

Caring for elderly parents

Is it altruism, exchange or family
norm?

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Introduction (1)

Definition(s) of Long Term Care (LTC):

- “A mix of social and health care provided on a daily basis, formally by professional caregivers or informally by relatives, at home or in institution, to people suffering from a loss of autonomy in their activity of daily living (ADL) for an extended period of time” (Courbage, 2012) .
- Long-term care concerns people who depend on help to carry out daily activities such as eating, bathing, dressing, going to bed, getting up or using the toilet. It deals with **nursing** care rather than with **health** care.

Introduction (2)

- Demand side:
 - 2/5 people aged 65 or older report having some type of functional limitation (sensory, physical, mental, self-care disability, or difficulty leaving home).
 - The relative importance of people aged 65+ (80+) will more than double (triple) by 2050 (European Union, 2012).
 - Supply side:
 - 70% from family, 20% from state, 10% from market (Pestieau, 2013)
 - Main provider: the family... but
 - change in family values
 - growing number of childless households
 - increasing rate of participation of women in the labour market
 - mobility of children
- Potentially less informal care provision

Introduction (3)

Motives of informal care:

- **Altruism ?**
- **Exchange ?**
- **Family norm ?**

Different impacts on social welfare and on caregivers' health:

- Advantages (Pollack, 1985; Tarlow et al., 2004; Brown et al., 2003)
- Disadvantages (Van Houtven et al.; 2013, Schultz et al., 1995; Pinquart and Sörensen, 2003; Vitaliano et al., 2003, Hirst, 2005; Burton et al., 2003)

Introduction (4)

WHAT WE DO:

- Test the motives of informal caring/financial transfer with SHARE data:
 - 1) Simple models of LTC provision within the family
 - 2) Database design & descriptive tables
 - 3) Empirical results identifying caring motives

WHAT WE FIND:

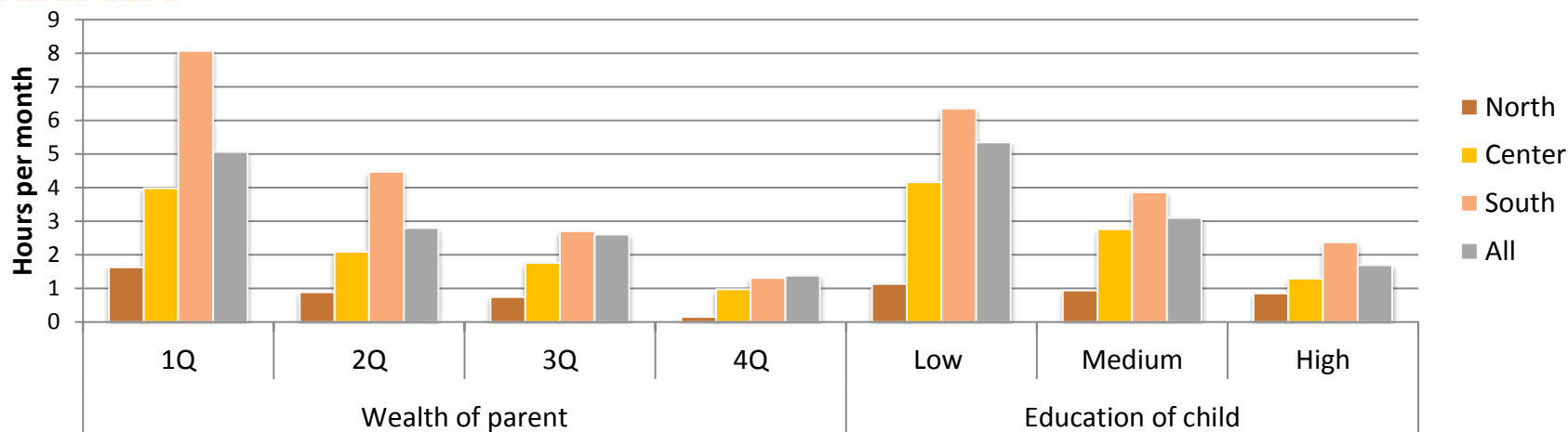
- Highlight the impact of exchange motives in explanation of descending transfers (Alessie et al. 2014) and find some room for family norm in informal care.

