Intrahousehold allocation of resources and household deprivation

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Introduction

- Poverty has a multidimensional nature.
- Individuals with the same income may suffer different deprivation levels:
  - effects of accumulated resources, educational level, housing ownership, ...
- Several proposals in the literature to measure the level of **multidimensional deprivation**: Nolan and Whelan, 1996, 2010; Atkinson et al., 2002; Atkinson, 2003; Bourguignon and Chakravarty, 2003; Chakravarty and D'Ambrosio, 2006; Ayala et al., 2011; Ravallion, 2011; Chzhen et al., 2016; among others.

Introduction

- Since the family involves an intra-household scheme of exchange and distribution of resources, different financial regimes within the household may, to some extent, explain the presence of specific types and levels of deprivation
- Empirical evidence suggesting:
  - Individuals may have different preferences and may not pool their incomes (Fortin and Lacroix, 1997; Clark et al., 2002; Ward-Batts, 2008; Dietrich, 2008; Cherchye et al., 2009
  - Decision-making process in a family exerts and important influence on the intra-household dynamics and welfare of the household (Sundari, 2013)

Introduction

Aim:

- This paper contributes to the literature in the fields of deprivation and household economics by analyzing the impact of different household financial regimes on deprivation in a number of European countries.
- Special module on intra-household sharing of resources included in the 2010 wave of the European Union Survey on Income and Living Conditions (EU-SILC) dataset.

Introduction

- Interest of the topic:
  - It answers the call reflected at the European level by the National Action Plans for Social Inclusion to analyze material deprivation and social exclusion in depth .
  - If different family arrangements in terms of intrahousehold resource allocation and decision-making translate into different levels of household deprivation, those should be be taken into consideration in designing focalized social programs targeted at reducing social inequalities

Outline

- Literature Review
- Data
- The Model
- Results
- Conclusions

Literature review

A large number of studies focused on the measurement of deprivation and its determinants at both the macro and micro level:

- Individual or household characteristics (for an excellent review see Boarini and D'Ercole, 2006).
- Cross-national differences in deprivation (see, for example, Layte et al., 2001a, 2001b; Muffels and Fouarge, 2004; Figari, 2012; Dewilde, 2008; Bradshaw and Chzhen, 2012; and Bárcena-Martín et al., 2014).

Literature review

Individual and household determinants

- Negative and weak relationship with income
- Families with dependent children are especially vulnerable to material deprivation
- No clear relationship with age (if any U-shaped)
- Higher education reduces deprivation
- Households with one or more self-employed or employed workers generally present lower deprivation scores.

