

Who gives whom? An inquiry of support to and from the elderly

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Plan

- 1. Motivation
- 2. Descriptive statistics
- 3. Theoretical model
- 4. Econometric results
- 5. Future research
- 6. Conclusion

Motivation

- 1. Private transfers and its motives:
 - Altruism
 - Exchange motive
 - Warm glow, demonstration effect and others
- 2. Altruism and its types:
 - Towards kins and relatives
 - Role of the biology
 - Charity giving
- 3. Changes in the family
- 4. Ageing and private transfers

Survey on Health, Ageing, Retirement in

Europe dataset

The sample covers indivudulas aged 50+ living in European countries.

Two waves are available (2005 and 2007).

South: France, Greece, Italy, Spain North: Austria, Belgium, Germany, the Netherlands, Sweden Poland The Czech Republic

Detailed data on private transfers from and to the population 50+ (financial, nonfinancial) with sociodemographic informantion are available.

Basic sociodemegraphic descriptive statistics

	Poland	Czech Republic	North Europe	South Europe
Age (average)	64.20	64.36	66.39	65.67
Female	59.88	59.79	55.73	56.62
Married	67.99	66.43	71.73	75.83
Widowed	23.67	17.35	15.53	13.48
Divorced	4.20	13.19	8.00	3.84
Never married	4.14	3.03	4.74	6.85
Education years (average)	9.16	12.16	11.75	9.31
Working	16.70	30.86	28.07	24.86
Retired	60.69	63.66	52.89	47.22
Household size (average)	2.93	1.99	1.89	2.26
Without children	16.70	23.49	29.83	33.82
With an adopted child	4.44	11.81	10.81	4.11
Children (average)	2.56	1.98	2.07	2.19
N individuals	2467	2830	15100	11422
N households	1771	1943	10527	7609

Table 1: Descriptive statistics of SHARE dataset.

Basic sociodemegraphic descriptive statistics

	Poland	Czech Republic	North Europe	South Europe
Age (average)	64.20	64.36	66.39	65.67
Female	59.88	59.79	55.73	56.62
Married	67.99	66.43	71.73	75.83
Widowed	23.67	17.35	15.53	13.48
Divorced	4.20	13.19	8.00	3.84
Never married	4.14	3.03	4.74	6.85
Education years (average)	9.16	12.16	11.75	9.31
Working	16.70	30.86	28.07	24.86
Retired	60.69	63.66	52.89	47.22
Household size (average)	2.93	1.99	1.89	2.26
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Table 1: Descriptive statistics of SHARE dataset.

Private transfers in Europe

Table 2: The financial and non-financial transfers given and received in international comparison.

	Financi	al transfers	Non-financial transfers				
			Within	household	Outside	e household	
	Given	Received	Given	Received	Given	Received	
Poland	23.25	7.43	10.32	13.69	18.23	22.93	
the Czech Republic	24.46	12.42	8.24	13.25	32.92	35.09	
North Europe	32.77	6.90	7.25	12.55	35.09	30.19	
South Europe	25.80	5.39	9.27	16.02	23.23	16.47	

Note: Financial transfers larger than 250 Euro. For the countries with national currencies the threshold value was calculated according to purchasing power. The question concerns the period between the survey waves. For the new SHARE countries the question concerned last 12 months.

Private transfers in Europe

Table 2: The financial and non-financial transfers given and received in international comparison.

	Financi	al transfers	Non-financial transfers				
			Within	household	Outside household		
	Given	Received	Given	Received	Given	Received	
Poland	23.25	7.43	(10.32)	13.69	18.23	22.93	
the Czech Republic	24.46	12.42	8.24	13.25	(32.92)	35.09	
North Europe	32.77	6.90	7.25	12.55	(35.09)	30.19	
South Europe	25.80	5.39	(9.27)	16.02	23.23	16.47	

Note: Financial transfers larger than 250 Euro. For the countries with national currencies the threshold value was calculated according to purchasing power. The question concerns the period between the survey waves. For the new SHARE countries the question concerned last 12 months.