WHY IT IS IMPORTANT:

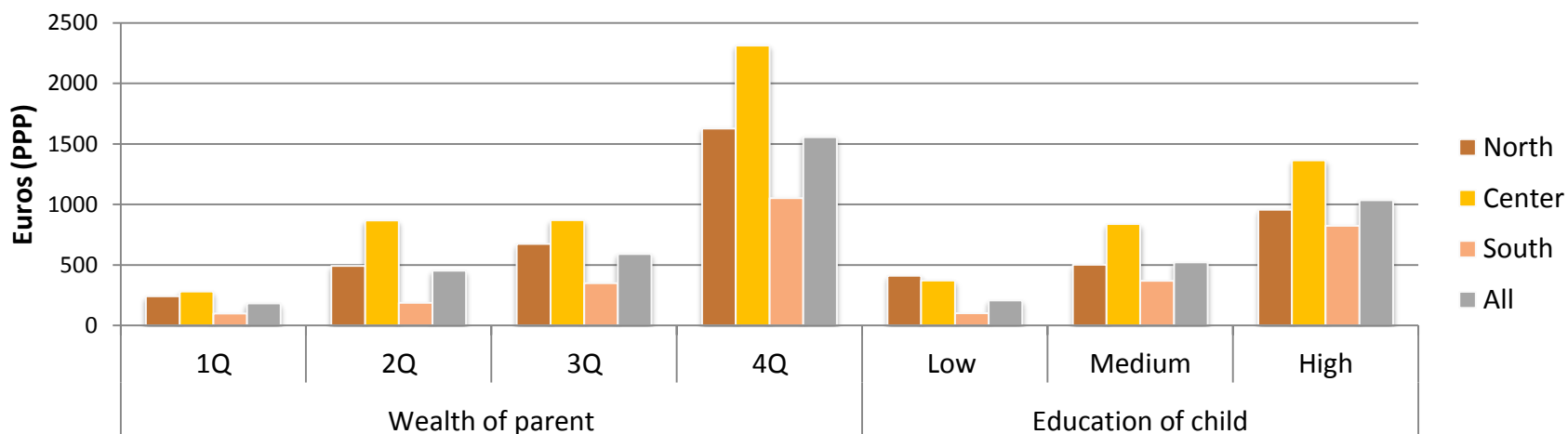
- If introduction of social insurance, crowding out effect of informal care if altruism (--) and exchange (-) but not if family norm (0).

Introduction (5)

Informal care



Financial transfer



Models (1)

- Two-sided issue where the proper utility of the child is a strictly concave function $U(c)$ where
$$c = ((1 - a)w + E + b)$$
 - w is the wage rate;
 - a , the time spent caring;
 - E , non labour income;
 - b , the transfer from the parent;
 - $1 - a$, the labour supply.
- The proper utility of the parent is a quasi-concave utility with two arguments $H(y - b, a)$
 - y is the income;
 - b , the transfer to the child ($y - b$ is formal care, m);
 - a , the caring time from the child.

Models (2)

- We can now write the full utility of both child and parent:

$$U_c = U((1 - a)w + E + b) + \alpha H(y - b, a)$$

and

$$U_p = H(y - b, a) + \beta u((1 - a)w + E + b)$$

where α and β are respectively the altruism parameters of the child and the parent.

Models (3)

- We assume that the parent moves first and chooses b . Then the child chooses a .
- Three cases:
 - Altruism : $\alpha \leq 1$ and $\beta = 1$
 - Exchange: $\alpha = 0$ and $\beta = 0$ and there is a market for assistance at price $p = w$
 - Family norm: $\beta = 0$ or $\beta > 0$ (α does not matter since \bar{a})
- We obtain the following comparative statics, depending on whether formal and informal care are substitutes or complements.

Models (4)

Summary of theoretical models

Summary	Care and time spent		Transfer received	
	da/dy	da/dE	db/dy	db/dE
Altruism	> 0 if comp < 0 if subs	> 0	> 0	< 0
Exchange	> 0 if comp ≥ 0 if subs	$= 0$	> 0 if comp ≥ 0 if subs	$= 0$
Family Norm	$= 0$	$= 0$	> 0 (if parent altruist)	< 0 (if parent altruist)
			$= 0$	$= 0$

Database design (1)

- Building a database to empirically test these hypotheses.
- 2nd wave of SHARE matches perfectly children and parents' information relative to hours per month of informal care and financial transfers.
- Duplication of information about children, help received and financial transfers to the partner not interviewed.