Literature review

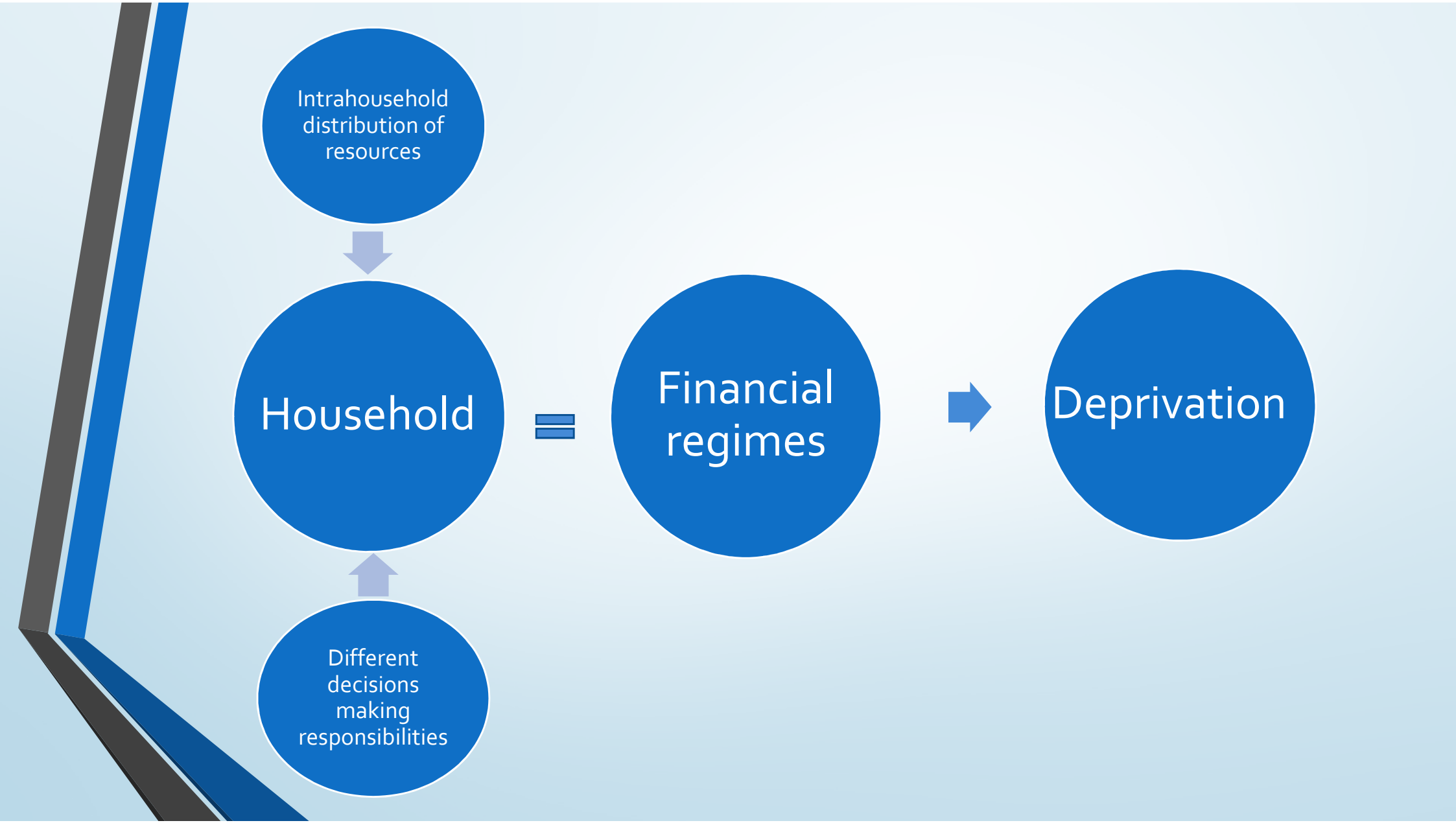
- These studies relied on the assumption that family members act as if they maximize a single utility function (Samuelson, 1956; Becker, 1981), and thus ignored the potential for unequal power and resource distribution within households.
- Recent empirical studies suggest that the unitary approach is not always supported and that significant inequalities might exist within the same family (see, for instance, Fortin and Lacroix, 1997; Clark et al., 2002 and Ward-Batts, 2008; Dietrich, 2008 for China; Bonke and Uldall-Poulsen, 2005; among others)

Literature review

- New literature based on non-unitary models (mainly collective models)
  - Each household member is characterized by his or her own utility function.
  - Decisions are seen as the outcome of some bargaining process (Bourguignon and Chiappori, 1992; Chiappori, 1992, 1997).
  - An important distinction has been made between responsibility for the management of household resources and control of (major) household decisions (Pahl, 1989; Wilson, 1987)

Literature review

- New literature based on non-unitary models (mainly collective models)
  - Evidence of gender differences concerning decision-making power and responsibility within the household (Mader and Schneebaum, 2013)
    - The smaller the differences in education, income, and employment status between the members of the couple, and the presence of children the more likely it is that decisions will be taken together


Intrahousehold distribution of resources
Household
Financial regimes
Deprivation
Different decisions making responsibilities

Data

- The 2010 module on intra-household sharing of resources of the EUSILC.
- Sample: heterosexual couples, with or without children, for 24 countries.
- We eliminate couples with inconsistent responses on the decision-making variables.
- We end up with 84,269 observations.

Deprivation

- Di : Deprivation Index (***Items***) (Guio et al., 2009)
  - Economic strain: to keep home adequately warm; to afford paying for one-week annual holiday away from home; to afford a meal with meat, chicken, fish every second day; to face unexpected financial expenses.
  - Durables: to have a telephone; a color TV; a computer; a washing machine; a personal car.
  - Housing: to have leaking roof/damp walls/floors/foundation or rot in window frames; no bath/shower; no indoor flushing toilet for sole use of the household.

Deprivation

- Di : Deprivation Index (***Aggregation***)

for each item we define a dichotomous indicator I_{ij}:

$$I_{ij} = \begin{cases} 0 & affordability \\ 1 & non\ affordability \end{cases} \quad for\ i = 1,...,N; \quad j = 1,....,J$$

and deprivation level is:

$$D_i = \sum_{j=1}^{J} w_j I_{ij}$$

that equals o if a person lacks no items and increases with the number of items the individual lacks.

