pooling" in households. Full pooling of incomes means that all incomes of all household members are pooled and all have full access to the pooled income. Partial pooling means that household members contribute to the pool only up to a share of their own income and keep the rest (Ponthieux 2013). Conventional inequality and poverty estimates assume full pooling of resources in the household and assumes that well-being is the same for all household

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members. When the most widely used indicator for individual living standard is calculated, household income is divided by the value of an equivalence scale, and this ratio is regarded as income of each and every household member. Studies on intrahousehold inequality however conclude that inequality among members of the same household accounts for substantial part of total inequality between individuals (eg. Haddad and Kanbur 1990). Existing studies on income pooling in households tend to focus on relationship between partners, there is less analysis on income pooling in multigenerational households.

Another strand of research that has produced results relevant to our study is research on living arrangements of young adults. Several studies assume that intensive exchange is taking place between parents and their adult children when they live in the same households, without explicitly analysing exchange (Whyte 1994). Shared household might involve a variety of exchanges: housing and economic assistance, help with household tasks, health-related needs and child care, emotional support. However according to Whyte coresidence is not equal to support: support can be also important for non co-resident adults and parents and support can be lower or higher in coresidence. Most of the research on living arrangements of young adults concerns the timing and determinants of the transition to independent living, and the literature on the experience of coresidence is scarce. Exceptions are mostly for the US , eg. Sassler et al. (2008), Aquilino and Supple (1991) and Ward and Spitze (1996).

Ward and Spitze (1996) analyses exchange patterns (room and board payments and housework) and satisfaction with parent-child relationship on a sample of adult children between ages 19-40 coresiding with parents from the National Survey of Families and Households 1987-88. Coresident children report doing a modest amount of housework, with significant gender difference: girls provide more housework. Only a minority of children report providing room and board payment (38% of sons, 28% of daughters) and the gender difference is not significant in the multivariate analysis. Children are more likely to pay room and board if they when they live only with mother, when they are employed or if parents have poor health. Exchange patterns do not seem to be associated with relationship satisfaction.

Sassler et al. (2008) presents a qualitative study of 30 young adults returning to parental home after studying at college or other independent living arrangements. Despite their earnings most young adults were not contributing to household finances. Likelihood of contribution was found to depend on age (older children were more likely to contribute), but non on level of earnings. Those who had lived in fully independent situations were far more likely to make financial contributions. Other studies on the experience of coresidence between elderly parent and adult child try to determine who is benefiting from coresidence. For example Choi (2003) reports subjective accounts of reason for coresidence of ageing parents with adult children. According to the elderly the reason for moving together with children was to help child (18%), to help parent (28%), to help each other (27%) and 27% reported that they were always living together.

To what extent intrahousehold income sharing redistributes resources within a household depends on patterns of income sharing which have been found to be related to absolute income of the household and relative income of the household members. The overall level of resources within a household is said to shape households' money management strategies

(Yodanis and Lauer 2007). For poor households making ends meet (paying utility bills, having money at the end of the month) requires the careful management of the totality of household incomes. Under a certain level of income there is no "discretionary" income what household members can keep for themselves. Thus we expect that the young will keep separately a lower share of their income in poor households.

Not only total household income is expected to influence income sharing patterns but relative income of household members as well. Both economic theories on altruistic transfers (Cox 1987) and sociological theories about contingent transfers (Swartz *et al.* 2011) imply that household members will be inclined to help other members in need, where they can. According to these theories a skewed distribution of income would increase the incentive of the higher-earning spouse to pool resources and to help household members with lower incomes.

Other theories however postulate a different relationship. According to the "relative resource theory", household decisions are arrived at as a result of a bargaining process in which household members with different needs, preferences and resources negotiate (Bennett 2013). The household member with more resources – more income, higher education level, higher occupational status – and better prospects outside the household will have a larger decision-making power over spending decisions, and more control over household finances.

Hypotheses

Determinants of contributions and ability to decide on personal consumption

- H1 („absolute income"): For poor households making ends meet requires the careful management of the totality of household incomes. Under a certain level of income there is no "discretionary" income. Thus we expect that the young will keep a lower fraction of income for personal use and have less control over spending decisions in poor households.
- H2 („needs"): Literature underlines the importance of needs in intergenerational support. Our expectation is that young adults in need (inactive, unemployed, student, those with children) will be contributing less to the household budget. On the other hand contribution of youth will be higher if parents are in need, eg. when parent is single, in ill health or inactive.
- H3 („relative income"): according "resource theory the household member with more resources will have a larger decision-making power over spending decisions, and more control over household finances (Bennett 2013). Our expectation is that young adults will be able to decide about expenses for personal consumption if their income relative to parents is higher.

Data and methods

The study uses data from the European Union Study on Incomes and Living Conditions (EU-SILC). EU-SILC is an output harmonised data collection, which is built on a common framework of concepts, procedures and classifications but in the same time allowing national

statistics offices a certain degree of discretion to implement the guidelines. As a result considerable differences remain between participating countries in terms of sample design, data collection and post-collection processing (e.g. Wolff et al., 2010). For example the framework allows to base many income variables on administrative data rather than on survey data and in some countries (Nordic countries, the Netherlands and Slovenia) income data and some demographic information is obtained from administrative registers. This study explores the 2010 ad hoc module of EU-SILC on intra-household sharing of resources in the EU Countries. This module contains household-level and individual-level questions about management of household finances covering aspects of income pooling and decision making about expenses and savings. Two questions are particularly relevant for our research issue.

Dependent variables:

Contribution to household expenses (PA010): ”What is the share of income kept separate from the household budget?”

1-All my personal income

2-More than half

3-About half of personal income

4-Less than half

5-None

6-No personal income

Our first dependent variable thus measures the degree to which respondents contribute to the household budget (the original 6-category variables was transformed into a 5-category with recoding the “no income” category to the zero contribution category)[2].

Ability to decide on personal expenses (PA090): ”Ability to decide about expenses for personal consumption, leisure activities, hobbies”.

1-Yes always, almost always

2-Yes, sometimes

3-Never or almost never

We reverse the coding of this item and use the recoded version as a second dependent variable in our analysis.

