

# Intra-household inequality and material deprivation and poverty in Europe

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# Background

Living standards (e.g. income poverty and material deprivation) are usually assessed using household-level indicators

underlying assumption: sharing of household resources is made to the equal benefit of  
→ all household members. **But** we know that resources are not always shared equally within households though most research to date on couples

This project is funded by the Economic and Social Research Council

Research objective: To examine the implications of intra-household inequality on poverty, inequality and material deprivation in Europe.

Focus on multi-family households

Today's talk on the implications of intra-household inequality on material deprivation

# Research objectives

To use data personal deprivation data included the 2014 round of EU-SILC to examine what we can infer about the intra-household allocation of resources.

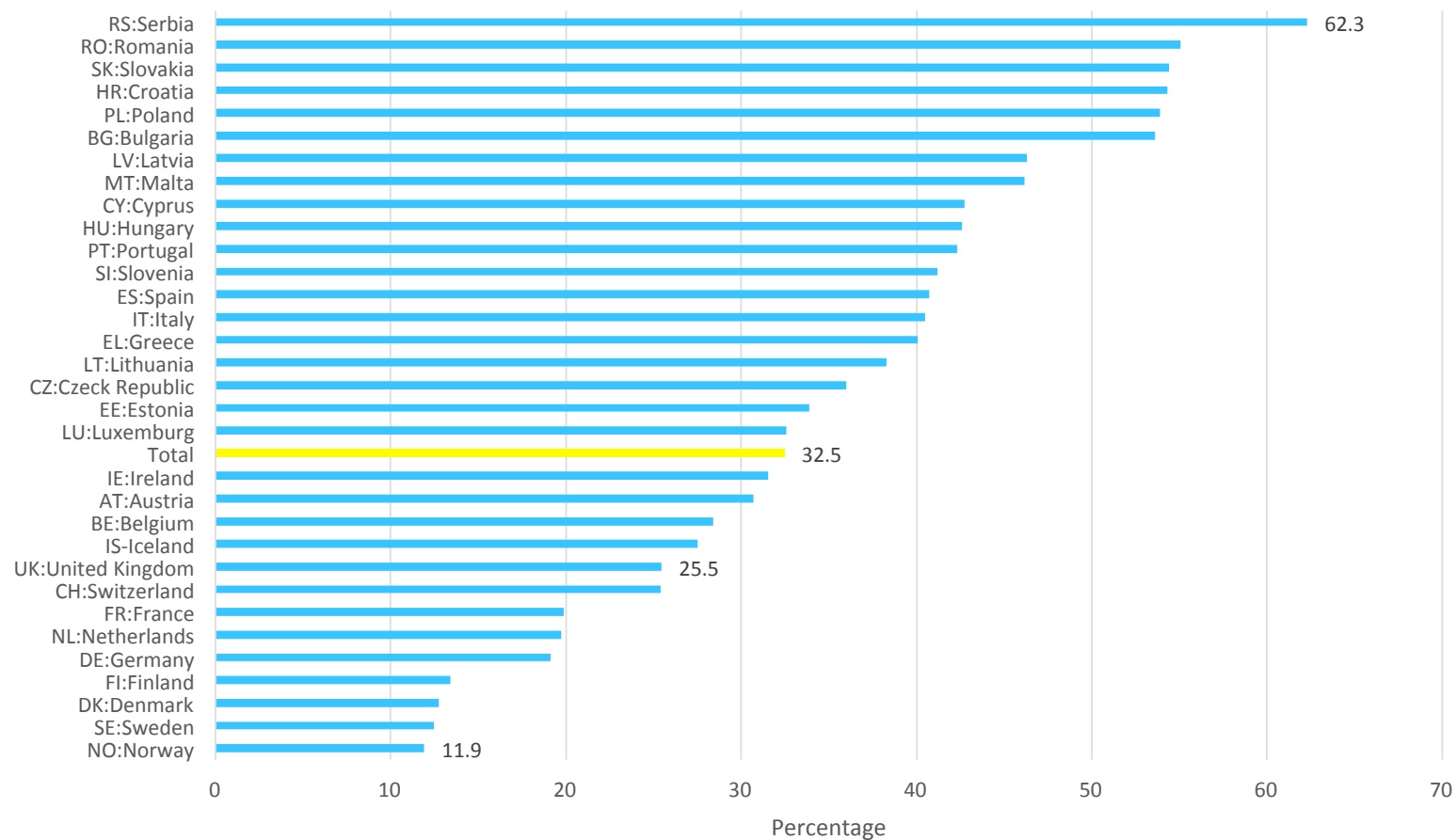
And conversely to examine to what extent intra-household inequality contributes to adult deprivation outcomes