Deprivation

- Mean levels of deprivation

Country	Overall Deprivation Index
CH	0,025
LU	0,036
DE	0,045
BE	0,046
FR	0,047
UK	0,048
AT	0,049
IE	0,062
MT	0,064
ES	0,066
CZ	0,067
IT	0,069
EL	0,079
SK	0,079
PT	0,084
CY	0,09
HR	0,091
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HU	0,113
LT	0,131
LV	0,154
BG	0,194
RO	0,21
TOTAL	0,072

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The Model

$$D_i = \gamma_0 + \mathbf{W_i'}\gamma_1 + \mathbf{Z_i'}\gamma_2 + \mathbf{C_i'}\gamma_3 + \varepsilon_i$$

- Zi : Socioeconomic variables
  - *Income*: household annual equivalent disposable income
  - *Child*: dummy to identify the presence of children
  - *Dual*: both members of the couple are working either full or part time
  - *H_Young:* when the mean age of the couple is less than 35
  - *H_Middle:* when the mean age of the couple is from 35 to 65
  - *H_Old* (reference category)

The Model

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- Zi : Socioeconomic variables
  - *H_Tertiary* and *H_Secondary :* 0 if None of the household members have tertiary education or secondary education; 1 if only one of them has attained a tertiary or secondary education respectively; and 2 if both members of the couple have attained a tertiary or secondary level of education.
  - *H_Chronic:* number of household members suffering from chronic diseases.
  - *H-Marital:* dummy for legal consensual unions

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- Ci : Country specific fixed effects

The Model

$$D_i = \gamma_0 + \mathbf{W_i'}\gamma_1 + \mathbf{Z_i'}\gamma_2 + \mathbf{C_i'}\gamma_3 + \varepsilon_i$$

- Wi : Financial Regimen

Income pooling: How are the incomes you receive in your household dealt with?

- ***Reg1*** if the answer is that all incomes are treated as common resources
- ***Reg2*** if the answer is that not all incomes are treated as common resources

The Model

$$D_i = \gamma_0 + \mathbf{W_i'}\gamma_1 + \mathbf{Z_i'}\gamma_2 + \mathbf{C_i'}\gamma_3 + \varepsilon_i$$

- Wi : Financial Regimen

Financial decision-making: "Who in your couple is generally more likely to take decisions on" in five areas: i) shopping; ii) children expenses; iii) furniture, etc.; iv) borrowing; v) saving

- ***Dec_f*** if females have most decision-making responsibilities
- ***Dec_m*** if males have most decision-making responsibilities
- ***Dec_s*** if decisions are shared

The Model

$$D_i = \gamma_0 + \mathbf{W_i'}\gamma_1 + \mathbf{Z_i'}\gamma_2 + \mathbf{C_i'}\gamma_3 + \varepsilon_i$$

- Wi : Financial Regimen

Financial decision-making:

Watson et al. (2013):

- The average across the items that range from 0 (responsibility for decision making in none of the areas) to 10 (responsibility for decision making in all areas).
- A score from 4 to 6 ⟹ shared responsibility
  - adults are jointly responsible for each of the areas
  - an almost even division of responsibilities between them (e.g., one is responsible for shopping and the other is responsible for decisions on savings).

The Model

$$D_i = \gamma_0 + \mathbf{W_i'}\gamma_1 + \mathbf{Z_i'}\gamma_2 + \mathbf{C_i'}\gamma_3 + \varepsilon_i$$

Wi : Financial Regimen

Variable	Description	Mean values
Reg1_DecS	All income pooling and decisions shared (*Reference*)	41,66%
Reg1_DecF	All income pooling and decisions mainly female	31,58%
Reg1_DecM	All income pooling and decisions mainly male	5,42%
Reg2_DecS	Not All income pooling and decisions shared	9,46%
Reg2_DecF	Not All income pooling and decisions mainly female	9,74%
Reg2_DecM	Not All income pooling and decisions mainly male	2,15%

The Model

$$D_i = \gamma_0 + \mathbf{W_i'}\gamma_1 + \mathbf{Z_i'}\gamma_2 + \mathbf{C_i'}\gamma_3 + \varepsilon_i$$

- Linear model. Cluster robust standard errors

Wi : Financial Regimen ➡ Endogeneity problem

- **Deb and Trivedi** (2006) : Two set of equations:
  - Choice of financial regime (selection)
  - Intensity of deprivation (outcome).

  (The selection and the outcome equations are linked via observed and unobserved characteristics).

