Do adult children living at home share their incomes with their parents?¹

Abstract

Across the developed world, young adults are now more likely to live with their parents than they were two or three decades ago. This is typically viewed, both in the media and in scholarly research, as an economic burden on parents. This article investigates the extent to which financial support also runs in the other direction, with young people contributing to their households' living costs. We use data on 20 European countries from the 2010 European Union Statistics on Income and Living Conditions (N = 600 in Austria to N =2,954 in Italy). Many young adults do share half or more of their income with their families; as a determinant of sharing, low income among other household members is far more important than the young adult's own income. In a substantial minority of households, particularly in lower-income countries, the contributions of young adult household members keep households out of poverty.

Keywords: Europe, EU-SILC, family, income sharing, intergenerational relationships, youth. *JEL classification:* H31

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INTRODUCTION

This paper investigates income sharing in households where young adults live with their parents; in particular, it analyses the extent to which young adults who still live with their parents share their incomes with the rest of their households.

Why is this question important? Most obviously, a trend towards later ages at leaving home means that households in which one or more young adults live with their parents are forming a growing percentage of all households across most developed countries. There are large differences between countries in the ages at which young people leave home, with home-leaving tending to occur much earlier in the United States and in Northern and Western Europe than in Southern and Eastern Europe (Iacovou, 2002; Mandic, 2008; Mulder, 2009); the tendency towards later home-leaving is evident both in countries where home-leaving is typically early, and in countries where it occurs relatively late.

This increase in the age at leaving home has been documented in a large literature spanning many countries - the United States (Goldscheider, 1997; Settersten & Ray, 2010); Canada (Beaujot, 2006; Clark, 2007); the United Kingdom (ONS, 2012); Australia (Flatau, James, Watson, Wood, & Hendershott, 2007); Italy (Rossi, 1997) and groups of countries (Bell, Burtless, Gornick, & Smeeding, 2007; Cordón, 1997; Eurofound, 2014, Rusconi, 2004). It has been attributed to a range of factors including later marriage, increased participation in education, unfavorable youth labor markets, and the increased cost of housing.

The phenomena of delayed home-leaving, and of returns to the parental home by young adults who had previously moved out, have been variously termed the "cluttered nest" (Boyd & Pryor, 1989), the "boomerang kids" generation (Mitchell & Gee, 1996), the "crowded nest" (Shaputis, 2003) and the "accordion family" (Newman, 2013). Accounts of the financial problems suffered by parents on account of their adult children abound in the media, with headlines such as "*Are your children destroying your retirement plans?*" (Green Money, 2014) and "*KIPPERS, or Kids In Parents' Pockets Eroding Retirement Savings*" (Observer, 2004).

The academic literature is much more measured: Da Vanzo and Goldscheider (1990) describe the parental home as functioning not only as a "safety net" for young people, in the case of unforeseen adverse circumstances, but also as a "home base", to which young people can return in between the various stages of the transition to adulthood. More recently, Swarz et al (2011) also invoke the notion of parents acting as "scaffolding" – a temporary supportive framework which helps young people to build up the resources they need to function as full adults. Nonetheless, the primary locus of interest in these, and almost all

other articles in the same area (Cooney & Uhlenberg, 1992; Fingerman, Miller, Birditt, & Zarit, 2009; Fingerman et al., 2010; Fingerman, et al., 2012; Heath & Calvert, 2013; Kirkpatrick Johnson, 2013), is the scope and magnitude of support provided by parents to their adult children. While it is undeniable that in aggregate, the financial support given by parents to their adult children greatly outweighs the volume of support in the other direction (Albertini, Kohli, &Vogel, 2007; Attias-Donfutt, Ogg, & Wolff, 2005), it may also be the case that a substantial minority of young adults are making important financial contributions to the households in which they live. This question has been almost entirely overlooked in the literature; it is this gap that the current paper seeks to fill.

We use data covering 20 countries from the European Union Statistics on Income and Living Conditions (EU-SILC), a large-scale household survey conducted across all countries of the EU. In 2010, the EU-SILC carried a module on within-household sharing of incomes. Using these data, we are able to show that substantial numbers of young people do share a significant proportion of their incomes with their households; that the degree of sharing is largest in the most impoverished households; and that in these households, the income shared by young adults is of a magnitude which is likely to make a considerable difference to the household's standard of living.

INTERGENERATIONAL SHARING

The literature on the specific issue at hand – namely, whether adult children living with their parents share their incomes with the rest of their households – is extremely sparse. We are aware of only three papers which have dealt directly this subject. Schneider (2003) used data from the 1993/4 Australian Household Expenditure Survey to estimate the degree of income sharing in households where young adults aged 18-24 live with their parents; Breuning and McKibbin (2012) used data from the 1998/9 and 2003/4 Australian Household Expenditure Surveys to test for income pooling in households where young people aged 15-30 live with their parents; and Pezzin and Shone (1997) used a sample drawn from the U.S. Survey of Assets and Health Dynamics to estimate household demand for doctor and dentist visits and prescription drugs. All rejected the hypothesis of income pooling for at least some categories of expenditure: alcoholic drinks and transport (Schneider, 2003); housing costs, fuel and power, health care and transport (Breuning & McKibbin, 2012); and the majority of categories considered (Pezzin and Shone, 1997).

The analysis in these three papers was based on estimating the relationship between the personal incomes of household members on the one hand, and household consumption or expenditures on the other. This method constitutes a good test of whether household members

pool their incomes completely (though the test is sensitive to the categories of expenditure defined, and to the fit of models, with a poorly fitting model potentially failing to reject income pooling when this would actually be appropriate). The approach of estimating demand systems is, however, less good at answering the questions in which we are particularly interested, namely *how many* young people share their incomes with their families, and *how important* these sharing arrangements are to the family's coffers.