Our analysis cannot include all countries participating in the EU-SILC study. In some countries (mostly the register countries) these questions were not asked from all adult household members (Denmark, Finland, the Netherlands, Sweden and Slovenia) and there are also countries with many missing values in the individual questionnaires (eg. France and the United Kingdom), so at present we restrict our analysis to nine countries, three countries from

[2] „Income which is considered not to be put in the “common household pot” is considered by the respondent to be his or hers to do with as he or she wishes (European Commission 2009)”. “By common household budget” we mean expenses and savings not primarily concerning one person only in the household (European Commission 2009)”.

each of the three country-groups of Eastern Europe (Bulgaria, Slovakia and Hungary), Southern Europe (Spain, Italy and Greece) and Western Europe (Germany, Belgium and Luxembourg). Our analysis studies the 18-34 age group in these countries.

Measurement of key explanatory variables:

- Needs: Child needs are measured by child labour market status (4 categories: employed, unemployed, inactive, student), partner employment (3 categories: partner employed, partner not working, no partner in the household) and having children in the household (dummy variable). Parental need is measured by parental labour market status (dummy showing whether any of the parents is in employment) and health status (dummy variable showing whether any of the parents is seriously limited in daily activities because of health problems). We also control for parental family status (3 categories: single mother; single father; both parents live in the household or one of the parent with partner).
- Absolute income of the household is measured using total equivalent household income.
- Relative income is measured by the personal income of young adult relative to average personal income of parents. Personal income is defined as including all income types that are recorded at an individual level in the EU-SILC dataset (income from employment, self-employment incomes, unemployment benefits, old-age and survivor' benefits, sickness and disability benefits and education related allowances). Relative income was than transformed into a 5-category variable: the first category groups young adults having incomes below 30% of average parental income, in the second group young adults have 31-50% of average parental income, in the third young adults have 50-80% of parental income, the fourth category shows cases when young adults have income roughly equal to that of average parental income (between 80-120%), and the fifth category shows cases where young adult has higher income than parents (above 120%).

To study the effect of the variables of interest, our analysis controls for other determinants of income sharing in the household. First group of controls are basic socio-demographic variables. As studies of parent-child relationships regularly show more intensive support from female children to parents (eg. Ward and Spitze 1996), we take into account the gender of the respondent. Age of the respondent is also controlled for since older respondents are presumably more advanced in the process of the transition to adulthood and are more likely to conform with adult role models. Education of the respondent is also taken into account (3 categories: below upper secondary, upper secondary, tertiary). Education level first influences the age when the young quit school and start working, which is an important step in the transition to adulthood. On the other hand education might also influence values and norms about family relationships.

According to Bonke and Uldall-Poulsen (2007) income pooling will be more frequent when there is a need for partners to coordinate their economic behaviour and a very convenient form of coordination is the pooling of incomes. Eg. in case of couples, having children

increases the need for coordination and thus increases the likelihood of pooling of incomes. Income pooling is also likely to occur when there is a division of labour among the partners: one partner specialising in paid employment, the other working in the household and looking after children. A case of coordination that is relevant to our research topic is the case of common goods in the household (e.g. shared rental of apartment, shared car). Common goods also require partners to coordinate their expenses, thus increase the likelihood of income pooling. In our analysis we control for tenure status of the dwelling where the household is living (3 categories: owner occupied/rented for free; rented at reduced rate; rented at market price). We expect that those living in owner-occupied dwelling and other households who do not have to pay a monthly rent will have a lower degree of income pooling. To measure crowding in the household we also include a measure of number of rooms per household member.

The literature also points out that cultural differences can also influence money management practices in the household (Rodman, 1972). Values and social norms affect roles in the family and influence patterns of exchange. To measure cultural differences we include parental migrant status, which means those born in a country different from country of residence. We also include a measure of the share of parental income contributed to the household budget by parents. It can be expected that all else equal contribution of young will be higher in household where there is a norm of income pooling, where parents pool a large share of their incomes. Thus we control also for parents' contribution level, which is also measured with the same variable (PA010). When two parents are present in the household we take the contribution level of the parent with higher personal income.

One limitation of the data that the information about the influence of the young adult over household expenses is limited. We only know whether the young is able to decide about expenses on personal consumption, but other items of household decision making are all focusing on the couple. Another limitation of the data that we only have information about partner or child of the young adult who lives in the same household, while no information is available on partners and children living in other households.

As our dependent variables are ordinal categorical variables we use the ordered probit model for multivariate analysis. The unit of analysis is the young adult. As a sizeable fraction of households includes more than one young adult in the relevant age range (18-34 years) we take into account of clustering of observations in households when estimating standard errors.

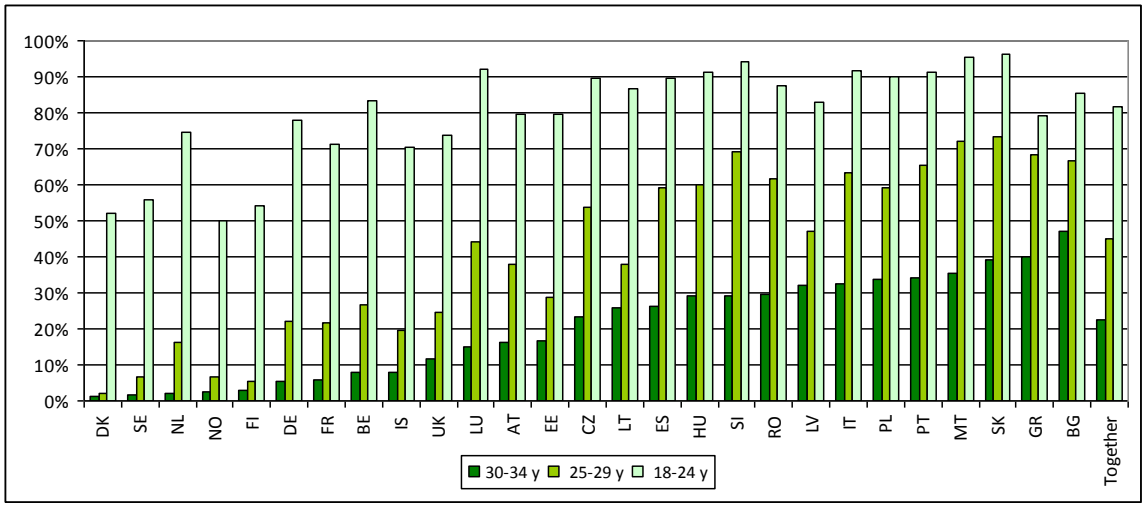
Ordinal probit models are non-linear multivariate statistical models, and as such estimated coefficients are not as easily interpreted as in the case of linear regression models. Estimated coefficients in OLS models are readily interpreted as partial derivatives, which show the effect of a unit change in a given explanatory variable holding all other explanatory variables constant. In non-linear models the effects of an explanatory variable varies with the level of other explanatory variables. One way to summarise the effect of given variable is to calculate the average of the effects at all combinations of other explanatory variables that can be found in the sample. In the following tables we will also show average marginal effects, which thus show the average in the sample of the effects of a unit change in the given explanatory variable.