Who gives whom?

	child	grandchild	parent	partner	sibling	child in law	parent in law	other relative	other unrelated
Financial given									
Poland	62.90	15.14	4.90	3.62	2.99	1.71	1.28	3.41	4.05
the Czech Republic	74.08	16.12	2.45	0.20	1.22	1.22	0.41	2.24	2.04
North Europe	71.29	10.27	2.46	3.26	2.79	1.08	1.08	3.01	4.78
South Europe	56.85	14.22	3.70	2.70	3.78	1.13	1.30	9.18	7.13
Financial received									
Poland	56.69	2.36	11.81	3.15	13.39	1.57	3.94	3.15	3.94
the Czech Republic	74.78	1.33	6.19	5.31	3.10	0.88	1.77	2.21	4.42
North Europe	21.16	2.26	36.25	3.10	5.64	0.99	16.78	5.08	8.74
South Europe	52.58	1.34	16.06	4.02	7.65	0.57	4.97	6.31	6.50
Non-financial given									
Poland	28.32	3.76	21.68	7.08	10.40	1.55	5.09	8.63	30.75
the Czech Republic	35.49	3.30	22.18	6.14	4.32	0.91	6.83	4.32	33.11
North Europe	32.66	1.79	27.37	3.55	7.96	1.19	11.08	6.61	34.78
South Europe	21.61	2.19	30.37	5.27	9.29	1.09	10.54	8.76	26.32
Non-financial received	i								
Poland	56.64	5.59	2.39	6.91	12.77	11.97	1.06	6.91	23.40
the Czech Republic	75.48	7.49	1.23	3.81	4.09	10.76	0.41	2.86	23.84
North Europe	47.06	3.14	4.17	3.84	10.01	8.94	1.11	6.13	39.27
South Europe	54.97	4.01	3.62	4.47	9.71	9.41	0.93	7.32	22.59

Table 3: Donors and recipients of the financial and outside household non-financial transfers in international comparison.

Who gives whom?

	child	grandchild	parent	partner	sibling	child in law	parent in law	other relative	other unrelated
Financial given									
Poland	62.90	15.14	4.90	3.62	2.99	1.71	1.28	3.41	4.05
	74.08	16.12	2.45	0.20	1.22	1.22	0.41	2.24	2.04
the Czech Republic		승규가 많이 많이 다 들었다. 나는 것이 같이 많이			2.79	1.22	1.08	3.01	
North Europe	71.29	10.27	2.46	3.26					4.78
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Financial received									
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North Europe	21.16	2.26	36.25	3.10	5.64	0.99	16.78	5.08	8.74
South Europe	52.58	1.34	16.06	4.02	7.65	0.57	4.97	6.31	6.50
South Europe	02.00	1.34	10.00	4.02	1.00	0.57	4.97	0.51	0.50
Non-financial given									
Poland	28.32	3.76	21.68	7.08	10.40	1.55	5.09	8.63	30.75
the Czech Republic	35.49	3.30	22.18	6.14	4.32	0.91	6.83	4.32	33.11
North Europe	32.66	1.79	27.37	3.55	7.96	1.19	11.08	6.61	34.78
South Europe	21.61	2.19	30.37	5.27	9.29	1.09	10.54	8.76	26.32
Non-financial received	1								
Poland	56.64	5.59	2.39	6.91	12.77	11.97	1.06	6.91	23.40
the Czech Republic	75.48	7.49	1.23	3.81	4.09	10.76	0.41	2.86	23.84
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South Europe	54.97	4.01	3.62	4.47	9.71	9.41	0.93	7.32	22.59