Focus on multi-family households:

- research on these types of household scarce;
- income pooling/sharing of resources more likely to be incomplete;
- prevalence of multi-family hhs is non-negligible and varies across Europe

# Large cross-country variation in rates of co-residence across Europe

Population living in households containing two+ family units, by country, 2014



Data source: EU-SILC

# EU Statistics on Income and Living Conditions (EU-SILC) 2014

EU-SILC is the annual micro-data source for EU social indicators, collecting information on income, material deprivation and many household characteristics

Countries given common framework of required outputs but flexibility on methods and data collection design (survey, or register plus survey)

The 2014 survey was conducted in 28 EU countries plus Iceland, Norway, Switzerland and Serbia

N ≈ 500,000 adults and ≈ 120,000 children

Detailed income information (some recorded at personal and some household level)

- Equivalised [modified OECD scales] net household income= Gross household and individual incomes, minus regular taxes, social security contributions and inter-hh transfers

No household grid – but enough info to determine most (but not all) household relationships and identify different family units in households – family unit defined as single individual or couple with any dependent children.

# Material deprivation indicators

**PD2: Personal deprivation indicator indicates whether the individual cannot afford two or more of the following 7 items**

1. replacing worn out clothes by some new (not second hand);
2. two pairs of properly fitting shoes (including a pair of all-weather shoes);
3. get together with friends/family (relatives) for drink/meal at least once per month;
4. regularly participate in leisure activities;
5. spend a small amount of money each week on yourself;
6. internet connection for personal use at home;
7. regular use of public transport