Coresidence of young adult with their parents in EU countries

The share of young adults living with their parents varies to a large degree across EU member states (Figure 1). Among the 18-24 year olds, the percentage of the young living independently is the lowest in Slovakia, where 96% of them live with their parents. Other countries with relatively high (above 90%) percentage of young adults living with parents are Southern European countries Italy, Spain, Portugal and Malta and also Eastern European countries the Czech Republic, Hungary, Poland and Slovenia. With the exception of the North European states (Sweden, Finland and Denmark) in all states less than third of the 18-24 years old live independently.

In the case of the 25-34 years age group the percentage of young adults living with their parents is lower, but differences between countries show broadly the same pattern. The percentage of those living with parents is highest in the Mediterranean countries and the new member states, where at least 30 percent among the 25-34 year olds live with the parent(s) (except Estonia). Then come the states of Continental Europe, together with Ireland, the United Kingdom and Estonia where 10-30 percent live at home. The countries with the lowest percentages are the Nordic states and the Netherlands where less than 10 out of 100 young people aged 25-34 live with their parent(s).

Figure 1. The proportion of young adults living at their parents home by age-groups in 27 European countries, 2010 (%)

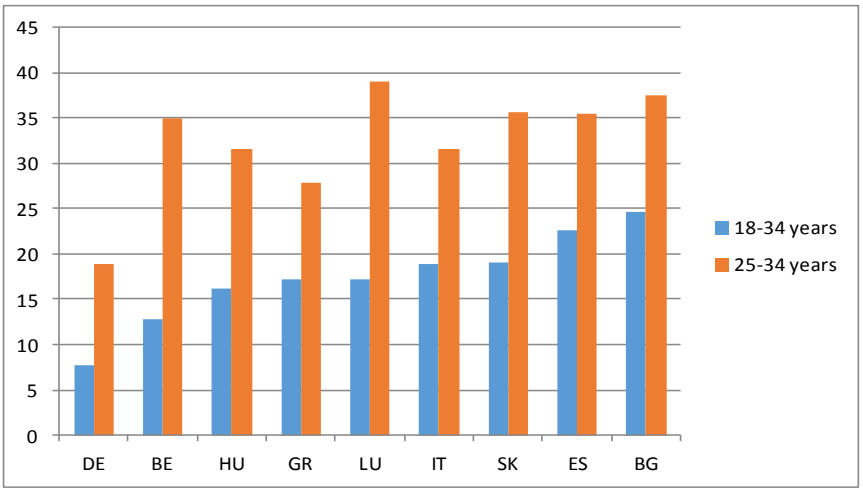


Between 2006 and 2010 the percentage of the young people aged 18-24 and 25-34 living with parents increased in 6 and 13 countries respectively. The highest growth rates among 18-24 years olds are recorded in the United Kingdom (8% points) and Hungary (7% points). In case of Hungary the increase took place during the crisis years, that is, between 2008 and 2010, while in the United Kingdom the rise preceded the crisis. In the older age group Slovakia and

Hungary take the lead with 8 percentage points, followed by Portugal with a 6 point growth rate. The increase in the percentage of those living with parents might be related to the economic crisis. As a consequence of financial hardship (inability to finance studies and / or unemployment etc.) they may postpone the establishment of a separate household or might decide to move back to their parents[3].

As the percentage of young adults living together with their parents differs between EU countries it is not surprising to see that the composition of those in coresidence with parents is also different. For example Figure 2 shows relative income of young adults living together with their parents in the countries included in the analysis. In the 18-24 age group young adults with high incomes relative to their parents are more frequent in Bulgaria, Spain compared to Germany. Among those between 25-34 years the percentage of young with high relative income is highest in Luxembourg and Bulgaria, while Greece and Germany show lower percentages. Table A3 compares the composition of country samples in other dimensions.

Figure 2. % of young adults having at least 120% of average income of their parents



[3] Some of the literature suggests that young adults who move back with their parents after a period of independent living would be different from those who haven't left the parental home before. In the cross-sectional data files there is no information whether the young adult has lived separately before. So we have made use of the EU-SILC longitudinal data file, to see the extent of the phenomenon and whether those who move backed with parents are different from those who have not yet moved out of the parental home. This picture is of course partial only, since the rotating panel design of the EU-SILC longitudinal file covers only four years. Unfortunately, even this partial information cannot be used in our cross-sectional analysis, since cross-sectional and longitudinal files cannot be linked in the EU-SILC study.

Results

First we provide some descriptive analysis of our two dependent variables and then proceed with the description of the results of multivariate analysis.

Our first dependent variable describes the proportion of personal income that is contributed to the household budget and not kept separately. Figure 4 shows the percentage of those contributing at least half of their income to the household budget in the countries included in the analysis (the whole distribution is show non Figure A1 in the Annex). In all countries only minority of young adults contribute more than half of their incomes. The percentage of the young adult contributing more than half of their incomes is highest in Bulgaria (28%), Hungary (27) and Slovakia (17%). Lowest figures were found in case of the Western European countries (3-8%), while Southern European countries were in between (around 10-13%).