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North Europe	71.29	10.27	2.46	3.26	2.79	1.08	1.08	3.01	4.78
South Europe	56.85	14.22	3.70	2.70	3.78	1.13	1.30	9.18	7.13
Financial received		$' \setminus /$							
financial received	\sim	\smile	\frown						
Poland	56.69	2.36	11.81	3.15	13.39	1.57	3.94	3.15	3.94
the Czech Republic	74.78	1.33	6.19	5.31	3.10	0.88	1.77	2.21	4.42
North Europe	21.16	2.26	36.25	3.10	5.64	0.99	16.78	5.08	8.74
South Europe	52.58	1.34	16.06	4.02	7.65	0.57	4.97	6.31	6.50
Non-financial given									
Non-infancial given	\frown								
Poland	28.32	3.76	21.68	7.08	10.40	1.55	5.09	8.63	30.75
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North Europe	32.66	1.79	27.37	3.55	7.96	1.19	11.08	6.61	34.78
South Europe	21.61	2.19	30.37	5.27	9.29	1.09	10.54	8.76	26.32
Non-financial received									
		All a Field service							
Poland	56.64	5.59	2.39	6.91	12.77	11.97	1.06	6.91	23.40
the Czech Republic	75.48	7.49	1.23	3.81	4.09	10.76	0.41	2.86	23.84
North Europe	47.06	3.14	4.17	3.84	10.01	8.94	1.11	6.13	39.27
South Europe	54.97	4.01	3.62	4.47	9.71	9.41	0.93	7.32	22.59

Table 3: Donors and recipients of the financial and outside household non-financial transfers in international comparison.

Reasons for giving financial transfers

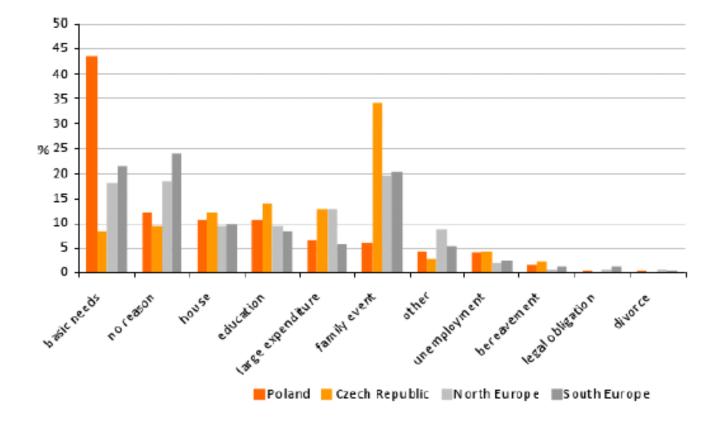


Figure 1: Reason of financial transfers given

Reasons for receiving financial transfers

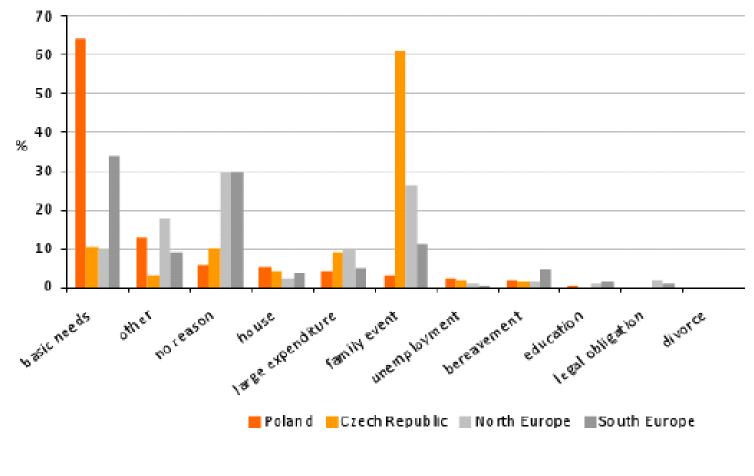


Figure 2: Reason of financial transfers received

Types of non-financial support between households

Table 4: Types outside household non-financial transfers in international comparison.

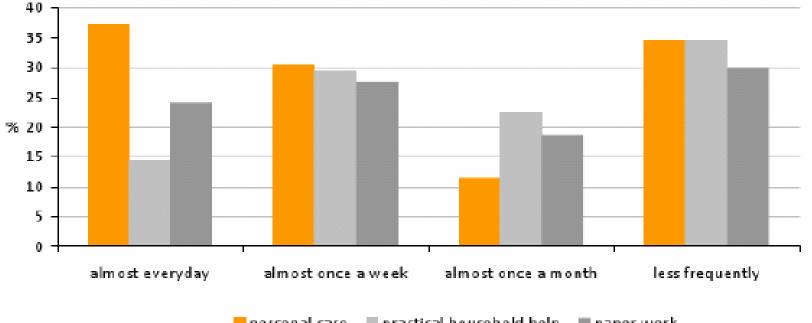
	Poland	the Czech Republic	North Europe	South Europe
Support given				
personal care	16.62	11.29	10.99	6.47
practical household help	43.27	68.21	55.88	64.07
paper work	40.11	20.50	33.13	29.46
Support received				
personal	4.95	2.10	2.76	6.78
practical household help	53.43	70.32	68.54	43.97
paper work	41.62	27.58	28.70	49.25