Database design (2)

Questions and answers about interest variables

Interest variable	Question		Answer
Informal Care	Now please think of the last 12 months. Has any family member from outside the household, any friend or neighbour given you (or your partner) any kind of help?	1. Dressing, bathing or showering, eating, getting in or out of bed, using toilet; 2. With home repairs, gardening, transportation, shopping, household chores; 3. Filling out forms, settling financial or legal matters.	1.Yes; 5.No
	From whom?		Name
	How often?		Hours
Financial transfer	Now please think of the last 12 months. Not counting any shared housing or shared food, have you (or your partner) given any financial or material gift or support to any person inside or outside this household amounting to 250 euro (in local currency) or more?		1.Yes; 5.No
	To whom?		Name
	How much?		Euros

Database design (3)

- Transfers:
 - 29.7% reported having made a financial donation of more than 250 euros in the last 12 months. 11,704 children received a transfer from their parents, which is equivalent to 74.4% of all recipients.
 - Informal help:
 - 20.9% of the 33,132 respondents declared having received help from outside the household. 5,067 children provided informal help to their parents, which is equivalent to 49.2% of all suppliers.
- One unique sample based on respondents' children

Database design (4)

Restrictions to the initial sample (69,069 children):

- Children with parents 65+ (→ 32,235 children)
- Information not complete (→ 31,416 children)

11,7% received a gift from parents

10,5 % provided informal help to parents

Database design (5)

Informal help and transfers

		<i>Help (%)</i>	Informal help given by a child to a parent if help (Hours by month)				<i>Transfer (%)</i>	Transfer received by a child from a parent if transfer (PPP euros)			
			<i>Mean</i>	<i>50th</i>	<i>90th</i>	<i>95th</i>		<i>Mean</i>	<i>50th</i>	<i>90th</i>	<i>95th</i>
North	SW	9.0	16.7	2.3	21.7	40.0	18.9	4,805	1,384	9,921	23,067
	DK	10.0	5.4	1.0	13.0	30.4	16.4	3,885	2,295	9,690	14,535
	NL	4.8	13.9	2.0	17.4	43.4	10.6	4,296	1,964	8,060	15,709
Center	AT	10.1	29.2	10.0	86.8	121.6	15.3	3,132	983	9,832	13,765
	DE	12.2	22.0	5.0	60.8	91.2	16.0	4,129	962	9,625	14,437
	FR	7.4	25.9	8.7	60.8	121.6	10.5	9,073	1,920	25,596	36,590
	BE	10.5	20.0	5.0	52.1	69.4	12.2	12,674	2,390	27,500	71,691
	CH	6.2	14.0	3.5	34.7	60.8	11.4	9,554	2,704	22,532	45,064
South	ES	6.6	62.2	10.0	182.5	304.1	2.8	3,732	2,210	7,514	13,261
	IT	7.3	47.8	10.0	152.1	212.9	11.8	5,863	962	7,657	19,238
	GR	13.9	45.0	13.0	121.6	173.6	8.6	2,560	1,172	7,030	9,908
East	CZ	30.0	31.1	10.0	60.8	120.0	9.4	1,189	334	3,316	5,306
	PL	10.5	42.4	13.2	91.2	152.1	9.0	920	486	2,432	3,416
All		10.5	30.0	8.0	86.8	130.2	11.7	5,310	1,172	9,832	21,331

Database design (6)