Figure 3. % Contributing at least half of income to hhd budget by relative income

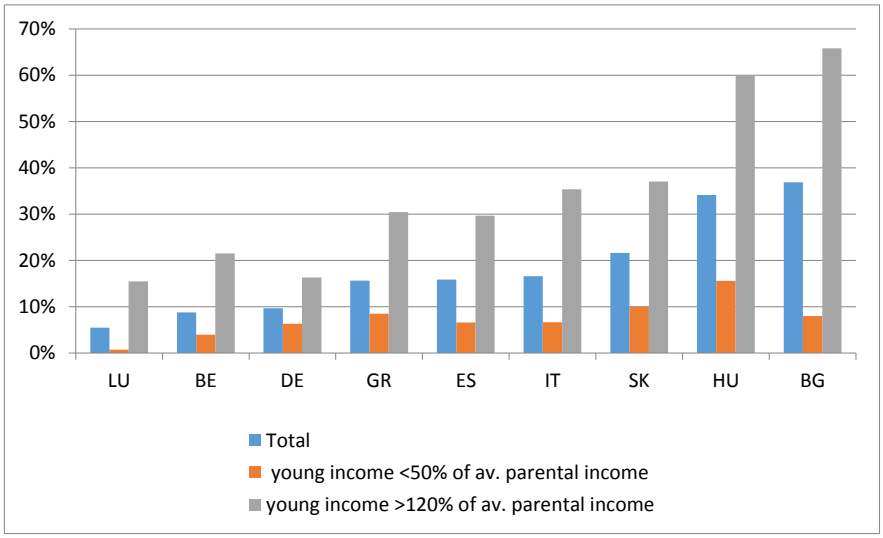
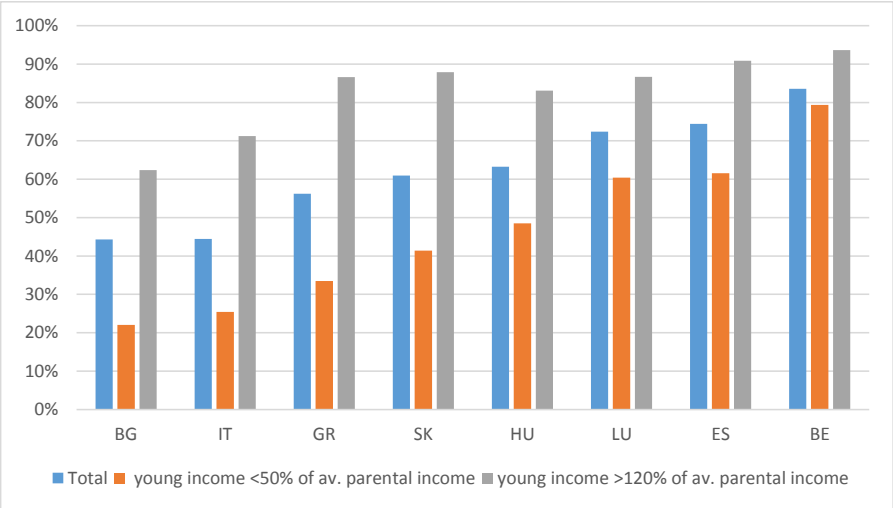


Figure 4. % Always able to decide about personal consumption by relative income



Our second dependent variable shows whether young adults are able to decide about spending on their personal expenses, hobbies etc. Figure 4 shows the percentage of those who are always able to decide about this issues. The highest percentage was found in Belgium, where 84% of young adults were always able to decide about spending on personal consumption. In Spain and Luxembourg this is true for 72-74% of young adults, while in Hungary, Slovakia and Greece the percentage of those who are always able to decide is somewhat lower (56-63%). Lowest figures were found in Bulgaria and Italy, where only 44% of young adults who live with their parents are able to decide about spending on personal consumption.

Figures 3 and 4 also show the association between relative income of young adults and our dependent variables. In every case we see a clear correlation between relative income and contribution to household expenses. Young adults who have higher income relative to their parents are more likely to contribute more than half of their income to the household budget compared to young adults who have low income relative to their parents. In the same time it is also true that young adults having high income relative to their parents are more likely to be able to decide about spending on personal consumption.

Multivariate analysis

First we provide results of the analysis on pooled samples. Ordinal probit regressions were run on pooled models with all control variables and country dummies included. Estimated coefficients for all variables included in the model are shown in Table A2 of the annex. In case of ordinal probit models estimated coefficients show the sign and significance of the effect of explanatory variables, but to assess magnitude of the effects we provide average marginal effects in Table 1 and Table 2.

Table 1 shows average marginal effects of most important explanatory variables on the probability that young adult contributes all personal income to the household budget (this is the highest category of the dependent variable) from pooled models. Results from models run on the entire sample (first column) confirm the role of absolute income, which has a statistically negative effect, meaning that higher household income goes together with a

decreased probability that young adults contribute to the household budget. Hypothesis 1 about the role of absolute income is thus confirmed.

Variables related to needs of young adults and their parents show mixed results. Results regarding employment status of young adults are in line with our hypothesis H2. Young adults who are not working have a lower probability to contribute to the household budget. As Table 1 shows, students are 7 points less likely, while the unemployed young are 5 points less likely to contribute all income compared to the working young adults. On the other hand, having a child actually increases the probability that the young adult will contribute all income to the household budget (by 4 points). This might be related intensive parental help to young adults with children.

Also in line with the "needs" hypothesis young adults contribute higher fraction of their income when the parent is single. The probability that the young adult contributes all personal income to the household budget is 4 points lower when both parents live in the household (or one parent with a spouse/partner). Contrary to our expectations employment status of the parent or having health limitations was not associated with the probability of contributing to the household budget.

It is also evident that relative income position of parents and the young is also important in determining the contribution of young adults to the household budget. Young adults with higher incomes compared to their parents are more likely to have higher contributions to the household budget. If the young adult has between 31-50% of incomes compared to the average income of parents he/she is 4 points more likely to contribute all incomes the household budget compared to young adults who have lower incomes relative to their parents. Young adults whose incomes exceed 50% of average parental income are 6 points more likely to contribute all incomes.

Most control variables exhibit the expected sign (see Table A2, model 1). Higher contribution to the household budget becomes more likely with age. Education level (ceteris paribus) has a negative effect: those with tertiary education are less likely to have higher contribution to the household budget. Young adults in migrant households have higher contribution to the household budget. Contribution to household budget is larger if parents contribute more from their incomes to the household budget. Contribution to household budget is higher if apartment/house is rented compared to those who live in owner-occupied housing. Parental age, our measure of overcrowding in the household and the number of young adults in the household has no effect.