Types of non-financial support between households

Table 4: Types outside household non-financial transfers in international comparison.

	Poland	the Czech Republic	North Europe	South Europe
Support given				
personal care	16.62	11.29	10.99	6.47
practical household help	43.27	68.21		64.07
paper work	40.11	20.50	33.13	29.46
Support received				
personal	4.95	2.10	2.76	6.78
practical household help	53.43	70.32	68.54	43.97
paper work	41.62	27.58	28.70	49.25

Frequency of giving non-financial transfers



📕 personal care 🛛 🔲 practical household help 📰 paper work

Figure 3: Type of nonfinancial transfers given

Frequency of receiving non-financial transfers

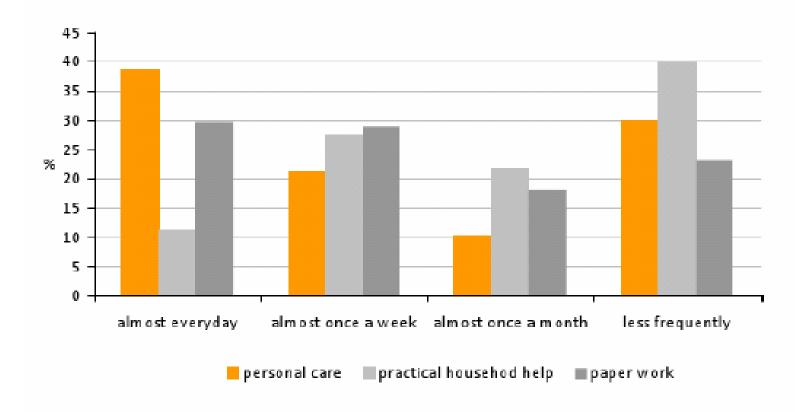


Figure 4: Type of nonfinancial transfers received

Transfers between parents and children

Table 5: Donors and recipients of the financial and outside household non-financial transfers of parents in North and South Europe.

	-				1	
	All pa	arents	Paren	ts with all	Parent	ts with
			biologie	al children	adopte	d child
	North	South	North	South	North	South
Financial given						
to children	36.08	24.94	35.17	24.90	42.22	25.91
to biological children	31.95	24.30	35.17	24.90	10.42	10.14
to adopted children	4.13	0.64			31.80	15.77
to others	8.47	11.79	8.37	11.76	9.11	12.39
N	12427	8728	10814	8373	1613	355
T2' ' 1 ' 1						
Financial received						
from children	4.06	5.58	4.19	5.66	3.13	3.72
from biological children	3.80	5.52	4.19	5.66	1.07	2.17
from adopted children	0.26	0.06			2.06	1.55
from others	5.15	3.14	4.68	3.12	8.40	3.73
Ν	10354	7830	9045	7508	1309	322
Non-financial given						
to children	16.10	6.29	16.10	6.25	17.37	7.07
to biological children	14.47	6.10	16.10	6.25	3.94	2.88
to adopted children	1.80	0.10	10.10	0.25	13.43	4.19
to adopted children to others	31.95	18.59	31.12	18.26	37.27	25.65
N	12890	8644	11162	8262	1728	382
14	12090	0044	11102	0202	1720	302
Non-financial received						
c 131	10.02	10.05	20 50	44.00	44.00	0.40
from children	19.92	13.97	20.73	14.30	14.32	6.13
from biological children	18.68	13.87	20.73	14.30	4.48	3.62
from adopted children	1.24	0.10			9.84	2.51
from others	17.03	9.69	17.11	9.87	16.46	5.57
N	12569	8861	10983	8502	1586	359

Note: North includes Poland and South Europe includes the Czech Republic.