A rather larger literature has considered support (both in cash and in kind) given to *elderly* parents by their adult children; because these studies have been concerned with parents at older ages, they typically have not focused on households where the generations are living under the same roof. These articles generally find that children give more financial assistance to elderly parents whose needs are higher, either because they are in a worse economic situation, or are older, or in poorer health (Bonsang, 2007; Ikkink, van Tilburg, & Knipscheer, 1999; Lowenstein & Daatland, 2006; Mutran & Reitzes, 1984; Silverstein, Gans, &Yang, 2006). These effects are common across cultures: in China (Logan & Bian, 2003) and Taiwan (Lee, Parish, & Willis, 1994) the degree of support for ageing parents is far higher than in the United States and Europe, but the determinants of the level of support are similar.

Several papers have considered transfers in both directions between parents and their adult children – although, again, they have not focused on households where members of both generations are co-resident. Bucx, van Wel, and Knijn (2012) found that support is more likely to flow from parents to children, although this varies over the life course; Eggebeen and Hogan (1990) found that financial transfers are more than four times more likely to flow from parent to child as from child to parent (although household assistance is more likely to flow from child to parent); families with young children are more likely to be involved with parents and to receive aid, and highly educated people are more likely to be involved in financial exchanges.

Of particular interest are a number of studies which have considered intergenerational transfers in a cross-national context. Deindl and Brandt (2010) found that Northern and Western Europe are characterized by highs levels of financial and practical transfers from parents to their adult children, while Southern and Eastern Europe are characterized by higher levels of support from adult children to their parents. Albertini et al. (2007) demonstrated that intergenerational transfers of time and money fall into a broad typology based on welfare regimes (see Methods section below), with more frequent but less intense transfers in the Nordic and Continental European countries than in the Southern countries. Attias-Donfutt et

al. (2005) also observed a general concordance with welfare regime typologies, although they noted exceptions: in particular, the level of cash transfers appears to be higher in Greece than in other Southern European countries.

These findings relate to gifts of cash between members of different generations, rather than to the ongoing sharing of income within a household for day-to-day living expenses. Thus, they may not be directly relevant to the current study; nevertheless, they suggest that we may find important differences between countries in the degree to which young people share their incomes with other household members; and in particular, that we may find higher levels of such sharing in Southern and Eastern Europe.

METHOD

Data

The analysis in this paper is based on data from the 2010 European Union Statistics on Income and Living Conditions. The EU-SILC is an annual household-level survey administered by Eurostat, the statistical agency of the European Union, which covers all 27 countries of the European Union, as well as a handful of other non-EU countries which have elected to conduct the same survey.

The EU-SILC launched in 2003 with six participating countries; by 2005, all 25 EU countries were participating, with Bulgaria joining in 2006 and Romania in 2007 (Eurostat, 2013). In the majority of countries, the survey takes the form of a four-year rolling panel: households stay in the sample for four years, with one quarter of the households being replaced each year. This rolling structure is important because it limits the degree of attrition which might otherwise be present in a longitudinal survey.

The EU-SILC is based on a common core of questions asked each year, plus rotating modules which change from year to year. In 2010, a module on the intra-household sharing of income was included (Eurostat, 2012; Nagy, Medgyesi, & Lelkes, 2012; Ponthieux, 2013). It is this module which provides the variable of interest for this study.

Sample

We identify as our sample households in which one or more individuals aged 16-34 live with one or both of their parents. The upper age limit of 34 may appear rather high, but because our sample contains several countries in which young adults (particularly young men) routinely remain living in the parental home until well into their thirties, we use this broad age range as our main sample. This yields sample sizes ranging from 752 in Austria to 6,583 in Italy; for part of the analysis, we exclude households in which the young adult

has no income, which yields smaller sample sizes ranging from 600 in Austria to 2,954 in Italy.

Variable of interest: income sharing

In the module on income sharing, respondents living with at least one other person aged 16 or over were asked the following question:

"What proportion of your personal income do you keep separate from the common household budget?"

Respondents were asked to select from the following answers:

1 = all my personal income is kept separate from the household budget;

2 = more than half of my personal income is kept separate;

3 = about half is kept separate;

4 = less than half is kept separate;

5 = none is kept separate;

6 = the respondent has no personal income.

Since hardly any respondents answered "about half", we combined categories (3) and (4), and generated a new reverse-coded variable indicating the proportion of personal income which is *shared* with the household (none, less than half, half or more, all, and no income to share).

The variable on income sharing is missing for around 70% of young adults living with their parents in Denmark, Finland, Iceland, Netherlands, Norway, Sweden, and Slovenia. This is because in these countries, the EU-SILC survey was based mainly on national registers, and only one individual aged 16 or over in each household was eligible for personal interview. Given that the sample of young adults living with their parents was already very small in most of the "register" countries (these are countries in which home-leaving takes place very early), we had to exclude these countries because of unworkably small sample sizes. Additionally, we excluded France, because of very high levels of non-response to the question on income sharing, and Ireland, because of problems in coding responses in this release of the data.

Control variables

In multivariate analysis, we draw on the literature on intergenerational exchanges (Bucx et al., 2012; Eggebeen & Hogan, 1990; and others) to identify a set of controls based on the characteristics of the young person, his or her parent(s), and the household in general.

We are particularly interested in the effects of income, as we hypothesize that young people will be more likely to share their incomes the better off they are, and the worse off are the other members of their households. Thus, we control for the young person's own income, and the incomes of other household members (that is, total household income less the income of the young person). We adjust the household-level income variable by a factor reflecting the economic needs of the household, which is based on the numbers and ages of household members (this factor is the modified OECD equivalence scale, as proposed by Hagenaars, de Vos, and Zaidi (1994), and used widely in the analysis of income and poverty). In carrying out this adjustment, we omit the young adults themselves from the equivalence scale, thus obtaining a measure of the adequacy of the income of the rest of the household, for the purposes of meeting the needs of the other household members.