The Model

Deb and Trivedi (2006) :

Selection equation

- multinomial choice model for the household financial regimen (selection)
- Let U_{ij}^{*} denote the indirect utility associated with the *j*th choice (*j=1,…J*)

$$U_{ij}^{*} = \mathbf{X}_{\mathbf{i}}^{'}\beta_j + \sum_{k=1}^{J}\varphi_{jk}m_{ik} + \eta_{ij}$$

  - Xi includes the exogenous variables plus the instruments
  - η_{ij} are i.i.d. error terms
  - m_{ik}, incorporate unobserved characteristics common to deprivation and household decisions regarding the financial regimen (independent of η_{ij})

The Model

Deb and Trivedi (2006) :

Selection equation

- Let b_j be the binary variables representing the observed choices and $\mathbf{b}_i = [b_{i1}, b_{i2}, ..., b_{iJ}]$
- The probability of any type of financial regime can be represented as:

$$\Pr(\mathbf{b}_i \mid \mathbf{X}_i, \mathbf{M}_i) = g\left(\mathbf{X}_i'\beta_1 + \sum_{k=1}^{J} \varphi_{1k} m_{ik}, \mathbf{X}_i'\beta_2 + \sum_{k=1}^{J} \varphi_{2k} m_{ik}, \quad \ldots \quad , \mathbf{X}_i'\beta_J + \sum_{k=1}^{J} \varphi_{Jk} m_{ik} \right)$$

where g is a multinomial probability distribution

Some restrictions are imposed: each choice is affected by a unique latent factor

The Model

Deb and Trivedi (2006) :

Outcome equation

$$D_i = \gamma_0 + \sum_{j=1}^{J} \delta_j b_{ij} + \sum_{j=1}^{J} \lambda_j m_{ij} + \mathbf{Z_i}'\gamma_2 + \mathbf{C}_i'\gamma_3 + \varepsilon_i$$

Where:

- $\mathbf{Z}_i$ is the set of exogenous covariates
- δ_j denotes the selection effects relative to the control

Results

Validity of instruments

- Instruments: variables that measure within-household inequalities concerning education and income (following Vogler (1994), Lyngstad et al. (2011), and Mader and Schneebaum (2013)).
  - ***Income_F*** and ***Income_M****:* Dummies to capture female or male earning more income than her/his partner
  - ***Education_F*** and ***Education_M****:* Dummies to capture female or male with higher level of education than her/his partner

- They have useful predictive power and hence are *relevant*.
- We test for the exogeneity of the financial regimes, and they are not exogenous.

	Reg1_DecF	Reg1_DecM	Reg2_DecS	Reg2_DecF	Reg2_DecM	Deprivation
Reg1_DecF						0.009*** (0.002)
Reg1_DecM						0.017*** (0.005)
Reg2_DecS						0.049*** (0.010)
Reg2_DecF						0.003 (0.002)
Reg2_DecM						0.009** (0.004)
Child	0.214* (0.117)	-0.267*** (0.075)	-0.429*** (0.073)	-0.196 (0.168)	-0.573*** (0.103)	0.009*** (0.002)
Income	-0.168*** (0.033)	-0.109 (0.067)	0.551*** (0.083)	0.416*** (0.105)	0.377*** (0.089)	-0.059*** (0.010)
Dual	-0.308*** (0.063)	-0.364*** (0.042)	0.188*** (0.046)	0.011 (0.182)	-0.315** (0.151)	-0.015*** (0.003)
H_Young	-0.147 (0.097)	0.178 (0.168)	0.773*** (0.157)	0.308 (0.198)	0.816*** (0.240)	0.036*** (0.005)
H_Middle	-0.166** (0.084)	-0.240** (0.116)	0.807*** (0.102)	0.482*** (0.173)	0.842*** (0.127)	0.020*** (0.003)
H_Chronic	0.073 (0.051)	0.097** (0.046)	-0.043 (0.056)	0.176*** (0.054)	0.060 (0.073)	0.012*** (0.001)
H_Marital	-0.192 (0.161)	-0.360*** (0.099)	-1.213*** (0.205)	-1.509*** (0.280)	-1.502*** (0.271)	-0.018*** (0.004)
H_Secondary	-0.157** (0.061)	-0.280*** (0.069)	-0.230** (0.101)	-0.384*** (0.120)	-0.334*** (0.074)	-0.020*** (0.005)
H_Tertiary	-0.346*** (0.045)	-0.329*** (0.118)	-0.145 (0.144)	-0.462*** (0.159)	-0.273** (0.128)	-0.031*** (0.005)
Income_F	0.097*** (0.034)	0.003 (0.099)	0.312*** (0.073)	0.381*** (0.122)	-0.195* (0.101)	
Education_F	0.149** (0.076)	-0.276*** (0.075)	0.004 (0.043)	0.215*** (0.064)	-0.461 (0.290)	
Income_M	-0.007 (0.050)	0.215** (0.089)	0.184* (0.101)	0.000 (0.119)	0.061 (0.127)	
Education_M	-0.102* (0.061)	0.212*** (0.063)	-0.067** (0.028)	-0.187** (0.086)	0.190** (0.087)	
Country Fixed Effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Const.	-0.126 (0.330)	-1.588*** (0.571)	-5.151*** (0.772)	-5.124*** (0.967)	-5.537*** (0.788)	0.648*** (0.101)