Transfers between parents and children

Table 5: Donors and recipients of the financial and outside household non-financial transfers of parents in North and South Europe.

	All parents		Paron	ts with all	Parents with		
	An p	arents		cal children		d child	
	North	South	North	South	North	South	
Financial given	1.01.01	south	1101011	South	roren	boutin	
r manoral gryon			\frown	\frown	\frown	\frown	
to children	36.08	24.94	35.17	24.90	(42.22)	(25.91)	
to biological children	31.95	24.30	35.17	24.90	10.42	10.14	
to adopted children	4.13	0.64			31.80	15.77	
to others	8.47	11.79	8.37	11.76	9.11	12.39	
Ν	12427	8728	10814	8373	1613	355	
Financial received							
from children	4.06	5.58	4.19	5.66	3.13	3.72	
from biological children	3.80	5.52	4.19	5.66	1.07	2.17	
from adopted children	0.26	0.06			2.06	1.55	
from others	5.15	3.14	4.68	3.12	8.40	3.73	
Ν	10354	7830	9045	7508	1309	322	
Non-financial given							
	40.40		10.10				
to children	16.10	6.29	16.10	6.25	(17.37)	(7.07)	
to biological children	14.47	6.10	16.10	6.25	3.94	2.88	
to adopted children	1.80	0.19		10.00	13.43	4.19	
to others	31.95	18.59	31.12	18.26	37.27	25.65	
Ν	12890	8644	11162	8262	1728	382	
Non-financial received							
Ivon-mancial received							
from children	19.92	13.97	20.73	14.30	14.32	6.13	
from biological children	18.68	13.87	20.73	14.30	4.48	3.62	
from adopted children	1.24	0.10			9.84	2.51	
from others	17.03	9.69	17.11	9.87	16.46	5.57	
N	12569	8861	10983	8502	1586	359	

Note: North includes Poland and South Europe includes the Czech Republic.

Transfers between parents and children

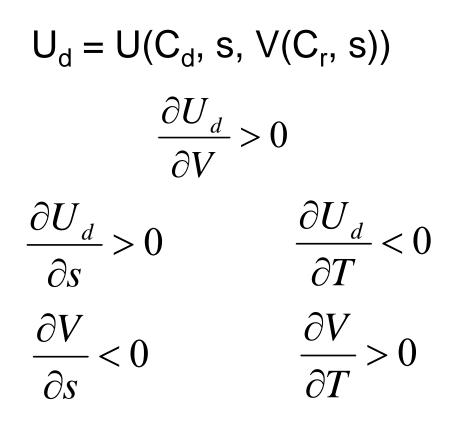
Table 5: Donors and recipients of the financial and outside household non-financial transfers of parents in North and South Europe.

	All parents		Danan	ts with all	Parents with		
	An pa	arents		al children		d child	
	North	South	North	South	North	South	
Financial cittan	NOLU	South	NOTTH	South	North	South	
Financial given							
to children	36.08	24.94	35.17	24.90	42.22	25.91	
to biological children	31.95	24.30	35.17	24.90	10.42	10.14	
to adopted children	4.13	0.64	00111	21100	31.80	15.77	
to others	8.47	11.79	8.37	11.76	9.11	12.39	
N	12427	8728	10814	8373	1613	355	
14	12421	0120	10014	0010	1010	000	
Financial received							
r manoral received			\frown	\frown	\frown	\frown	
from children	4.06	5.58	4.19	5.66	(3.13)	(3.72)	
from biological children	3.80	5.52	4.19	5.66	1.07	2.17	
from adopted children	0.26	0.06			2.06	1.55	
from others	5.15	3.14	4.68	3.12	8.40	3.73	
Ν	10354	7830	9045	7508	1309	322	
Non-financial given							
to children	16.10	6.29	16.10	6.25	17.37	7.07	
to biological children	14.47	6.10	16.10	6.25	3.94	2.88	
to adopted children	1.80	0.19			13.43	4.19	
to others	31.95	18.59	31.12	18.26	37.27	25.65	
N	12890	8644	11162	8262	1728	382	
N 0 11 1							
Non-financial received							
from children	19.92	13.97	20.73	14.30	14.32	6.13	
from biological children	18.68	13.97	20.73	14.30	4.48	3.62	
from adopted children	1.24	0.10	20.13	14.30	4.40 9.84	2.51	
from others	1.24 17.03	9.69	17.11	9.87	9.84 16.46	$\frac{2.51}{5.57}$	
N N	12569	9.09 8861	10983	8502	1586	359	
14	12009	0001	10903	0002	1000	309	

Note: North includes Poland and South Europe includes the Czech Republic.