In the case of our second dependent variable detailed results are shown in Table A2 (model 4), while average marginal effects for most important explanatory variables can be found in Table 2 (first column). Ability to decide about expenses on personal consumption is also related to absolute income of the household: young adults living in more affluent households are more likely to be able to decide about expenses on personal consumption. This result thus confirms Hypothesis 1 similarly to the case of our first dependent variable. The pattern among variables related to the "needs" variable is also similar. Unemployed, inactive or studying young adults are less likely to be able to decide about expenses on personal consumption compared to those who are working. Having children increases the probability that young

adults can always decide about expenses on personal consumption by 10 percentage points. Parental age, living with partner or having health limitations do not have a statistically significant effect. Relative income is also related to the ability to decide about personal consumption. In households where incomes of the young are roughly equal or higher compared to the average income of parents, the young are 10 points more likely to be able to decide about expenses on personal consumption compared to young who have less than 30% of parental income. These results confirm Hypothesis 3.

Results regarding control variables are shown in Table A2. The ability to decide about personal expenses is higher for women. Influence over decisions regarding personal consumption also increase with age and educational attainment. Young living in households that pay rent are less likely to be able to decide about personal consumption, while those living in more spacious housing are more likely to have influence over such decisions. The number of children in the household decreases the likelihood that young adults can decide about expenses on personal consumption.

Table 1: Dep.var: Proportion of personal income contributed to common household budget, average marginal effects on the probability of „contributing all personal income"

	Pooled sample	Pooled, positive income	Pooled, 25-34 age group
Labour market (reference category: working)			
Unemployed	-0.050***	-0.049***	-0.062***
Inactive	-0.014*	0.029*	0.001
Student	-0.069***	-0.073***	-0.077***
Having child	0.043***	0.049***	0.054***
Partner in household (ref. cat.:partner not employed)			
Partner employed	-0.005	-0.000	0.012
No partner in household	-0.097***	-0.143***	-0.136***
Parents in household (ref.cat.only mother)			
Only father	-0.008	-0.004	-0.013
Both parents/parent w. partner	-0.035***	-0.049***	-0.047***
Working parent	-0.006	-0.008	-0.001
P. health limitations	0.006	0.003	0.001
Log hhd income	-0.013***	-0.028***	-0.029***
Relative income of young (ref.cat.less than 30% of average parental income)			
31-50%	0.043***	0.034***	0.067***
51-80%	0.055***	0.052***	0.067***
81-120%	0.058***	0.055***	0.074***
120%+	0.059***	0.058***	0.079***
N	28537	15994	10357

Note: Pooled models include country dummies. All regressions include controls.

Table 2: Dep. var: Ability to decide about expenses for your own personal consumption, average marginal effects on the probability of „always able to decide"

	Pooled sample	Pooled, positive income	Pooled, 25-34 age group
Labour market (reference category: working)			
Unemployed	-0.277***	-0.204***	-0.244***
Inactive	-0.291***	-0.315***	-0.283***
Student	-0.286***	-0.256***	-0.263***
Having child	0.086***	0.035	0.060**
Partner in household (ref. cat.:partner not employed)			
Partner employed	-0.028	-0.019	-0.001
No partner in household	0.021	0.040	0.023
Parents in household (ref.cat.only mother)			
Only father	0.004	-0.005	0.023
Both parents/parent w. partner	0.012	0.009	0.000
Working parent	0.019*	0.004	0.007
P. health limitations	-0.006	-0.014	-0.007
Log hhd income	0.056***	0.072***	0.052***
Relative income of younf (ref.cat.less than 30% of average parental income)			
31-50%	0.098***	0.030*	0.096***
51-80%	0.078***	0.016	0.072***
81-120%	0.109***	0.044***	0.096***
120%+	0.106***	0.045***	0.093***
N	27158	15076	10301

Robustness of results

We checked robustness of our results with restricting the sample to only those young that have positive incomes and we also estimated the pooled model including only the young between 25-34 in the analysis. The rationale for the first check is that the issue of contribution to household budget is most relevant in case of young adults who have positive incomes. It can also be argued that the issue of contribution to household expenses might be more meaningfully studied among those between 25 and 34 years, since many of those between 18 and 24 years are still studying. As can be seen from Tables 1, 2 and A2, results obtained with different subsamples show similar signs and significance to the original estimates. In some case magnitude of the effects seems to be different: eg. total household income or the effect of having no partner in the household has a more important effect on contribution to the household budget in case of the subsamples.

Differences between countries

First we study difference between countries by examining estimates for country dummies in the pooled models. Differences in the country intercepts show differences in the dependent variable between countries that exists after controlling for a wide set of explanatory variables. According to the estimates the probability that young adults contribute to the household budget is highest in Hungary, Slovakia and Bulgaria, while the likelihood is lowest in Luxembourg. In case of our second dependent variable, the ability to decide about expenses on personal consumption is highest in Belgium. Hungary and Spain are the following in the country ranking, while lowest estimates were obtained for Italy, Greece and Bulgaria.

We have also estimated models similar to those discussed before on a country-by-country basis. The reason for this is to see whether determinants of our dependent variables are different between countries. Table A4 shows average marginal effects for selected explanatory variables in case of the contribution to household expenses. The pattern of determinants is broadly similar in different countries. The likelihood of students contributing to the household budget is lower compared to those in employment in all countries, while the same is true for the unemployed in six out of nine countries (exceptions are Germany, Belgium and Luxembourg). In case of the inactive we see mixed results, negative effects were shown in four countries, while others show insignificant or positive effects. Having a child has a positive effect on contribution to household budget in six out of nine countries, while in Spain there is a significant negative effect. If both parents are living in the household (or one parent with a partner) the probability that the young adult contributes is significantly lower in all countries except Belgium. It is interesting to note that total household income has a significant negative effect only in three countries, Hungary, Slovakia and Italy. Relative income is a significant predictor of contribution to household budget in all countries.

In case of the other dependent variable (ability to decide about expenses for personal consumption) we again see mainly similar pattern. Total household income has a significant positive effect on the probability of being able to decide about personal consumption in all countries except Belgium. Relative income has a positive effect with the exception of Belgium and Luxembourg. Employment status of the young adult is significant predictor in

all countries. On the other hand having a child has a significant positive effect only in three out of eight countries, Belgium, Slovakia and Italy.

Impact of taking into account intra-household resource sharing on relative incomes of the young

As a last step of our analysis we evaluate the consequences of taking into account intra-household sharing of resources on the income situation of young adults living together with their parents. Our method follows that of Ponthieux (2014) who constructs a measure of modified equivalised income which is the sum of an individual's personal income kept separate from the household budget plus his part of the public incomes of the household, that are composed of personal incomes of household members contributed to the household budget and other household-level income types (eg. income from capital, income from certain social transfers)[4].