In the context of a study spanning many countries, where income levels vary enormously (per capita GDP in Luxembourg is five times higher than in Bulgaria, even after adjusting for purchasing power), special attention is needed to make the income variables comparable between countries. We do this by converting young people's incomes to a percentile score reflecting their position in the income distribution of young people living with their parents in their own country; we do the same for the equivalized incomes of other household members. This process of converting to percentiles also ameliorates a problem with the data, namely that incomes in most countries are provided as amounts net of tax and benefits, while incomes in five countries (Germany, Hungary, Malta, Latvia and Slovakia) are provided as gross amounts.

In addition to income variables, we control for the following characteristics of the young person: age, gender, educational qualifications (degree/ upper secondary school qualifications/sub-secondary qualifications), and labor market status (in education; in work; and not in employment, education or training – "NEET"). We control for the following factors at household level: whether the young person is living with both parents, with a lone parent, or in a formal (married) or informal stepfamily; and whether the young person has a partner and/or one or more children in the household. Finally, we control for the following characteristics of the young person's parent or parents: age (of the older parent, in the case of two parents); educational attainment (the higher, in the case of two parents); whether one or both parents were foreign-born; whether either parent has poor health or a limiting health problem; and parental labor market status (parent/s fully employed, one parent employed and one non-employed, or no parental employment).

We also experimented with specifications including quadratic terms in the age of both generations; further variables indicating the composition of the household (additional adults and children); a more sophisticated specification of parental health problems, distinguishing

between poor health and disability; and more complex specifications of parental employment. These yielded no additional insights and were not included in models.

Welfare regime typologies

Most of our results are displayed for all 20 countries in the sample. In order to keep the paper to a manageable length, and to make the results easier to understand and interpret, we perform some analysis on groups of countries rather than individual countries. These country groupings are informed by a large theoretical and empirical literature deriving from Esping-Andersen's (1990 and 1999) threefold typology of welfare regimes, developed and extended by other scholars (Arts & Gelissen, 2002; Fenger, 2007; Ferrera, 1996), and extensively tested with empirical data (Albertini et al., 2007; Iacovou & Skew, 2010). The grouping we use here departs slightly from that proposed by Fenger (2007). We use geographical rather than political terminologies: thus, we call Fenger's "former USSR" and "post-communist" clusters the "Baltic" and "Eastern" clusters respectively. Our sample does not include any country belonging to the "Nordic/Social democratic" welfare regimes, and only one country belonging to the "Liberal" welfare regime type (the UK, which we add to the conservative/corporatist cluster to form a North/Western European cluster). Table 1 lists the country clusters we consider, including the countries included in each cluster, and the characteristics of each.

Table 1: Country groupings

	North/		Baltic/	Eastern/
	Western	Southern	former	post-
	western		USSR	communist
Countries	Germany Austria Belgium Luxembourg UK	Greece Spain Italy Portugal Cyprus Malta	Latvia Lithuania Estonia	Hungary Czech Rep Slovakia Poland Romania Bulgaria
% young adults living with parents (1)	Low	High	Medium	High
% young adults living in extended families (2)	Low	Medium	Medium	High
Per capita GDP (3)	High	Medium	Low	Low
Income inequality (4)	Low-med	Med-high	High	Low
Youth wages, % of adult wages (5)	Low	Low	High	High
Social expenditure, % of GDP (6)	High	Medium	Low	Low
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Notes: (1) Mandic, 2008; (2), (5) authors' own calculations using EU-SILC 2010; (3), (4) Eurostat, 2011; (6) European Commission, 2013.

Weights

The EU-SILC data are supplied with weights which correct for non-response. For the analysis based on groups of countries, we adjust the weights to take account of different countries' population sizes. Taking full account of population size in weights would mean that larger countries in a group would entirely dominate smaller countries (for example, Germany, with a population of almost 70 million, would entirely dominate Luxembourg, with a population of under 350,000). On the other hand, not adjusting at all for population size would effectively give equal weights to very small and very large countries. We tread a middle path, weighting by the square root of population size as suggested by Penrose (1946). Weights are normalized to sum to the total sample size across each group of countries, in order to produce accurate standard errors in regressions.

Analytic methods

For multivariate analysis we employ logistic regressions, using a dichotomous variable indicating whether the young person shares 50% or more of his or her income, as the dependent variable. We transform the coefficients from logistic regressions into marginal effects, using the *margins* command in Stata. These marginal effects indicate the expected change in the probability of a young person sharing his or her income, associated with a one-unit change in a continuous explanatory variable, or a shift from 0 to 1 in a dichotomous explanatory variable. Thus, marginal effects may be interpreted analogously to linear regression coefficients.

RESULTS

Descriptive statistics

Table 2 shows the distribution of the variable of interest across all countries. Column (1) shows the percentages of young people in the sample who report having no income of their own. Columns (2) - (5) show the percentages of young people who share none, some (1-49%), most (50-99%) and all of their incomes with other household members; Columns (1)-(5) sum to 100%. Column (6) shows the percentage of young people who share most or all of their incomes with other household members, as a percentage of those who report having any income to share. Column (7) shows sample sizes.

There are clear differences between countries and country groupings. The percentage of the sample reporting having no income to share ranges from 35% in the North/Western cluster, to 53% in the Baltic cluster. This reflects differences between countries in both youth employment rates (see Table 3) and the availability of state support to those without jobs. Differences in sharing behavior are best described with reference to Column (6). Of young people with any income to share, the percentage sharing most or all of their incomes with other household members ranges from only 16% in the North/Western cluster, to 28% in the Southern cluster, 58% in the Baltic cluster, and 55% in the Eastern cluster. There are some overlaps between clusters (for example, Cyprus and Malta fall into the range of the North/Western cluster). Nevertheless, these overlaps are few, and interestingly, the figures in Column (6) distinguish completely between the North/Western and Southern clusters on the one hand, and the Baltic and Eastern clusters on the other.