**Source: 2014 Material deprivation module**

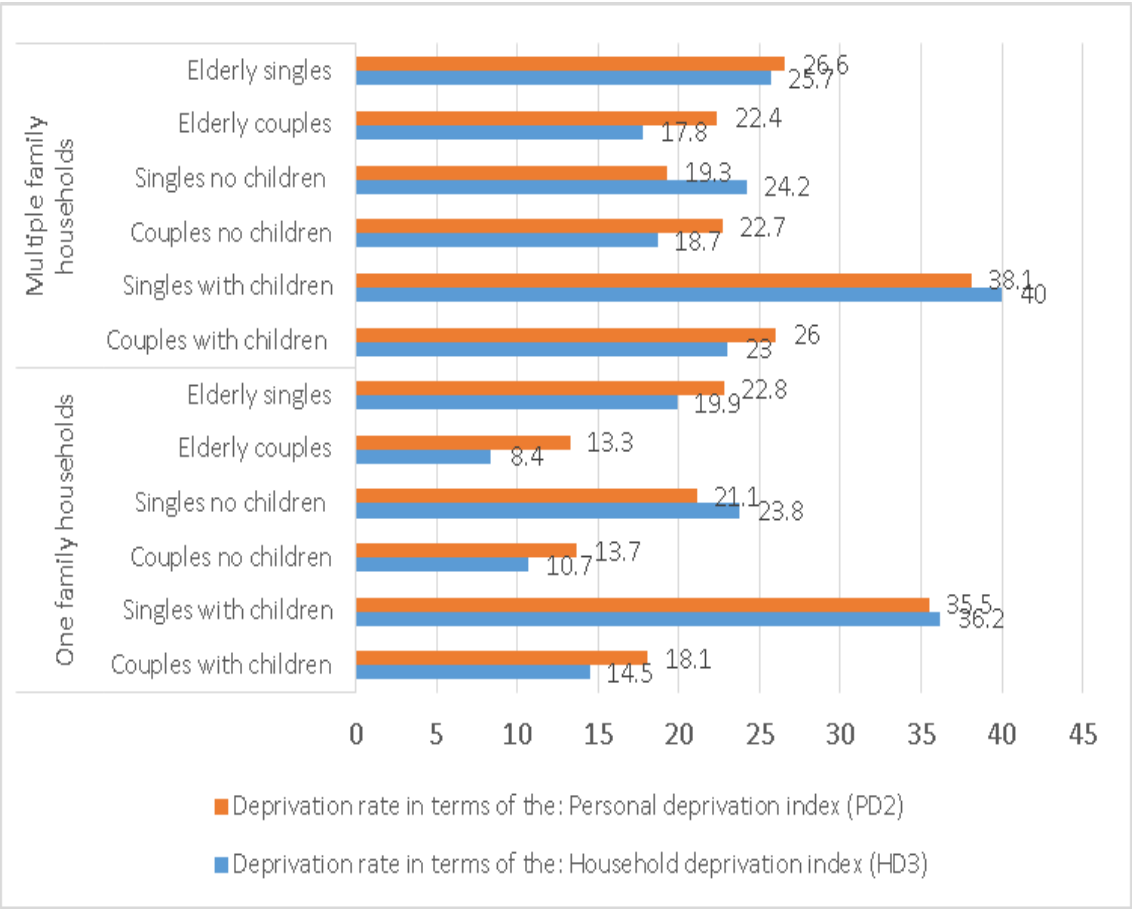
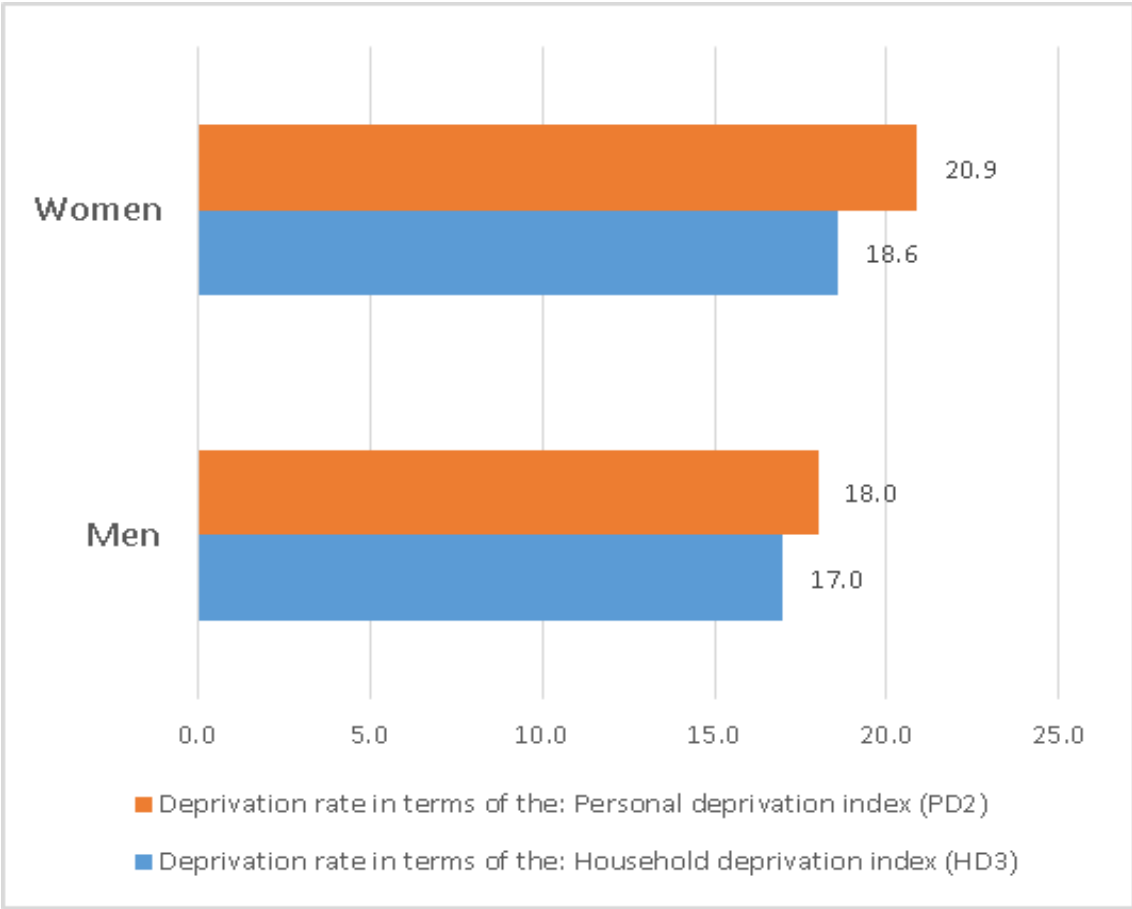
**HD3: Household deprivation indicator indicates whether the individual cannot afford three or more of the following 9 items**