Table 3. The effect of taking into account intra-household sharing on incomes of the young (%)

	Modified income lower than original equivalised income	Modified and original equivalised income equal	Modified income higher than equivalised income	
BE	15.9	7.5	76.7	100
BG	19.7	12.4	67.9	100
DE	18.3	12.9	68.7	100
ES	11.3	9.8	79.0	100
GR	24.8	6.3	68.9	100
HU	15.1	17.0	67.9	100
IT	16.9	5.5	77.6	100
LU	12.8	4.5	82.7	100
SK	30.2	5.9	63.9	100

Note: by equal we mean between ±2% of the original equivalised income.

As we discussed earlier, the standard measure of equivalised income used in inequality and poverty measurement assumes full pooling of incomes of household members and thus assumes equality among household members. The modified measure of equivalised income allows household members to keep certain part of their incomes separate from the household budget (partial pooling). Moving from the standard measure to the modified measure is „beneficial" to young adults if their modified equivalised income is higher than standard equivalised income. Whether moving to the modified measure is beneficial, neutral or detrimental to young adults depends on the relative incomes of young adults and parents and on their relative contribution levels. Table 3 shows the distribution of young adults in these groups. In all countries the majority of young adults would benefit from moving from the standard equivalised income to the modified version. This is mainly due to the fact that parents typically contribute a higher share of their income to the household budget compared to young adults (see Figure A3). The highest percentage of young adults who would end up

[4] The part of public income assigned to one household member equals P/N_{eq}, where P is the amount of public income of the household and N_{eq} measures the number of consumption units in the household.

with lower incomes under the modified version can be found in Slovakia (30%), Greece (20%) and Bulgaria (18%).

Conclusions

This study exploits the EU-SILC special module on intra-household sharing of resources to shed light on practices of income sharing in households were young adults live together with their parents. The paper is novel in two respects. First quantitative comparative evidence on how young adults in coresidence with parents participate in household finances and their financial independence is scarce. The study also tries to quantify the effect of intra-household income sharing on the income situation of young adults.

Results about determinants of contribution to household budget and ability to decide about personal expenses broadly confirm our hypotheses about the effect of household income, relative income of household members and household members' needs. Youth contribution to household budget declines as household income increases. The unemployed and students pay less contribution, but those having child often pay higher contribution to household expenses. If parent is single, or non working, young pay higher contribution, but having health limitations do not seem to count. Contribution to the household budget increases with relative income of young albeit sometimes non-monotonically. For ability to decide on personal consumption those with income higher than parents have more ability to decide.

The effect of intra-household sharing on income situation of young adults depends both on initial incomes of parents and young adults and their contributions to the household budget. Results show that the majority of young adults benefit from intra-household sharing of resources, since parents typically have higher incomes and share a larger fraction of their incomes with other household members.

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Annex

Table A1. The distribution of households with coresident youth by the number of young adults aged 18-34

	1	2	3	4+	
BE	38.7	42.3	13.9	5.1	100.0
BG	45.4	46.5	5.7	2.4	100.0
DE	52.0	38.3	8.0	1.8	100.0
ES	43.4	48.0	7.1	1.5	100.0
GR	40.6	53.2	5.8	0.4	100.0
HU	42.2	46.6	9.4	1.8	100.0
IT	41.8	48.2	9.0	1.0	100.0
LU	43.7	41.9	12.5	1.9	100.0
SK	28.7	47.6	16.8	6.8	100.0

Figure A1. Proportion of personal income contributed to common household budget

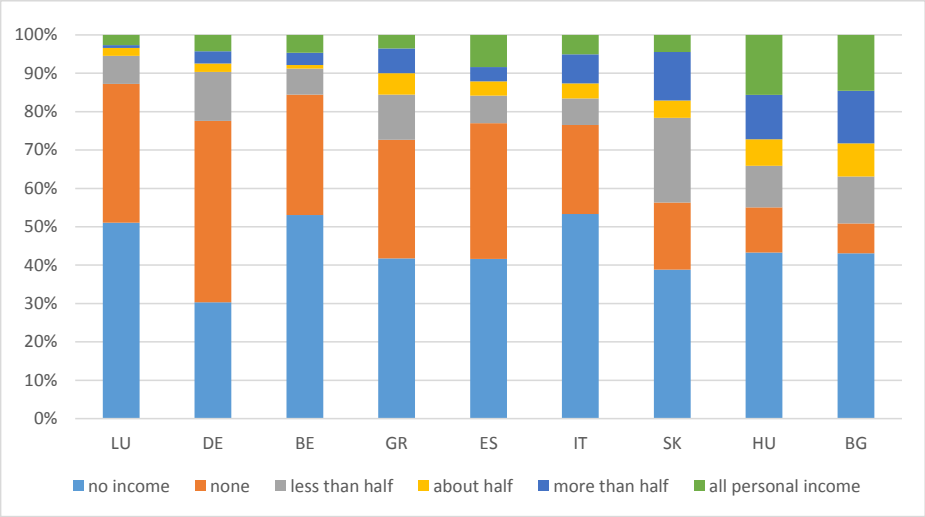

Figure A2. Ability to decide about expenses for your own personal consumption

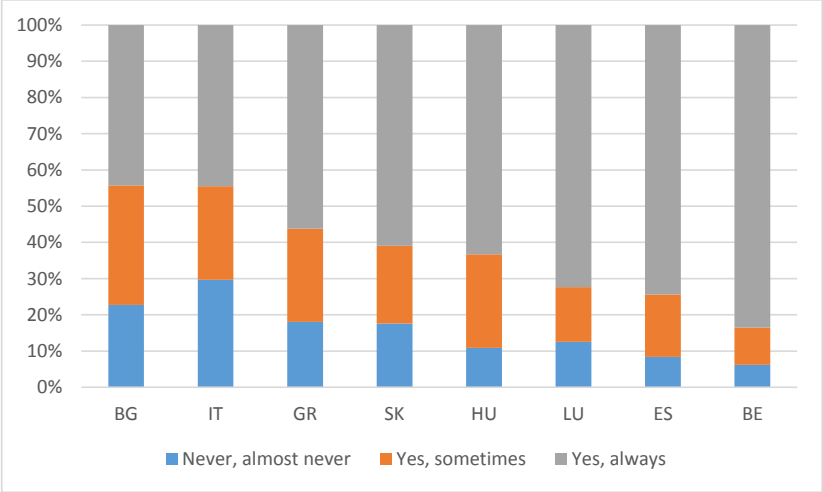

Figure A3. % of young adults with equal or higher contributon to the household budget compared to their parents, (18-34 age group)