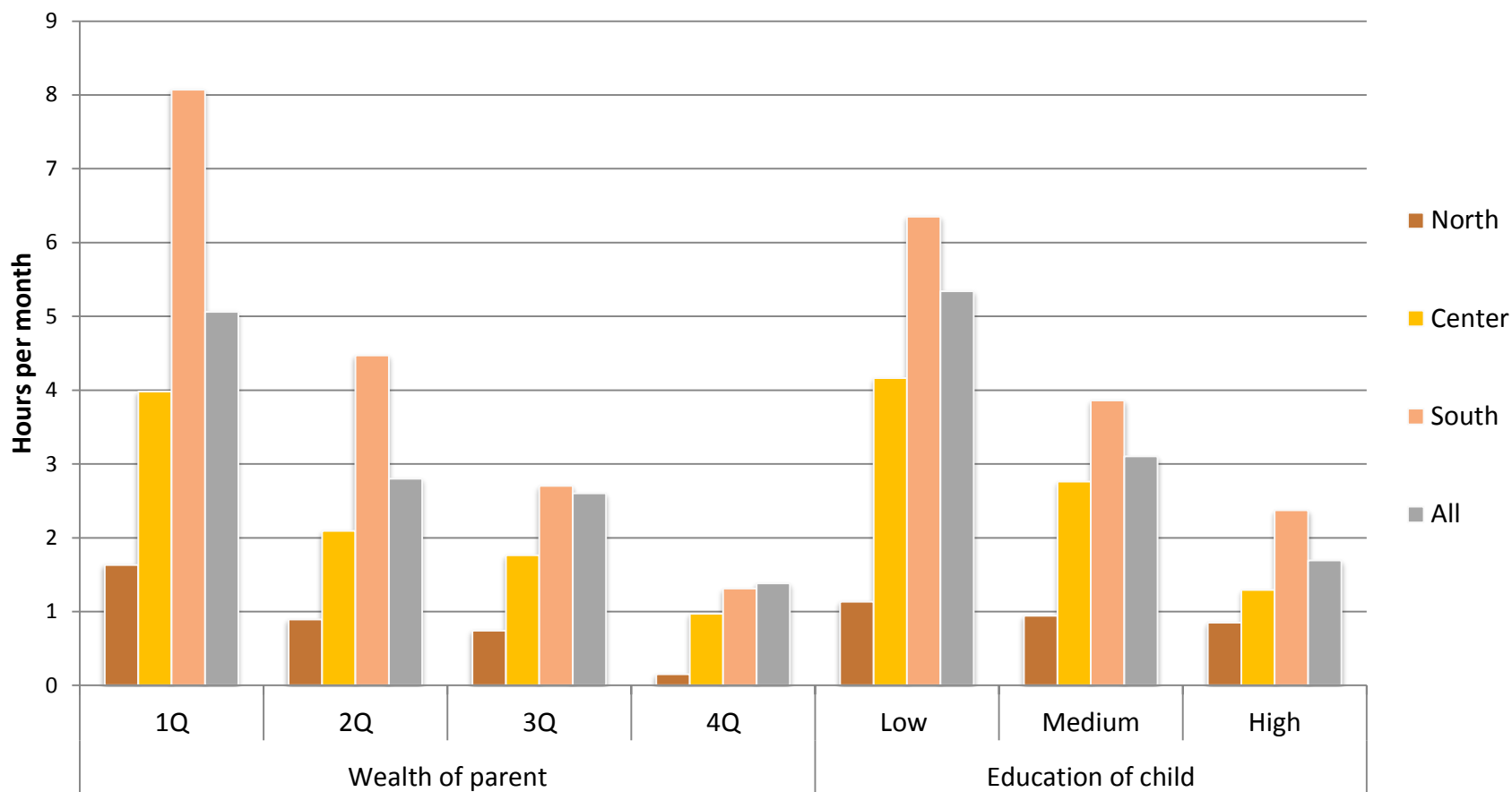
There are country differences in aid provided by children (and intensity) and downward transfers (and amount). Based on the theoretical model, in order to see if this is altruism, exchange or family norms governing parent-child relationships, variables on wealth of parents and on the level of education of children have been constructed.

→ wealth percentiles by country (y)

→ 7 education levels based on ISCED 1997 (E)