1. to pay their rent, mortgage or utility bills;
2. to keep their home adequately warm;
3. to face unexpected expenses;
4. to eat meat or proteins regularly;
5. to go on holiday;
6. to have a television set;
7. to have a washing machine;
8. to have a car;
9. to have a telephone

**Source: 2014 core EU-SILC dataset**

# **Provisional results**

# Deprivation rates in terms of HD3 and PD2 indicators by gender, family type and co-residence status





# Multivariate analysis

Probit model predicting the probability of being deprived in terms of PD2 indicator

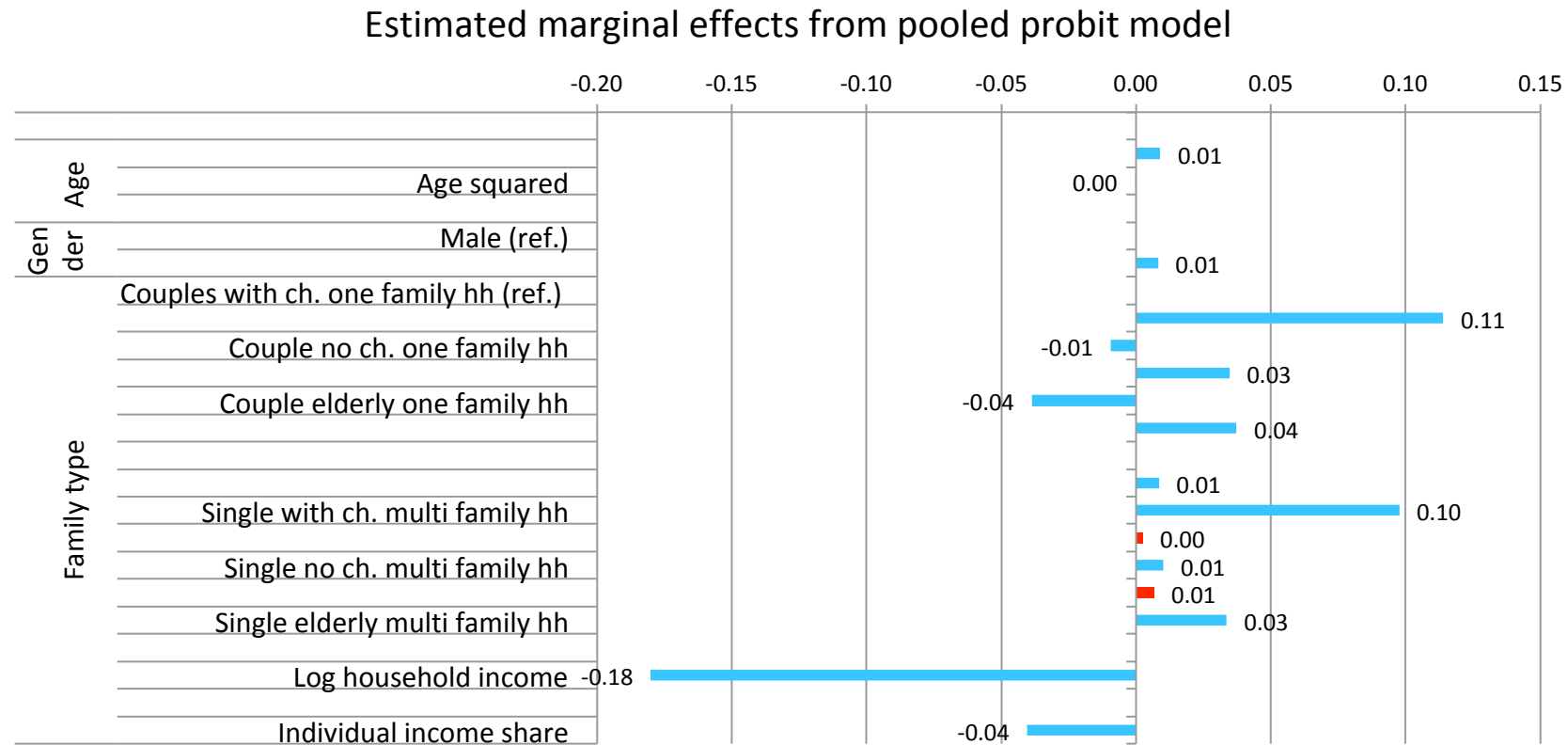
## Regressors

- gender,
- age and age squared
- family type by co-residence status
- equivalised net household income
- individual income share i.e. income of each individual as share total household income  
*(used as a proxy of individual's control over household resources)*

Models first on the pooled sample of all countries and family types with country and family type dummies,