	Reg1_DecF	Reg1_DecM	Reg2_DecS	Reg2_DecF	Reg2_DecM	Deprivation
Reg1_DecF						0.009***
						(0.002)
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Reg2_DecM						0.009**
						(0.004)
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	(0.117)	(0.075)	(0.073)	(0.168)	(0.103)	(0.002)
Income	-0.168***	-0.109	0.551***	0.416***	0.377***	-0.059***
	(0.033)	(0.067)	(0.083)	(0.105)	(0.089)	(0.010)
Dual	-0.308***	-0.364***	0.188***	0.011	-0.315**	-0.015***
	(0.063)	(0.042)	(0.046)	(0.182)	(0.151)	(0.003)
H_Young	-0.147	0.178	0.773***	0.308	0.816***	0.036***
	(0.097)	(0.168)	(0.157)	(0.198)	(0.240)	(0.005)
H_Middle	-0.166**	-0.240**	0.807***	0.482***	0.842***	0.020***
	(0.084)	(0.116)	(0.102)	(0.173)	(0.127)	(0.003)
H_Chronic	0.073	0.097**	-0.043	0.176***	0.060	0.012***
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	Reg1_DecF	Reg1_DecM	Reg2_DecS	Reg2_DecF	Reg2_DecM	Deprivation
Reg1_DecF						0.009*** (0.002)
Reg1_DecM						0.017*** (0.005)
Reg2_DecS						0.049*** (0.010)
Reg2_DecF						0.003 (0.002)
Reg2_DecM						0.009** (0.004)
Child	0.214* (0.117)	-0.267*** (0.075)	-0.429*** (0.073)	-0.196 (0.168)	-0.573*** (0.103)	0.009*** (0.002)
Income	-0.168*** (0.033)	-0.109 (0.067)	0.551*** (0.083)	0.416*** (0.105)	0.377*** (0.089)	-0.059*** (0.010)
Dual	-0.308*** (0.063)	-0.364*** (0.042)	0.188*** (0.046)	0.011 (0.182)	-0.315** (0.151)	-0.015*** (0.003)
H_Young	-0.147 (0.097)	0.178 (0.168)	0.773*** (0.157)	0.308 (0.198)	0.816*** (0.240)	0.036*** (0.005)
H_Middle	-0.166** (0.084)	-0.240** (0.116)	0.807*** (0.102)	0.482*** (0.173)	0.842*** (0.127)	0.020*** (0.003)
H_Chronic	0.073 (0.051)	0.097** (0.046)	-0.043 (0.056)	0.176*** (0.054)	0.060 (0.073)	0.012*** (0.001)
H_Marital	-0.192 (0.161)	-0.360*** (0.099)	-1.213*** (0.205)	-1.509*** (0.280)	-1.502*** (0.271)	-0.018*** (0.004)
H_Secondary	-0.157** (0.061)	-0.280*** (0.069)	-0.230** (0.101)	-0.384*** (0.120)	-0.334*** (0.074)	-0.020*** (0.005)
H_Tertiary	-0.346*** (0.045)	-0.329*** (0.118)	-0.145 (0.144)	-0.462*** (0.159)	-0.273** (0.128)	-0.031*** (0.005)
Income_F	0.097*** (0.034)	0.003 (0.099)	0.312*** (0.073)	0.381*** (0.122)	-0.195* (0.101)	
Education_F	0.149** (0.076)	-0.276*** (0.075)	0.004 (0.043)	0.215*** (0.064)	-0.461 (0.290)	
Income_M	-0.007 (0.050)	0.215** (0.089)	0.184* (0.101)	0.000 (0.119)	0.061 (0.127)	
Education_M	-0.102* (0.061)	0.212*** (0.063)	-0.067** (0.028)	-0.187** (0.086)	0.190** (0.087)	
Country Fixed Effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Const.	-0.126 (0.330)	-1.588*** (0.571)	-5.151*** (0.772)	-5.124*** (0.967)	-5.537*** (0.788)	0.648*** (0.101)