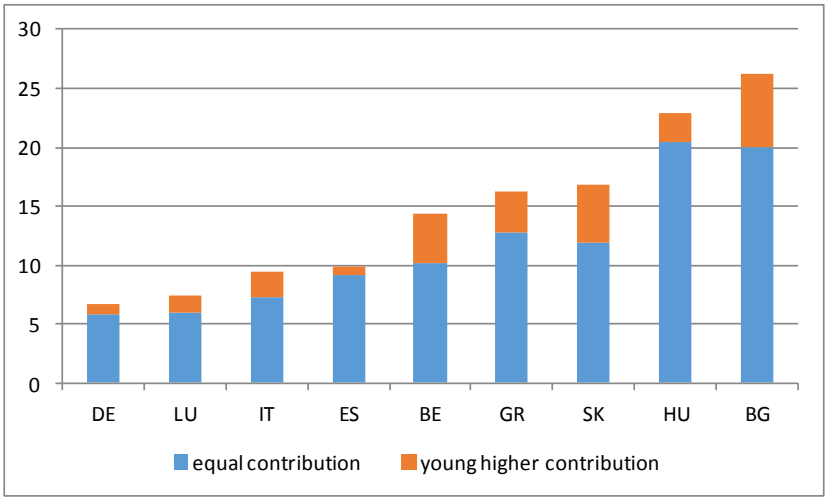

Table A2. Dep.var: Proportion of personal income contributed to common household budget, coefficients of ordinal probit model, pooled models

	Contribution to household expenses			Ability to decide about personal consumption		
	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.011	0.014	-0.031	0.040*	0.015	0.013
Age	0.023***	0.022***	0.017**	0.011**	0.003	-0.009
Education (reference category: lower than upper secondary)						
Upper secondary	-0.003	-0.109**	-0.112*	0.321***	0.302***	0.267***
Tertiary	-0.136***	-0.258***	-0.243***	0.449***	0.390***	0.383***
Labour market (reference category: working)						
Unemployed	-0.511***	-0.404***	-0.528***	-0.891***	-0.729***	-0.842***
Inactive	-0.114*	0.175*	0.007	-0.932***	-1.049***	-0.953***
Student	-0.871***	-0.717***	-0.738***	-0.917***	-0.881***	-0.896***
Having child	0.460***	0.373***	0.392***	0.296***	0.136	0.239**
Partner status (ref. cat.:partner not employed)						
Partner employed	-0.030	-0.001	0.050	-0.096	-0.067	-0.002
No partner	-0.733***	-0.773***	-0.727***	0.071	0.149	0.089
Parents in household (ref.cat.only mother)						
Only father	-0.066	-0.023	-0.079	0.014	-0.018	0.094
Both parents	-0.337***	-0.338***	-0.309***	0.043	0.036	0.000
Parental age	-0.001	0.002	0.002	0.004	0.004	0.003
Parent Working	-0.058	-0.059	-0.008	0.067*	0.017	0.029
P. health limit.	0.066	0.025	0.004	-0.021	-0.055	-0.028
P. migrant	0.223***	0.260***	0.263***	-0.072	0.027	0.123
Parents' share of income contributed to household budget (ref. cat: no contribution)						
less than half	0.231**	0.319***	0.300**			
about half	0.329***	0.374***	0.455***			
more than half	0.296***	0.407***	0.466***			
all incomes	0.378***	0.507***	0.540***			
no personal income	0.300**	0.361**	0.438**			
Tenure status (reference category: owner-occupied housing)						
Reduced rent	0.185*	0.227**	0.228*	-0.209**	-0.203*	-0.177
Market rent	0.114**	0.198***	0.198***	-0.089*	-0.166**	-0.189*
Room/person	-0.025	0.010	-0.101*	0.109**	0.103*	0.095
Number of children	-0.003	0.013	0.008	-0.091***	-0.063**	-0.024
Number of young	0.017	0.026	-0.042*	0.027*	0.048*	-0.028
Log hhd income	-0.143***	-0.216***	-0.207***	0.192***	0.281***	0.209***
Relative income of young (ref.cat.less than 30% of average parental income)						
31-50%	0.537***	0.334***	0.628***	0.322***	0.111*	0.358***
51-80%	0.643***	0.464***	0.626***	0.257***	0.058	0.264***
81-120%	0.663***	0.489***	0.672***	0.361***	0.170***	0.358***
120%+	0.673***	0.506***	0.706***	0.352***	0.171***	0.346***
Cut 1	-0.685*	-1.373***	-1.583***	0.413	1.242***	0.150
Cut 2	-0.194	-0.774*	-0.946*	1.324***	2.108***	1.023*
Cut 3	0.030	-0.506	-0.678			
Cut 4	0.484	0.052	-0.076			
N	28537	15994	10357	27158	15076	10301
pseudo R^2	0.203	0.142	0.145	0.194	0.160	0.187

Note: pooled models include control dummies.

Table A3. Demographic and socioeconomic characteristics of residing young adults of 9 EU countries (%)