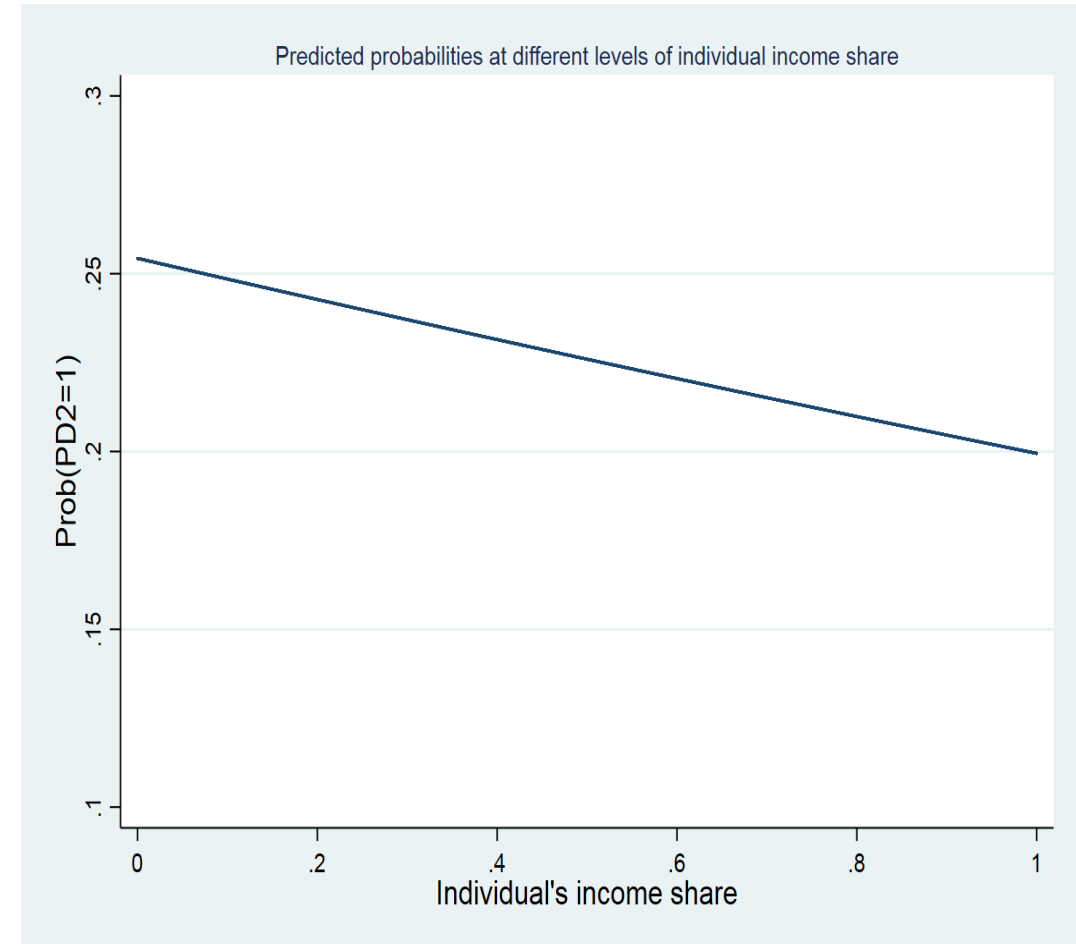
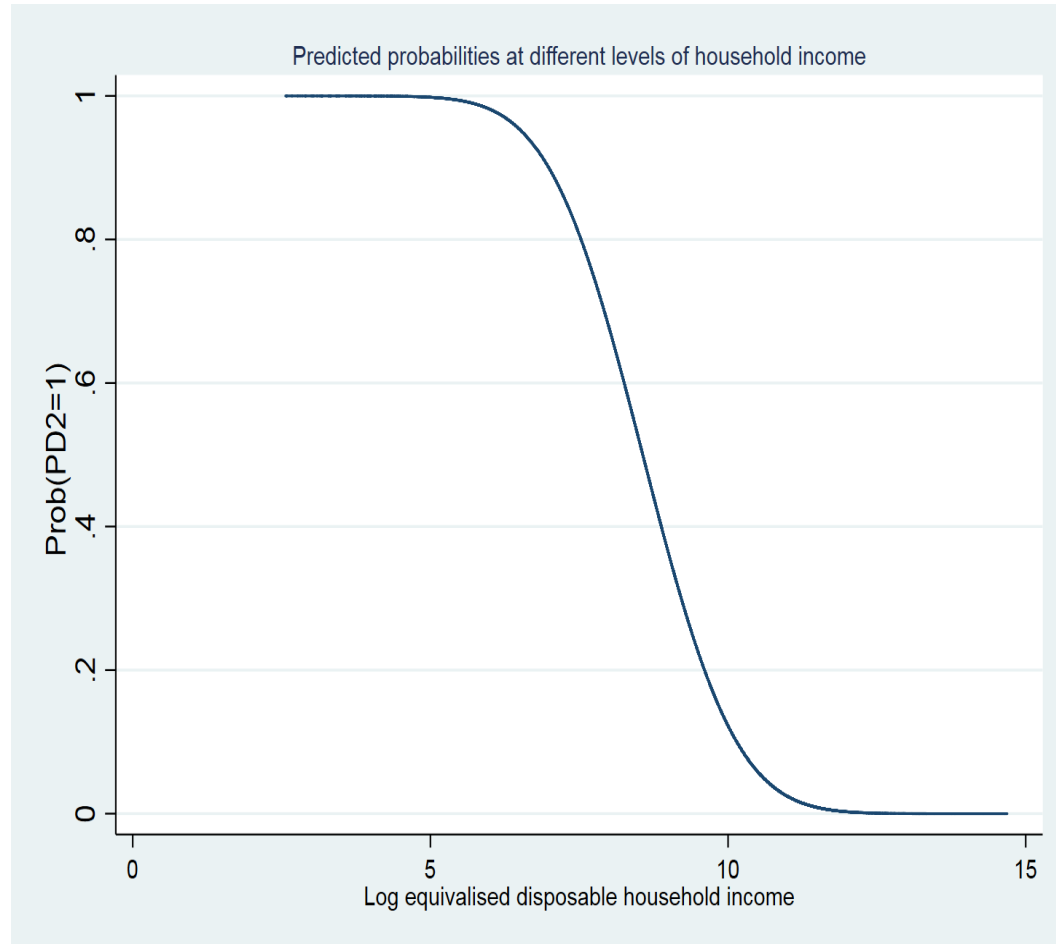
Then separate models by country and family type