		(1) No income to share	(2) None	(3) Some (1 - 49%	(4) Most 5) (50-99%)	(5) All	(6) % sharing at least half, of those who have any income	(7) N
	Austria	16.3	38.9	33.3	10.0	1.4	13.7	752
ern	Belgium	57.7	28.5	5.9	3.6	4.3	18.5	1,441
/este	Germany	33.9	44.5	12.1	5.1	4.3	14.3	2,170
th/V	Luxembourg	55.2	33.3	6.6	2.5	2.5	11.0	1,643
Nor	United Kingdom	27.6	42.0	15.9	8.6	5.9	20.0	1,131
	Group	35.2	40.2	13.9	6.2	4.4	16.4	7,137
	Cyprus	54.4	35.2	4.3	4.1	2.0	13.3	2,009
	Malta	23.1	64.2	4.3	6.0	2.3	10.9	1,796
E	Greece	44.6	29.1	11.0	11.6	3.6	27.5	2,186
uthe	Spain	44.4	33.3	6.8	7.3	8.3	27.9	5,203
S	Portugal	41.0	34.3	8.7	8.2	7.8	27.1	1,805
	Italy	55.9	21.8	6.4	11.0	5.0	36.2	6,583
	Group	47.3	30.4	7.4	9.0	5.9	28.4	19,582
	Estonia	53.4	18.2	8.3	14.2	5.9	43.1	2,161
tic	Lithuania	55.2	9.1	13.7	11.8	10.3	49.2	1,870
Bal	Latvia	50.9	11.1	9.6	23.0	5.5	58.0	2,191
	Group	53.3	11.8	11.0	16.4	7.6	51.2	6,222
	Bulgaria	46.0	7.4	11.5	20.9	14.3	65.1	2,495
	Czech Republic	48.5	16.4	20.9	9.9	4.5	27.7	2,786
astern	Hungary	46.4	10.9	10.2	17.4	15.1	60.7	3,855
	Poland	44.6	11.8	14.8	17.3	11.4	51.9	3,252
ш	Romania	45.0	4.9	7.4	31.8	11.0	77.7	2,326
	Slovakia	41.9	16.7	21.0	16.2	4.2	35.2	3,994
	Group	45.3	10.9	13.8	19.9	10.2	55.0	18,708
	TOTAL	44.2	24.4	11.4	12.8	7.2	35.9	51,649

Table 2: The extent to which young people share their incomes, by country

Figure 1: Scatterplot showing the percentage of young people living in the parental home who share at least half of their personal income, by GDP per capita.



Note: per capita income in Luxembourg is $\leq 64,000$ (*Eurostat, 2011*). *The point for Luxembourg has been shifted to the left to liberate more space to display the other countries.*

Figure 1 shows that at the aggregate level, there is a close relationship between per capita income (adjusted for purchasing power) and the degree of income sharing; the higher is per capita income in a country, the lower is the likelihood that young people will share their incomes. While this may appear to support the intuitively appealing hypothesis that young people are more likely to share their incomes in countries where their families are more in need of their contribution, this relationship may be mediated by other factors. For example, the countries with higher incomes tend to be those where young people leave home earlier; thus, the sample of young people living at home in these countries will be younger, and may be less likely to have substantial incomes of their own which are worth sharing with their families.

Table 3 presents the means of variables used in regressions. There are slightly more men than women in the sample, owing to the later age at leaving home among young men. The mean age of sample members ranges from 20.8 in the North/Western countries to 23.4 in the Southern countries; the percentage who are not in employment, education or training (NEET) ranges from 10% in the North/Western countries to 21% in the Southern countries. The percentage with a partner or children is very low in the North/Western and Southern countries, but much higher in the Baltic and Eastern groups, where well over 5% of the sample have a partner or children in the household.

	Ν	7048	18955	6058	18311
	Employment: no parent in work	0.128	0.229	0.170	0.175
	Employment: one parent in work	0.201	0.345	0.237	0.219
	Employment: both employed	0.671	0.426	0.593	0.607
	Education: tertiary	0.485	0.223	0.546	0.221
	Education: secondary	0.396	0.291	0.390	0.635
	Education: lowest	0.119	0.486	0.065	0.144
Characteristics of parent/s	One or both foreign born	0.155	0.080	0.170	0.014
	One or both poor health	0.147	0.146	0.167	0.165
	Age (of elder parent)	51.715 (6.940)	54.565 (7.587)	50.644 (7.645)	51.367 (7.288)
	Stepfamily	0.013	0.012	0.030	0.011
	Lone parent	0.235	0.176	0.299	0.231
	Both parents present in HH	0.752	0.812	0.670	0.758
	Has child/ren in household	0.010	0.025	0.080	0.069
	Has partner in household	0.013	0.018	0.053	0.068
	Employment: NEET	0.095	0.205	0.213	0.155
	Employment: student	0.511	0.415	0.508	0.446
	Employment: in work	0.394	0.380	0.280	0.399
of young person	Education: degree	0.158	0.207	0.148	0.146
Characteristics	Education: secondary	0.477	0.415	0.405	0.532
	Education: lowest	0.365	0.378	0.447	0.322
	Age	20.838 (3.992)	23.400 (4.936)	21.958 (4.563)	22.906 (4.829)
	Female	0.458	0.459	0.454	0.431
	Male	0.542	0.541	0.546	0.569
Income variables	Rest of household income (pctile)	50.603 (28.731)	50.573 (28.853)	50.629 (28.916)	50.240 (28.882)
	Young adult's own income (pctile)	50.570 (28.652)	50.367 (28.938)	49.988 (28.826)	50.434 (28.834)
		North/ Western	Southern	Baltic	Eastern

Table 3: Means of control variables, by country group

Notes: This table presents means for all control variables used in multivariate regressions; in the case of continuous variables, standard errors are given in parentheses. Some of the later analyses are restricted to young adults with incomes of their own. Descriptive statistics for this sample are available in the Appendix.