	Reg1_DecF	Reg1_DecM	Reg2_DecS	Reg2_DecF	Reg2_DecM	Deprivation
Reg1_DecF						0.009***
						(0.002)
Reg1_DecM						0.017***
						(0.005)
Reg2_DecS						0.049***
						(0.010)
Reg2_DecF						0.003
						(0.002)
Reg2_DecM						0.009**
						(0.004)
Child	0.214*	-0.267***	-0.429***	-0.196	-0.573***	0.009***
	(0.117)	(0.075)	(0.073)	(0.168)	(0.103)	(0.002)
Income	-0.168***	-0.109	0.551***	0.416***	0.377***	-0.059***
	(0.033)	(0.067)	(0.083)	(0.105)	(0.089)	(0.010)
Dual	-0.308***	-0.364***	0.188***	0.011	-0.315**	-0.015***
	(0.063)	(0.042)	(0.046)	(0.182)	(0.151)	(0.003)
H_Young	-0.147	0.178	0.773***	0.308	0.816***	0.036***
	(0.097)	(0.168)	(0.157)	(0.198)	(0.240)	(0.005)
H_Middle	-0.166**	-0.240**	0.807***	0.482***	0.842***	0.020***
	(0.084)	(0.116)	(0.102)	(0.173)	(0.127)	(0.003)
H_Chronic	0.073	0.097**	-0.043	0.176***	0.060	0.012***
	(0.051)	(0.046)	(0.056)	(0.054)	(0.073)	(0.001)
H_Marital	-0.192	-0.360***	-1.213***	-1.509***	-1.502***	-0.018***
	(0.161)	(0.099)	(0.205)	(0.280)	(0.271)	(0.004)
H_Secondary	-0.157**	-0.280***	-0.230**	-0.384***	-0.334***	-0.020***
	(0.061)	(0.069)	(0.101)	(0.120)	(0.074)	(0.005)
H_Tertiary	-0.346***	-0.329***	-0.145	-0.462***	-0.273**	-0.031***
	(0.045)	(0.118)	(0.144)	(0.159)	(0.128)	(0.005)
Income_F	0.097***	0.003	0.312***	0.381***	-0.195*	
	(0.034)	(0.099)	(0.073)	(0.122)	(0.101)	
Education_F	0.149**	-0.276***	0.004	0.215***	-0.461	
	(0.076)	(0.075)	(0.043)	(0.064)	(0.290)	
Income_M	-0.007	0.215**	0.184*	0.000	0.061	
	(0.050)	(0.089)	(0.101)	(0.119)	(0.127)	
Education_M	-0.102*	0.212***	-0.067**	-0.187**	0.190**	
	(0.061)	(0.063)	(0.028)	(0.086)	(0.087)	
Country Fixed Effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Const.	-0.126	-1.588***	-5.151***	-5.124***	-5.537***	0.648***
	(0.330)	(0.571)	(0.772)	(0.967)	(0.788)	(0.101)