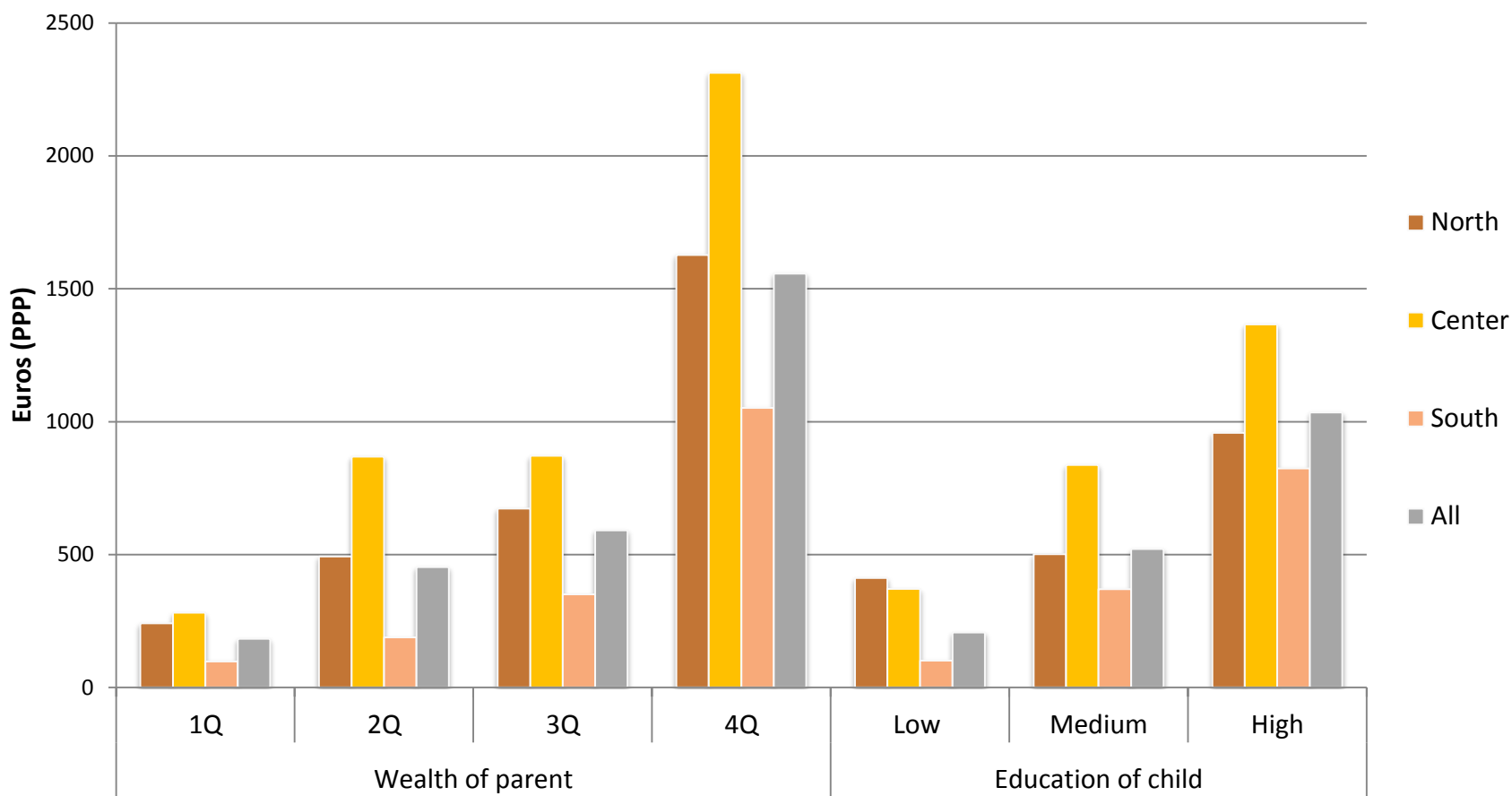
Database design (7)

Descriptive statistics about informal care (a)



Database design (8)

Descriptive statistics about financial transfers (b)



Empirical results (1)

The first empirical model consists in analysing the effect of parents' wealth (da/dy) and endowment of children (da/dE) on informal care provided by the adult children to their parents.

Remarks:

- Analyses by subgroups of countries
- Tobit model where $\ln(hours\ of\ help+1)$ is the dependent variable
- Duan & al. (1983) two-part models tested but our models deal with the intensive margins (results similar but lack of clarity)

Empirical results (2)

Tobit I model of informal help

<i>Help to parent</i>	All	North	Center	South
Explanatory variables				
Parent				
<i>Wealth (y)</i>	-0.009***	-0.008***	-0.011***	-0.023***
<i>Woman</i>	0.326***	0.302**	0.511***	0.031
<i>Partner</i>	-0.778***	-0.542***	-1.103***	-0.874***
<i>Age</i>	0.059***	0.069***	0.087***	0.019
<i>Physically not limited</i>	ref	ref	ref	ref
<i>Physically limited</i>	1.130***	0.545***	1.016***	1.598***
<i>Physically severely limited</i>	2.080***	1.289***	2.046***	2.631***
Child				
<i>Education (E)</i>	0.021	0.049	-0.009	0.054
<i>Woman</i>	0.662***	-0.025	0.633***	1.752***
<i>Partner</i>	-0.267	0.287	-0.428	-1.073
<i>Age</i>	0.057***	0.036***	0.037***	0.090***
<i>Localisation</i>	-0.546***	-0.475***	-0.656***	-0.503***
<i>Siblings</i>	-0.238***	-0.167***	-0.189***	-0.321***
Observations	31,416	7,836	9,330	8,252

Ref: For the analysis over the entire sample, the reference is a Belgian low-educated male without partner whose male low educated parent is in the first percentile of wealth and physically not limited (controlling for country fixed effects and education of the parent).