Theoretical model

Cox, Rank (1992)



 U_d – donors utility C_d – donors consumption S- services V- recipients utility C_r - recipients consumption $C_d=I_d-T$ $C_r=I_r+T$

Theoretical model

In altruism as well as exchange motive probability of the transfer is positively related to the donor's income and inversely related to recipient's income:

 $\frac{\partial P_T}{\partial I_d} > 0$ $\frac{\partial P_T}{\partial I_r} < 0$

Theoretical model

If transfer is motivated by altruism, the increase of the income of the recipient results in a decrease of the value of transfer, because the recipient can attain optimal consumption by himself and the aid is less needed

$$\frac{\partial T}{\partial I_r} < 0$$

Transfer is motivated by exchange

T = p * s

When the income of the recipient increases, he can require higher "price" for his work and for given amount of services "s" a transfer of a larger value will be expected. Therefore, an increase of the recipient's income results in an increase of the value of transfer

Econometric specification

Probability of a transfer:

 $P(T > 0) = \alpha_0 + \alpha_1 I_p + \alpha_2 biological + \alpha_3 region + \alpha_4 X_p + \varepsilon$

Value of a transfer:

 $T = \beta_0 + \beta_1 I_p + \beta_2 biological + \beta_3 region + \beta_4 X_p + \eta$

Probit results

	Nonfinancial received	Nonfinancial given	Financial received	Financial given
age	.0041***	0045***	0007	0031**
education	0014	.0010	.0005	.0075***
adopted child in family	0339	0092	0221*	.0180
female	.0651***	0073	.0293**	1041***
employed	.0287	.0150	0073	.0541**
number of siblings	0036	.0019	.0020	0173**
number of grandchildren	.0062	.0083	.0037	.0067
number of children	0026	0043	0034	0018
rural	.0431***	0035	.0031	.0087
any parent alive	0438**	0156	0314***	.0101
log income	0104*	.0080*	0055*	.0190***
married	0419*	.0200	0001	0497*
$\mathbf{married}^{*}\mathbf{female}$	0280	0305	0267*	$.1044^{***}$
fair health	.0455*	0165	.0116	0435**
bad health	.1356***	0417^{***}	.0189	0428*
South region	1350 * * *	0688***	.0025	0223
Observations	4239	4239	4234	4234

Table 6: Estimation results of probit models - marginal effects.

H ealth reference group: excellent health

* significant at 0.05 ++ significant at 0.01

Probit results

	Nonfinancial received	Nonfinancial given	Financial received	Financial given
age	.0041***	0045***	0007	0031**
education	0014	.0010	.0005	.0075***
adopted child in family	0339	0092	0221*	.0180
female	.0651***	0073	.0293**	1041***
employed	.0287	.0150	0073	.0541**
number of siblings	0036	.0019	.0020	0173^{**}
number of grandchildren	.0062	.0083	.0037	.0067
number of children	0026	0043	0034	0018
rural	.0431***	0035	.0031	.0087
any parent alive	0438**	0156	0314***	.0101
log income	(0104*)	.0080*	(0055*)	.0190***
married	0419*	.0200	0001	0497*
married*female	0280	0305	0267*	$.1044^{***}$
fair health	.0455*	0165	.0116	0435**
bad health	.1356***	0417^{***}	.0189	0428*
South region	1350***	0688***	.0025	0223
Observations	4239	4239	4234	4234

Table 6: Estimation results of probit models - marginal effects.