	Reg1_DecF	Reg1_DecM	Reg2_DecS	Reg2_DecF	Reg2_DecM	Deprivation
Reg1_DecF						0.009*** (0.002)
Reg1_DecM						0.017*** (0.005)
Reg2_DecS						0.049*** (0.010)
Reg2_DecF						0.003 (0.002)
Reg2_DecM						0.009** (0.004)
Child	0.214* (0.117)	-0.267*** (0.075)	-0.429*** (0.073)	-0.196 (0.168)	-0.573*** (0.103)	0.009*** (0.002)
Income	-0.168*** (0.033)	-0.109 (0.067)	0.551*** (0.083)	0.416*** (0.105)	0.377*** (0.089)	-0.059*** (0.010)
Dual	-0.308*** (0.063)	-0.364*** (0.042)	0.188*** (0.046)	0.011 (0.182)	-0.315** (0.151)	-0.015*** (0.003)
H_Young	-0.147 (0.097)	0.178 (0.168)	0.773*** (0.157)	0.308 (0.198)	0.816*** (0.240)	0.036*** (0.005)
H_Middle	-0.166** (0.084)	-0.240** (0.116)	0.807*** (0.102)	0.482*** (0.173)	0.842*** (0.127)	0.020*** (0.003)
H_Chronic	0.073 (0.051)	0.097** (0.046)	-0.043 (0.056)	0.176*** (0.054)	0.060 (0.073)	0.012*** (0.001)
H_Marital	-0.192 (0.161)	-0.360*** (0.099)	-1.213*** (0.205)	-1.509*** (0.280)	-1.502*** (0.271)	-0.018*** (0.004)
H_Secondary	-0.157** (0.061)	-0.280*** (0.069)	-0.230** (0.101)	-0.384*** (0.120)	-0.334*** (0.074)	-0.020*** (0.005)
H_Tertiary	-0.346*** (0.045)	-0.329*** (0.118)	-0.145 (0.144)	-0.462*** (0.159)	-0.273** (0.128)	-0.031*** (0.005)
Income_F	0.097*** (0.034)	0.003 (0.099)	0.312*** (0.073)	0.381*** (0.122)	-0.195* (0.101)	
Education_F	0.149** (0.076)	-0.276*** (0.075)	0.004 (0.043)	0.215*** (0.064)	-0.461 (0.290)	
Income_M	-0.007 (0.050)	0.215** (0.089)	0.184* (0.101)	0.000 (0.119)	0.061 (0.127)	
Education_M	-0.102* (0.061)	0.212*** (0.063)	-0.067** (0.028)	-0.187** (0.086)	0.190** (0.087)	
Country Fixed Effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Const.	-0.126 (0.330)	-1.588*** (0.571)	-5.151*** (0.772)	-5.124*** (0.967)	-5.537*** (0.788)	0.648*** (0.101)

	Reg1_DecF	Reg1_DecM	Reg2_DecS	Reg2_DecF	Reg2_DecM	Deprivation
Reg1_DecF						0.009*** (0.002)
Reg1_DecM						0.017*** (0.005)
Reg2_DecS						0.049*** (0.010)
Reg2_DecF						0.003 (0.002)
Reg2_DecM						0.009** (0.004)
Child	0.214* (0.117)	-0.267*** (0.075)	-0.429*** (0.073)	-0.196 (0.168)	-0.573*** (0.103)	0.009*** (0.002)
Income	-0.168*** (0.033)	-0.109 (0.067)	0.551*** (0.083)	0.416*** (0.105)	0.377*** (0.089)	-0.059*** (0.010)
Dual	-0.308*** (0.063)	-0.364*** (0.042)	0.188*** (0.046)	0.011 (0.182)	-0.315** (0.151)	-0.015*** (0.003)
H_Young	-0.147 (0.097)	0.178 (0.168)	0.773*** (0.157)	0.308 (0.198)	0.816*** (0.240)	0.036*** (0.005)
H_Middle	-0.166** (0.084)	-0.240** (0.116)	0.807*** (0.102)	0.482*** (0.173)	0.842*** (0.127)	0.020*** (0.003)
H_Chronic	0.073 (0.051)	0.097** (0.046)	-0.043 (0.056)	0.176*** (0.054)	0.060 (0.073)	0.012*** (0.001)
H_Marital	-0.192 (0.161)	-0.360*** (0.099)	-1.213*** (0.205)	-1.509*** (0.280)	-1.502*** (0.271)	-0.018*** (0.004)
H_Secondary	-0.157** (0.061)	-0.280*** (0.069)	-0.230** (0.101)	-0.384*** (0.120)	-0.334*** (0.074)	-0.020*** (0.005)
H_Tertiary	-0.346*** (0.045)	-0.329*** (0.118)	-0.145 (0.144)	-0.462*** (0.159)	-0.273** (0.128)	-0.031*** (0.005)
Income_F	0.097*** (0.034)	0.003 (0.099)	0.312*** (0.073)	0.381*** (0.122)	-0.195* (0.101)	
Education_F	0.149** (0.076)	-0.276*** (0.075)	0.004 (0.043)	0.215*** (0.064)	-0.461 (0.290)	
Income_M	-0.007 (0.050)	0.215** (0.089)	0.184* (0.101)	0.000 (0.119)	0.061 (0.127)	
Education_M	-0.102* (0.061)	0.212*** (0.063)	-0.067** (0.028)	-0.187** (0.086)	0.190** (0.087)	
Country Fixed Effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Const.	-0.126 (0.330)	-1.588*** (0.571)	-5.151*** (0.772)	-5.124*** (0.967)	-5.537*** (0.788)	0.648*** (0.101)