Before progressing to full multivariate analysis, we perform a simple regression for each country, estimating the relationship between the probability that a young person shares at least half of his or her income, and two income variables: the young person's own income, and the equivalized income of other household members. As outlined earlier, both these income variables have been converted to percentiles indicating their ranking within sample households in their own country. Marginal effects from these regressions, together with 95% confidence intervals, are presented graphically in Figures 2 and 3.

Figure 2: Marginal effects and confidence intervals on the young person's own income and household income (all sample households). Dependent variable: probability that the young person shares at least 50% of their personal income with the household.



Notes: Based on all sample households. Marginal effects relate to the change in the probability that a young person shares 50% or more of their income, associated with a 10 percentile point change in individual or household income.

Figure 2 presents results for the sample of all households in which a young person lives with his or her parents. In every country, we observe a positive and statistically significant coefficient (expressed as a marginal effect) on the young person's own income, and a negative and statistically significant coefficient on the income of the rest of the household.

Thus, it appears that young people are more likely to share their incomes with their households the higher are their own incomes and the lower are the incomes of the rest of their households. There is a certain amount of heterogeneity in the size of the effect within the country groupings, but the relationship appears to be strongest in the Baltic and Eastern European countries.

The full sample used in Figure 2 contains many young people who have no incomes of their own, and who are therefore unable to report themselves as sharing income with their families; thus, the difference in the propensity to share between young people who have no income of their own, and those who have any income, may be driving the observed relationships. We therefore repeat the analysis, excluding young people with no income.

These results are shown in Figure 3. The coefficients on household income are virtually unchanged from Figure 2; the confidence intervals are slightly larger, due to the smaller sample size, but the coefficient remains negative and significantly different from zero in all countries. The coefficients on the young person's own income, by contrast, have changed substantially: when the sample is restricted to young people who have any income of their own, the coefficients in most countries are negative, and only three (for Estonia, Latvia and Bulgaria) are positive and significantly different from zero. This suggests that in the majority of countries, the likelihood of sharing is *not* driven by the level of the young person's own income (if anything, in most countries, young people with higher incomes are *less* likely to share with their households); rather, the level of sharing seems to be driven primarily by the needs of the household.

Figure 3: Marginal effects and confidence intervals on the young person's own income and household income (households where young person has some income). Dependent variable: probability that the young person shares at least 50% of their personal income with the household.



Notes: Based on sample households where the young person has some income. Marginal effects relate to the change in the probability that a young person shares 50% or more of their income, associated with a 10 percentile point change in individual or household income.

Multivariate analysis

Table 4 presents the results of multivariate logistic regressions for the four groups of countries (results for individual countries are available from the authors on request). We use the sample of young people who have an income, since these are potentially in a position to share. Coefficients on the income variables are shown at the top of the table. In three of the four country groups, we observe a significant negative relationship between the young person's own income and the probability of sharing; in the Baltic countries, the relationship is negative and insignificant. This is somewhat counter-intuitive, as we might expect young people with more income to be more inclined to share it. In fact, this finding is in line with Bucx et al (2012) and Deindl and Brandt (2011), who found (in the context of generations living apart) that the incomes of the younger generation are not a significant determinant of the amount of financial assistance they provide to their parents.

We observe a positive coefficient on the young person's age in all groups of countries; since income tends to rise with age, it is possible that this is confounding the estimated effect of personal income. We therefore re-estimated these regressions excluding the young adult's age, qualifications and employment status (that is, excluding any variables which may be linked to the young adult's income). These results are included in the Appendix. In all groups of countries except the Baltic states, the significant negative coefficient on own income remains, but in the Baltic states, we now observe a significant positive coefficient on own income income. This provides fairly strong evidence that across most of Europe, young people with higher incomes are (other things being equal) less likely to share their incomes with their households, while in the Baltic countries, those with higher incomes are more likely to share, although this is entirely explained by their age, education and labor market status.

Turning now to the incomes of other household members, we see that the coefficient on this variable is negative and significant in every group of countries, indicating that young people are more likely to share their incomes when the incomes of other household members are low. The finding that sharing behavior is driven by the needs of the household is further supported by the fact that young adults are more likely to share their incomes with lone parents and with parents who do not have a job. They are not more likely to share with older parents, or parents who are in poor health, although this is probably related to the fact that the parents in this sample are relatively young themselves, with a mean age of around 53.