Health reference group: excellent health * significant at 0.05 $^{++}$ significant at 0.01

Probit results

	Nonfinancial received	Nonfinancial given	Financial received	Financial given
		-		-
age	.0041***	0045***	0007	0031**
education	0014	.0010	.0005	.0075***
adopted child in family	0339	0092	0221*	.0180
female	.0651***	0073	.0293**	1041****
employed	.0287	.0150	0073	.0541**
number of siblings	0036	.0019	.0020	0173**
number of grandchildren	.0062	.0083	.0037	.0067
number of children	0026	0043	0034	0018
rurəl	.0431***	0035	.0031	.0087
any parent alive	0438**	0156	0314***	.0101
log income	0104*	.0080*	0055*	$.0190^{***}$
married	0419*	.0200	0001	0497*
$\mathbf{married}^*\mathbf{female}$	0280	0305	0267*	$.1044^{****}$
fair health	.0455*	0165	.0116	0435**
bad health	.1356***	0417***	.0189	(0428*)
South region	1350***	0688***	.0025	0223
Observations	4239	4239	4234	4234

Table 6: Estimation results of probit models - marginal effects.

H ealth reference group: excellent health

* significant at 0.05 ++ significant at 0.01

Tobit results

Financial received Financial given -0.1520.009age $(2.74)^{**}$ (0.30)0.1070.280education (0.93)(4.99)**adopted child in family 1.6880.765(1.47)(1.18)female 1.728-3.210(4.77)**(1.45)0.6912.241employed (3.95)**(0.69)number of siblings 0.126-0.389(0.40) $(2.31)^*$ 0.184number of grandchildren 0.554(1.61)(1.06)number of children -0.091-0.405(0.60)(1.21)rural 0.0780.552(0.09)(1.26)any parent alive 0.8300.704(0.93)(1.37)-0.5930.924log income (2.38)*(6.35)**married -2.059-1.199(1.60)(1.78)married*female -1.8463.108(3.64)**(1.15)fair health 0.494-1.459(2.73)**(0.50)bad health 1.448-1.715(1.42)(3.08)**South region -1.0130.157(1.23)(0.35)Constant -13.044-16.620(2.82)** (6.73)**Observations 1200910831 Number of clusters 419941361.482.37Pseudo R2

Table 7: Estimation results of tobit models.

Health reference group: excellent health

Robust z statistics in parentheses

* significant at 0.05 ** significant at 0.01

Tobit results

Financial received Financial given -0.1520.009age $(2.74)^{**}$ (0.30)0.1070.280education (0.93)(4.99)**0.765 adopted child in family 1.688(1.47)(1.18)-3.210 female 1.728(4.77)**(1.45)0.6912.241employed (3.95)**(0.69)number of siblings 0.126-0.389(0.40) $(2.31)^*$ 0.184number of grandchildren 0.554(1.61)(1.06)number of children -0.091-0.405(0.60)(1.21)rural 0.0780.552(0.09)(1.26)any parent alive 0.8300.704(0.93)(1.37)-0.5930.924log income (2.38)*(6.35)**married 2.059 -1.199(1.60)(1.78)married*female -1.8463.108(3.64)**(1.15)fair health 0.494-1.459(2.73)**(0.50)bad health 1.448-1.715(1.42)(3.08)**South region -1.0130.157(1.23)(0.35)Constant -13.044-16.620(2.82)**(6.73)**Observations 1200910831 Number of clusters 419941361.482.37Pseudo R2

Table 7: Estimation results of tobit models.

Health reference group: excellent health

Robust z statistics in parentheses

* significant at 0.05 ** significant at 0.01

Future research

OLS results

being a biological child, gender, education, age, contact with parent and distance to parent's household) are statistically insignificant for parents who give them transfers

- Analysis where the characteristics both of a parent and a child
- Research representative for the whole population

Conclusions

- The financial and non-financial private transfers are very important for the 50+ population in Europe and the elderly are not only the beneficiaries but also very often donors.
- Most of the financial intervivos transfers are between the family members. The elderly usually support financially own children.
- The results are in line with the altruistic motive for giving private transfers.
- The children among which there is an adopted one are less likely to financially support their parents.
- The estimation results show that there is no reason to believe that parents over 49 years old in Europe treat biological children in a different way than non-biological.