	BE	BG	DE	ES	GR	HU	IT	LU	SK	Total
Gender of young adult										
Men	55.1	*61.9*	57.3	55.3	58.9	56.2	55.4	58.8	57.5	57.0
Women	44.9	*38.1*	42.7	44.7	41.1	43.8	44.6	41.2	42.5	43.0
Age of young adult										
18-24 yy	76.1	48.5	80.1	51.9	42.8	61.4	52.8	64.4	56.8	57.0
25-29 yy	18.1	29.0	15.6	30.6	34.1	25.0	29.5	25.7	28.5	27.4
30-34 yy	5.8	22.5	4.3	17.6	23.1	13.6	17.7	9.9	14.8	15.6
Level of education										
Low	31.2	24.0	38.5	38.5	15.4	28.0	30.8	41.6	21.6	29.9
Middle	48.5	60.0	53.4	34.5	59.6	60.2	54.1	43.2	59.3	52.3
High	20.3	15.9	8.1	27.0	25.0	11.8	15.1	15.2	19.1	17.8
Employment status										
Working	31.8	50.0	44.0	42.3	48.4	37.7	38.3	43.1	41.8	41.7
Unemployed	6.8	17.9	5.8	19.3	18.0	11.6	15.0	7.1	12.5	14.0
Inactive	4.0	5.6	4.5	3.6	5.4	8.8	5.1	1.5	4.0	5.0
Student	57.5	26.5	45.8	34.8	28.2	41.9	41.5	48.3	41.6	39.4
Family status										
Single	98.1	84.3	99.5	97.4	98.1	93.3	98.4	95.3	94.0	95.6
Has partner, no child	1.5	11.6	0.4	1.1	1.2	2.9	0.6	2.8	3.1	2.5
Has partner + child	0.1	1.8	0.0	0.4	0.1	1.3	0.4	0.5	1.3	0.7
Alone with child	0.3	2.2	0.0	1.1	0.6	2.6	0.7	1.4	1.5	1.2
Number of parents										
Two parents	68.8	74.1	76.3	77.9	84.5	70.1	81.7	79.5	78.5	77.4
Single mother	19.4	18.7	19.8	15.8	11.6	22.7	14.5	17.5	18.2	17.2
Single mother with partner	5.0	1.1	0.0.	2.4	1.3	2.3	0.0	0.2	1.6	1.4
Single father	5.1	5.2	3.9	3.4	2.5	4.4	3.8	2.7	1.6	3.6
Single father with partner	1.6	1.0	0.0	0.5	0.1	0.6	0.0	0.1	0.1	0.4
Parental age										
Father's average age	52.9	52.4	53.2	55.5	57.4	52.2	56.1	53.7	52.0	54.3
Mother's average age	50.2	49.6	50.2	53.1	52.0	49.7	52.5	50.8	49.7	51.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table A4. Dep.var: Proportion of personal income contributed to common household budget, average marginal effects on the probability of „contributing all personal income"

	DE	BE	LU	BG	HU	SK	IT	ES	GR
Labour market (reference category: working)									
Unemployed	-0.016	-0.003	-0.008	-0.169***	-0.055**	-0.024***	-0.042***	-0.063***	-0.044***
Inactive	0.005	-0.016	-0.026***	-0.100***	-0.055*	0.047*	0.004	-0.022*	-0.016
Student	-0.033***	-0.049***	-0.019**	-0.173***	-0.186***	-0.041***	-0.059***	-0.066***	-0.045***
Having child	0.332***	0.034	0.023*	0.043*	0.109***	0.032***	0.051***	-0.031*	-0.044
Partner status (ref. cat: partner not employed)									
Partner employed	0.077	0.039	0.010	0.003	-0.016	0.012	0.046	0.090	-0.155*
No partner	0.038***	0.004	-0.087	-0.104***	-0.154***	-0.048*	-0.096*	-0.090	-0.208**
Parents in household (ref.cat only mother)									
Only father	-0.024	-0.027	-0.018	-0.002	0.027	0.012	0.007	-0.007	-0.023
Both parents	-0.030**	-0.018	-0.022*	-0.055***	-0.052***	-0.021***	-0.056***	-0.044***	-0.036**
Working parent	-0.029*	0.013	-0.002	-0.015	-0.022	-0.010	-0.008	-0.008	0.005
P. health limitations	0.003	0.001	0.005	0.002	0.017	0.003	-0.013	-0.005	0.026**
Log hhd income	-0.007	-0.002	-0.008	-0.016	-0.035**	-0.013**	-0.029***	-0.003	-0.011
Relative income (ref.cat.: less than 30%)									
31-50%	0.025***	0.032	0.011	0.098***	0.093***	0.030***	0.075***	0.020**	0.031*
51-80%	0.053***	0.030*	0.021*	0.109***	0.095***	0.034***	0.071***	0.027***	0.037**
81-120%	0.035**	0.029*	0.020*	0.120***	0.093***	0.035***	0.067***	0.028***	0.057***
120%+	0.038***	0.044**	0.024**	0.112***	0.083***	0.025***	0.091***	0.036***	0.055***
N	2141	1398	1557	2432	3812	3806	4856	6379	2156

Table A5. Dep. var: Ability to decide about expenses for your own personal consumption, average marginal effects on the probability of „always able to decide"

	BE	LU	BG	HU	SK	IT	ES	GR
Labour market (reference category: working)								
Unemployed	-0.096*	-0.262***	-0.316***	-0.131***	-0.208***	-0.156***	-0.483***	-0.285***
Inactive	-0.218**	-0.231*	-0.402***	-0.154***	-0.214***	-0.264***	-0.387***	-0.233***
Student	-0.184***	-0.240***	-0.315***	-0.143***	-0.201***	-0.242***	-0.454***	-0.281***
Having child	1.171***	0.152	0.005	0.086	0.253***	0.133**	-0.040	-0.014
Partner status (ref. cat: partner not employed)								
Partner employed	-0.130	-0.223	-0.005	0.062	-0.078	-0.191*	0.193*	-0.026
No partner	0.008	-0.162	-0.031	-0.025	0.024	-0.193**	0.063	-0.013
Parents in household (ref.cat only mother)								
Only father	-0.084	0.007	0.008	0.104**	0.100	-0.032	0.045	-0.081
Both parents	-0.000	0.010	0.019	0.014	0.005	0.016	0.029	-0.009
Working parent	0.046	-0.024	-0.014	-0.034	0.049	0.046**	0.027*	0.036
P. health limitations	-0.003	0.029	-0.014	0.001	0.004	-0.036	-0.023	-0.019
Log hhd income	0.045	0.060**	0.073***	0.067***	0.061***	0.025***	0.052***	0.068***
Relative income (ref.cat.: less than 30%)								
31-50%	0.040	0.037	0.061	0.088*	0.128***	0.127***	0.077***	0.184***
51-80%	-0.075	0.006	0.035	0.080*	0.039	0.081***	0.110***	0.199***
81-120%	-0.035	0.104	0.082*	0.076*	0.078*	0.137***	0.094***	0.250***
120%+	-0.040	0.067	0.098**	0.041	0.130***	0.122***	0.083***	0.213***
N	1419	1601	2482	3861	3883	5117	6580	2199