Empirical results (3)

The second model focuses on the impact of parents' wealth (db/dy) and endowment of children (db/dE) on transfers received by adult children from the parents. These financial transfers are higher than 250 euros in the last twelve months.

Remarks:

- Analyses by subgroups of countries
- Tobit model where $\ln(\text{amount of gift}+1)$ is the dependent variable
- Duan & al. (1983) two-part models tested but our models deal with the intensive margins (results similar but lack of clarity)

Empirical results (4)

Tobit I model of downward transfers

<i>Transfer to child</i>	All	North	Center	South
Explanatory variables				
Parent				
Wealth	0.073***	0.106***	0.085***	0.064***
Woman	-0.512**	-0.608***	0.224	-1.403**
Partner	-0.139	-2.703***	1.775***	-0.273
Age	-0.069***	-0.006	-0.028	-0.238***
Physically not limited	ref	ref	ref	ref
Physically limited	0.469*	0.260	1.102**	-0.467
Physically severely limited	0.219	0.575	1.146**	-0.731
Child				
Education	0.201**	0.217	0.158	0.187
Woman	0.593***	1.022***	0.145	0.055
Partner	0.329	-0.480	0.387	0.174
Age	-0.117***	-0.087**	-0.202***	-0.052
Localisation	0.120*	0.403***	0.203*	-0.075
Siblings	-1.653***	-1.536***	-1.858***	-2.338***
Observations	31,416	7,836	9,330	8,252

Ref: For the analysis over the entire sample, the reference is a Belgian low-educated male without partner whose male low educated parent is in the first percentile of wealth and physically not limited (controlling for country fixed effects and education of the parent).

Empirical results (5)

Applying empirical results to models (a and m substitutes)



If a and m are substitutes	Applying empirical results to models											
	Child's help side						Parent's transfer side					
	If parent is altruist in family norm model											
	da/dy			da/dE			db/dy			db/dE		
SHARE	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	> 0	> 0	> 0
North	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	= 0	= 0	= 0
Center	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	= 0	= 0	= 0
South	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	= 0	= 0	= 0
impossible												
	If parent is not altruist in family norm model											
	da/dy			da/dE			db/dy			db/dE		
SHARE	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	> 0	> 0	> 0
North	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	= 0	= 0	= 0
Center	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	= 0	= 0	= 0
South	< 0	< 0	< 0	= 0	= 0	= 0	> 0	> 0	> 0	= 0	= 0	= 0
impossible												

Note: Altruism Exchange Family norm

→ Empirical results match with exchange models for parent/child side but the results are in conflict in the “global” exchange model in case where a and m are substitutes (opposite signs).

Empirical results (6)

Applying empirical results to models (a and m complements)

If a and m are complements	Applying empirical results to models												
	Child's help side							Parent's transfer side					
	If parent is altruist in family norm model												
	da/dy			da/dE				db/dy			db/dE		
SHARE	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	> 0	> 0	> 0
North	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	= 0	= 0	= 0
Center	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	= 0	= 0	= 0
South	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	= 0	= 0	= 0
													
	If parent is not altruist in family norm model												
	da/dy			da/dE				db/dy			db/dE		
SHARE	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	> 0	> 0	> 0
North	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	= 0	= 0	= 0
Center	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	= 0	= 0	= 0
South	< 0	< 0	< 0	= 0	= 0	= 0		> 0	> 0	> 0	= 0	= 0	= 0
													

Note:

Altruism	Exchange	Family norm
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→ Empirical results match exchange motives in descending relationships while family norm plays a role in ascending ones.

Conclusion(s)

- We test three alternative models of long-term caring motives: pure altruism, exchange and family norm.
- For the design of LTC public policy but also for that of private insurance contracts this distinction is extremely relevant.
- Depending on the prevailing motives, the extent of crowding out of informal care will vary and this will affect the desirability of either private or public insurance.
- The empirical results seem to lean towards the model of exchange (even if it remains some room for family norm into explaining informal care motives).

To do

- Analyses on sample of singles lead to same results
- Look at the direct relation of help and transfer (sign of da/db) empirically (check for endogeneity) in order to simplify the conclusions of models and contribute to the literature on the issue of complementarity / substitutability between formal and informal help.

Thanks for your attention! Questions?