		North/ Western	Southern	Baltic	Eastern
	Young adult's own income	-0.006**	-0.011***	-0.003	-0.009***
Income	(effect of 10 percentile points)	(0.003)	(0.002)	(0.005)	(0.003)
variables	Rest of household income	-0.006***	-0.019***	-0.016***	-0.007***
	(effect of 10 percentile points)	(0.002)	(0.002)	(0.004)	(0.002)
	Female	0.039***	-0.002	0.032*	-0.017*
		(0.011)	(0.009)	(0.019)	(0.010)
	Age	0.005**	0.004**	0.006**	0.003**
		(0.002)	(0.001)	(0.003)	(0.002)
	Education (ref: lowest) secondary	-0.034***	-0.028**	-0.036	-0.105***
		(0.013)	(0.011)	(0.024)	(0.016)
	Education: degree	-0.026	-0.088***	-0.079***	-0.154***
Characteristics		(0.018)	(0.013)	(0.030)	(0.019)
person	Employment (ref: student) in work	0.012	-0.079	0.235***	0.111***
		(0.016)	(0.016)	(0.029)	(0.018)
	Employment: NEET	0.064***	-0.013	0.196***	0.174***
		(0.019)	(0.018)	(0.033)	(0.021)
	Has partner in household	0.096***	0.239***	0.115***	0.216***
		(0.034)	(0.030)	(0.042)	(0.024)
	Has child/ren in household	0.117***	0.126***	0.190***	0.115***
		(0.040)	(0.026)	(0.035)	(0.024)
	Lone parent	0.064***	0.111***	0.132***	0.091***
		(0.013)	(0.012)	(0.022)	(0.012)
	Stepfamily	0.014	0.076*	-0.071	0.079
		(0.050)	(0.039)	(0.058)	(0.049)
	Age (of elder parent)	-0.000	-0.001	-0.001	-0.000
		(0.001)	(0.001)	(0.002)	(0.001)
	One or both poor health	0.018	-0.006	0.016	-0.020
		(0.014)	(0.012)	(0.025)	(0.013)
Characteristics	One or both foreign born	0.054***	0.092***	0.031	-0.198***
of parent/s		(0.014)	(0.017)	(0.023)	(0.042)
	Education (ref: lowest) secondary	-0.020	0.005	0.068*	-0.133***
		(0.016)	(0.011)	(0.039)	(0.016)
	Education: tertiary	-0.028	-0.012	0.046	-0.153***
		(0.017)	(0.015)	(0.040)	(0.020)
	Employment (ref: both employed)	0.030**	0.021*	0.020	0.072***
	one parent in work	(0.015)	(0.012)	(0.024)	(0.013)
	Employment: no parent in work	0.070***	0.041***	0.080***	0.060***
		(0.017)	(0.013)	(0.028)	(0.015)
	N	3,906	9,324	2,674	9,499
	Pseudo R-squared	0.0835	0.0830	0.1160	0.0906

Table 4: Marginal effects from logistic regressions. Dependent variable: the probability that a young person shares at least half of personal income

Notes: Based on the sample of young adults who have any income. Standard errors in parentheses. *P*-values indicated by asterisks: *p < .05 **p < .01 ***p < .001

As expected, young people whose own partners or children also live in the household are more likely to share their incomes – although in this case, it is not clear whether the sharing is between the young adult and his or her partner and children, or whether it also extends to the young person's parents.

One interesting divergence between our findings and other research on transfers from children to their elderly (and non-co-resident) parents, is in the sign of the education coefficient. Mutran and Reitzes (1984), Albertini et al. (2007), Attias-Donfutt et al. (2005) and others found that families with higher levels of education (in either generation) are more likely to make intergenerational gifts, in both directions, of both cash and in-kind help. We find that *ceteris paribus*, young adults with higher levels of education are less likely to share their incomes with their households than their less educated counterparts, and there is no well-defined relationship between the parents' level of education and the probability that the young person shares his or her income. In fact, the two sets of findings are not necessarily inconsistent: it would not be unreasonable to infer that young adults with higher levels of education are less likely to make financial contributions to their parents, in cash and in kind, once they have left home and their parents are older.

Considering these results as a whole, it is interesting to note that they are generally very consistent between the four groups of countries. We have noted that the coefficient on the young person's own income behaves rather differently in the Baltic states than elsewhere; however, a post-estimation test between regressions in the fully controlled model does not reject the hypothesis that the coefficients in all four groups of countries are identical.

In fact, only two coefficients differ significantly between country groups. One is the young person's gender (women are slightly more likely to share in the North/Western and Baltic groups, and slightly more likely to share in the Eastern countries). The other is whether one or both parents were foreign born: this coefficient is fairly large and positive in the North/Western and Southern countries, and very large (0.19) and negative in the Eastern countries. This may reflect differences in the composition of the foreign-born population across the country groups, although it may also reflect the fact that the foreign-born population forms only a very small proportion of the sample in the Eastern countries.

These differences aside, the determinants of income are fairly similar between country groups; this is all the more striking, given the huge cross-European differences in income levels and living arrangements, as well as very substantial differences in the variable of interest itself.

The magnitude of young adults' contributions

We have demonstrated that in many countries, a sizeable proportion of young adults who live with their parents share half or more of their incomes with the rest of their households, and that this sharing is most likely to occur in the poorest households. What we have not yet done is to assess the importance of this sharing to the finances of the households in which it occurs.

One problem in making such an assessment is that although we have reasonably reliable measures of the incomes of the young adults themselves, and the incomes of the other members of their households, we do not know the exact percentage of their income which they share. Still, it is possible to make reasonable assumptions. Where the young person reports that none, half or all their income is shared, we know the exact amount of income which is shared. We assume that those reporting sharing "some" income share 25% (the midrange of the band), and those reporting sharing "most" share 75% (also the midrange).

We thus compute the amount of each young person's income which we assume is shared with the rest of the household. In households which contain more than one young adult, we add up these shared amounts. We then divide this total by a sum representing the "common pot" of the household – that is, the portion of their incomes which the young people contribute, plus the incomes of all other household members. This fraction is an estimate of the proportion of the "common pot" which is contributed by the young adults in the household. Note that this is likely to be a conservative estimate, as we have assumed that all other members of their household share their entire incomes.

The first column of Table 5 shows the mean percentage of the "common pot" which is contributed by young adults. This percentage ranges from 5% in the North/Western countries to 12% in the Baltic and Eastern countries. This figure is computed over all households where young adults live with their parents, even those where the young adults make no contribution. Column (2) of Table 5 shows the same percentages computed over households where the young adults share at least part of their incomes; here, the mean percentages are much higher, ranging from 26% in the North/Western countries to 33% in the Baltic group.