When couple members keep part of their incomes separately, the worse situation is that in which decision making is shared

	Reg1_DecF	Reg1_DecM	Reg2_DecS	Reg2_DecF	Reg2_DecM	Deprivation
Reg1_DecF						0.009*** (0.002)
Reg1_DecM						0.017*** (0.005)
Reg2_DecS						0.049*** (0.010)
Reg2_DecF						0.003 (0.002)
Reg2_DecM						0.009** (0.004)
Child	0.214* (0.117)	-0.267*** (0.075)	-0.429*** (0.073)	-0.196 (0.168)	-0.573*** (0.103)	0.009*** (0.002)
Income	-0.168*** (0.033)	-0.109 (0.067)	0.551*** (0.083)	0.416*** (0.105)	0.377*** (0.089)	-0.059*** (0.010)
Dual	-0.308*** (0.063)	-0.364*** (0.042)	0.188*** (0.046)	0.011 (0.182)	-0.315** (0.151)	-0.015*** (0.003)
H_Young	-0.147 (0.097)	0.178 (0.168)	0.773*** (0.157)	0.308 (0.198)	0.816*** (0.240)	0.036*** (0.005)
H_Middle	-0.166** (0.084)	-0.240** (0.116)	0.807*** (0.102)	0.482*** (0.173)	0.842*** (0.127)	0.020*** (0.003)
H_Chronic	0.073 (0.051)	0.097** (0.046)	-0.043 (0.056)	0.176*** (0.054)	0.060 (0.073)	0.012*** (0.001)
H_Marital	-0.192 (0.161)	-0.360*** (0.099)	-1.213*** (0.205)	-1.509*** (0.280)	-1.502*** (0.271)	-0.018*** (0.004)
H_Secondary	-0.157** (0.061)	-0.280*** (0.069)	-0.230** (0.101)	-0.384*** (0.120)	-0.334*** (0.074)	-0.020*** (0.005)
H_Tertiary	-0.346*** (0.045)	-0.329*** (0.118)	-0.145 (0.144)	-0.462*** (0.159)	-0.273** (0.128)	-0.031*** (0.005)
Income_F	0.097*** (0.034)	0.003 (0.099)	0.312*** (0.073)	0.381*** (0.122)	-0.195* (0.101)	
Education_F	0.149** (0.076)	-0.276*** (0.075)	0.004 (0.043)	0.215*** (0.064)	-0.461 (0.290)	
Income_M	-0.007 (0.050)	0.215** (0.089)	0.184* (0.101)	0.000 (0.119)	0.061 (0.127)	
Education_M	-0.102* (0.061)	0.212*** (0.063)	-0.067** (0.028)	-0.187** (0.086)	0.190** (0.087)	
Country Fixed Effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Const.	-0.126 (0.330)	-1.588*** (0.571)	-5.151*** (0.772)	-5.124*** (0.967)	-5.537*** (0.788)	0.648*** (0.101)

when looking at households that pool all incomes, deprivation is especially higher when males take most decisions

Results

- *How much extra income would have to be given to the household to exactly compensate for a specific financial regime other than the reference category in terms of deprivation?*
  - ***Reg1_DecS*** ➡ ***Reg2_DecS***: the negative effect in terms of deprivation could be offset by a **129 percent increase in own household income** (for the sample average income, this variation amounts to **€23,504**)

Results

- *How much extra income would have to be given to the household to exactly compensate for a specific financial regime other than the reference category in terms of deprivation?*
  - ***Reg1_DecS*** ➡ ***Reg1_DecF***: the negative effect in terms of deprivation could be offset by a **16.47 percent increase in own household income** (for the sample average income, this variation amounts to **€2,992**)
  - ***Reg1_DecS*** ➡ ***Reg1_DecM***: the negative effect in terms of deprivation could be offset by a **33.39 percent increase in own household income** (for the sample average income, this variation amounts to **€6,063**)

Conclusions

- Interesting insight on the role that income pooling and decision making within the household play in determining material deprivation
- Pooling all incomes and sharing decisions, once controlling for the effects of other socio-economic determinants, is associated with lower levels of deprivation.
- When not all income are pooled, the financial regimen where females have most decision responsibilities is associated with similar low levels of deprivation.

Conclusions

- The worst situation in terms of household deprivation is that in which couple members keep part of their incomes separately and decisions are shared.

- ***As far as possible, it is crucial to take into account the pooling decisions as well as the decision-making processes and power relations within the family in designing policies to reduce deprivation.***

Intrahousehold allocation of resources and household deprivation

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