Column (3) shows the percentages of households in which young adults' contributions account for over one third of the common household budget. As expected, this percentage is fairly low in the North/Western countries; nevertheless, even in these countries, it accounts for 1 in 20 households. In the Baltic and Eastern countries, the figure is much higher, standing at 1 in 7 and 1 in 8 households respectively. Thus, although in every country those households which rely heavily on the contributions of their young adult members are in a minority, that minority is not vanishingly small in any country, and is indeed sizeable in the

lower-income nations of Eastern Europe. Column (4) shows households in which young adults' incomes account for over one-third of the common household budget, as a percentage of households in which young adults share any income at all. In the North/Western group, young adults' contributions account for over one-third of the common household budget in 31% of households where young adults share any of their incomes; in the other country groups, this figure rises to over 40% of households.

		(1)	(2)	(3)	(4)	(5)
		The incomes shared by young adults, as % of the "common pot" – mean across households		% of hou where you contribute o "comm	% of non- poor households that would be	
		All households with a YA	Households with a YA who shares any income	All households with a YA	Households with a YA who shares any income	poor without one young adult's income
	Austria	5.0%	27.5%	3.9%	35.0%	7.2%
tern	Belgium	3.5%	25.9%	3.5%	33.3%	4.2%
Vest	Germany	4.2%	21.3%	3.9%	24.5%	7.1%
th∕	Luxembourg	3.2%	29.3%	3.5%	34.4%	6.0%
Nor	United Kingdom	6.2%	29.5%	5.8%	34.5%	11.7%
	Group	4.9%	26.1%	4.5%	31.1%	8.2%
	Cyprus	4.4%	37.7%	6.5%	62.2%	10.6%
	Malta	5.3%	37.1%	6.8%	49.4%	22.2%
ern	Greece	7.6%	32.4%	7.9%	39.0%	8.8%
uth	Spain	7.4%	33.8%	8.6%	44.5%	9.3%
So	Portugal	7.2%	30.0%	8.2%	37.5%	10.1%
	Italy	7.2%	29.6%	8.0%	36.5%	8.1%
	Group	7.2%	31.6%	8.2%	40.1%	9.5%
	Estonia	7.1%	26.3%	7.8%	33.4%	7.1%
Itic	Lithuania	10.9%	31.6%	11.9%	37.4%	15.0%
Ва	Latvia	15.0%	38.1%	18.8%	49.5%	14.0%
	Group	11.5%	33.4%	13.4%	41.8%	12.8%
	Bulgaria	14.0%	30.3%	16.5%	39.0%	9.9%
	Czech Republic	7.1%	24.2%	5.6%	28.0%	5.3%
E	Hungary	15.5%	34.0%	20.6%	48.4%	15.9%
Easte	Poland	6.5%	26.5%	7.2%	33.2%	12.4%
	Romania	15.8%	30.6%	22.2%	45.2%	10.2%
	Slovakia	12.3%	30.8%	13.6%	42.0%	10.9%
	Group	11.8%	29.9%	14.3%	40.9%	10.8%
	TOTAL	8.6%	30.2%	8.6%	38.2%	9.9%

Table 5: Indicators of the magnitude of young adults' contributions to household budgets

Column (5) of Table 5 takes a different approach, based on a definition of poverty as living in a household with an equivalized income of 60% of national median income (European Commission, 2009). We calculate whether each household is poor, under its current composition. We then re-calculate the household's poverty status, under the hypothetical assumption that the young adult(s) leave the household, accompanied by any partners or children, and taking with them their own personal incomes, and the incomes of partners and/or children. We present the percentage of non-poor households in each country which would be poor if their young adult members moved out. This percentage is around 10% across all countries; it shows less variation between country groups than the other indicators, ranging from 8% in the North/Western region to 13% in the Baltic countries.

Taken together, the indicators in Table 5 suggest that in aggregate, the amount of income shared by young people does not constitute a major part of their households' budgets. However, for a minority of households, particularly in Eastern Europe and the Baltic countries, the contributions of young adults do form a significant part of household budgets, and for around 10% of families, are instrumental in keeping their households out of poverty.

DISCUSSION

This study extends our understanding of intergenerational support, by focusing on the extent to which young adults who are still living with their parents share their incomes with the rest of their households. This is an area which has been largely overlooked in the literature, and is an issue of great potential relevance, in the context (a) of delayed home-leaving across the developed world, and (b) of a worldwide recession which has had a particular impact on the employment and incomes of young adults (Bell & Blanchflower, 2010), but which has also adversely impacted their parents' generation.

The existing literature on intergenerational sharing within households focuses on the support that parents provide to their children. There are sound reasons for this: the evidence suggests that in aggregate, parents provide much more support to their adult children than their children provide to them (the balance shifts as parents become very elderly and the children reach middle age, but the net direction of support in early adulthood is clearly towards the younger generation).

Nevertheless, these aggregate figures may mask a good deal of heterogeneity in sharing behavior; we show that this is indeed the case. In the North/Western countries, 75% of young adults share no income with their households, and only 4% share all their incomes; however,

even in these countries, at a conservative estimate, one in 20 households containing young adult children rely on their young adult members for over one third of their common income.

In the Eastern and Baltic countries, where incomes are lower and young adults are more likely to share their incomes with their households, well over one in eight households with young adult members rely on them for over one third of their common income. Thus, while in every country, only a minority of households depend heavily on their young adult members for financial support, in many countries, this is a substantial minority.

In assessing the determinants of sharing by young adults living with their parents, we have complemented the existing literature on intergenerational sharing. In particular, our finding that sharing is driven primarily by needs of the wider household, and barely at all by the resources of the young adult, confirms earlier findings relating to sharing between adults and their elderly parents.

Strengths and limitations

This study is the first to study the importance of young adults' contributions to household resources, and as such, has broken significant new ground. The analysis was not, however, without its difficulties, which chiefly relate to various features of the available data. The EU-SILC is an unparalleled – and in many ways an extremely valuable – resource for research; no other data set provides so many opportunities for the study of household living conditions across such a wide range of countries. Owing to differences in survey design between countries, we were unfortunately unable to use data for several countries, including all those with "social-democratic" welfare regimes. In these countries, young people tend to leave home early, and both young adults and their parents are reasonably well provided for in the event of unemployment or other misfortune, by a generous and universal welfare state. It would have been extremely interesting to compare the incidence of income sharing in these social-democratic regimes with the incidence elsewhere in Europe.

Another constraint on our research was the limited range of possible responses to the question on income sharing. This means that it was not possible to make an exact assessment of the amount of income which young people were sharing; we were able to make informed assumptions on this, but it would be useful to have more detailed data. It is not likely that this question will be repeated in the foreseeable future in the EU-SILC; if it were to be repeated, or asked in another survey, it may be desirable to make the response categories rather narrower, or even to ask respondents to make their own estimate of the percentage they share.

Future directions

This study opens up many potential avenues of research. The aforementioned issues relating to the data mean that there may be only limited opportunities to develop this work in a cross-national context; however, more sophisticated modelling of the determinants of income sharing would be possible, and this could include simultaneous consideration of the sharing behaviors of both young adults and other household members. There is also ample scope for the determinants of sharing behavior to be studied in the context of single countries, both in large-scale representative surveys, where appropriate data were available, and in smaller-scale studies, which might seek to understand the processes by which young adults and their parents come to an agreement about how much of their income they should share.

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North/ Southern Baltic Eastern Western 65.018 70.722 69.734 70.542 Young adult's own income (pctile) (23.787)(22.436) (24.130)(21.898) Income variables Rest of household income (pctile) 49.525 50.582 47.796 48.621 (28.803)(28.039)(28.634)(28.638)Male 0.566 0.584 0.549 0.617 Female 0.434 0.416 0.451 0.383 Age 21.981 25.729 24.313 25.528 (4.083)(4.505)(4.557)(4.446)Education: lowest 0.259 0.299 0.281 0.153 Characteristics Education: secondary 0.532 0.402 0.455 0.618 of young Education: degree 0.209 0.299 0.264 0.228 person Employment: in work 0.624 0.756 0.623 0.753 Employment: student 0.281 0.115 0.210 0.132 **Employment: NEET** 0.095 0.129 0.166 0.115 Has partner in household 0.018 0.028 0.092 0.109 Has child/ren in household 0.013 0.036 0.149 0.108 Both parents present in HH 0.748 0.791 0.629 0.705 Lone parent 0.241 0.198 0.346 0.285 0.011 0.010 Stepfamily 0.011 0.025 Age (of elder parent) 52.506 56.469 53.023 53.808 (7.082)(7.548)(7.696)(6.958)One or both poor health 0.146 0.163 0.194 0.202 Characteristics 0.014 One or both foreign born 0.131 0.069 0.196 of parent/s Education: lowest 0.078 0.167 0.116 0.569 Education: secondary 0.422 0.260 0.418 0.646 Education: tertiary 0.462 0.170 0.504 0.187 Employment: both employed 0.663 0.367 0.546 0.540 Employment: one parent in work 0.339 0.230 0.200 0.219 Employment: no parent in work 0.137 0.294 0.224 0.241 Ν 3906 9324 2674 9499

Appendix 1: Means of control variables for country groups: sample of young adults with any income of their own.

Appendix 3: Marginal effects from logistic regressions, as estimated in Table 4, but excluding controls for the young adult's age, education and labor market status. Dependent variable: the probability that a young person shares at least half of personal income.

		North/ Western	Southern	Baltic	Eastern
	Young adult's own income	-0.000*	-0.002***	0.002***	-0.001***
Income	(effect of 10 percentile points)	(0.000)	(0.000)	(0.000)	(0.000)
variables	Rest of household income	-0.001***	-0.002***	-0.002***	-0.001***
	(effect of 10 percentile points)	(0.000)	(0.000)	(0.000)	(0.000)
	Female	0.030***	-0.015*	0.009	-0.036***
		(0.011)	(0.009)	(0.019)	(0.010)
Characteristics	Has partner in household	0.094***	0.236***	0.126***	0.212***
person		(0.033)	(0.030)	(0.043)	(0.024)
	Has child/ren in household	0.132***	0.154***	0.244***	0.151***
		(0.038)	(0.026)	(0.034)	(0.023)
	Lone parent	0.068***	0.118***	0.130***	0.090***
		(0.013)	(0.012)	(0.022)	(0.012)
	Stepfamily	0.037	0.099**	-0.028	0.106**
		(0.048)	(0.039)	(0.059)	(0.049)
	Age (of elder parent)	0.001	-0.001	0.003*	0.001
		(0.001)	(0.001)	(0.001)	(0.001)
	One or both poor health	0.019	-0.001	0.009	-0.014
		(0.014)	(0.012)	(0.025)	(0.013)
Characteristics	One or both foreign born	0.057***	0.094***	0.039*	-0.186***
of parent/s		(0.014)	(0.017)	(0.023)	(0.042)
	Education (ref: lowest) secondary	-0.031*	-0.003	0.059	-0.176***
		(0.016)	(0.011)	(0.039)	(0.015)
	Education: tertiary	-0.044***	-0.025*	0.016	-0.221***
		(0.017)	(0.014)	(0.040)	(0.019)
	Employment (ref: both employed)	0.034**	0.021*	0.020	0.078***
	one parent in work	(0.015)	(0.012)	(0.025)	(0.013)
	Employment: no parent in work	0.083***	0.046***	0.080***	0.073***
		(0.016)	(0.013)	(0.028)	(0.015)
	N	3,936	9,393	2,686	9,539
	Pseudo R-squared	0.0750	0.0749	0.0929	0.0809

Notes: Based on the sample of young adults who have any income. Standard errors in parentheses. *P*-values indicated by asterisks: *p < .05 **p < .01 ***p < .001