# Effects of personal and household characteristics on the probability of being PD deprived (pooled probit model)



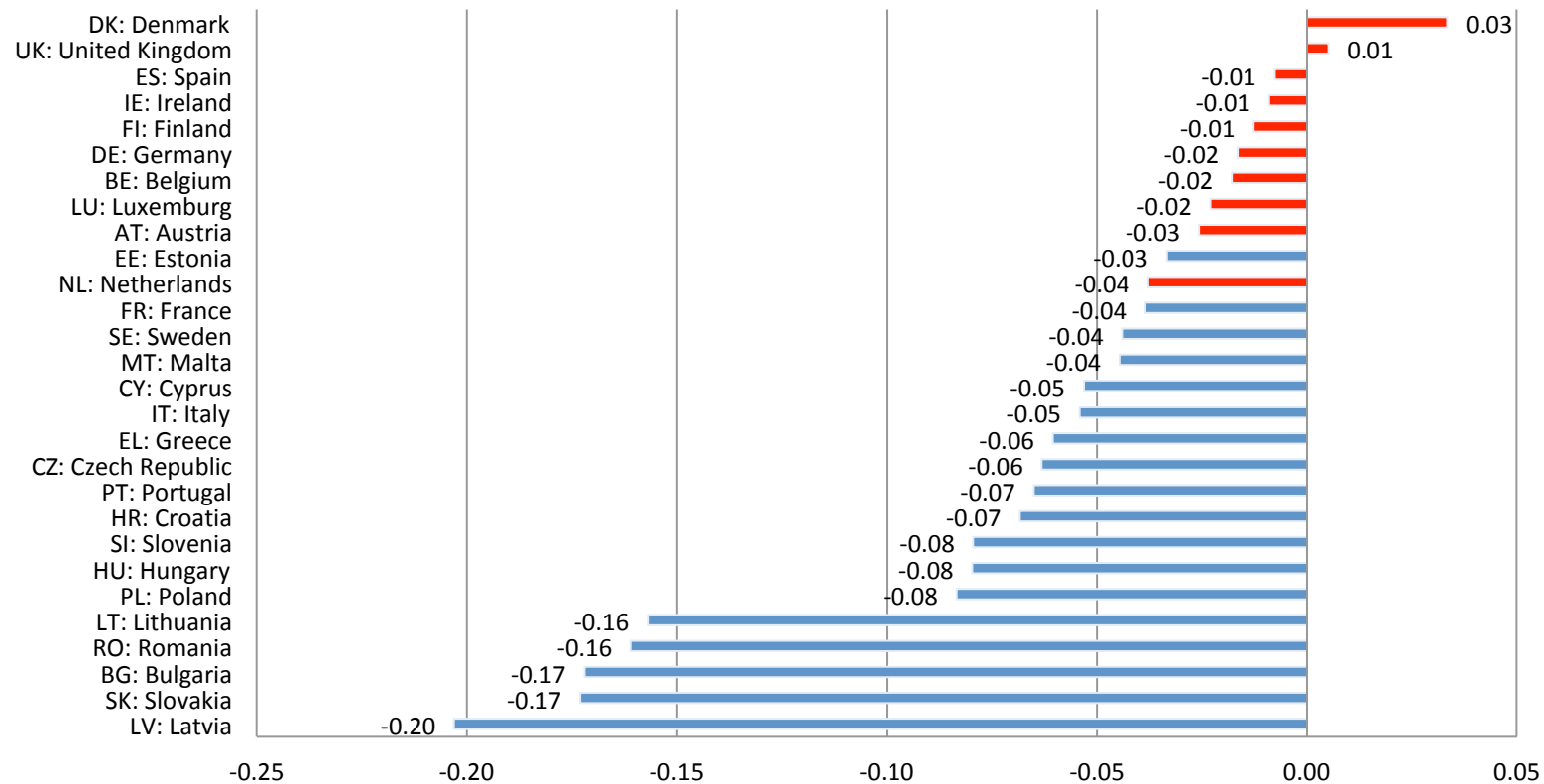
**Note:** All blue shaded bars indicate statistical significance at least 10 per cent significance level.

# Predicted probabilities for household income and individual income share



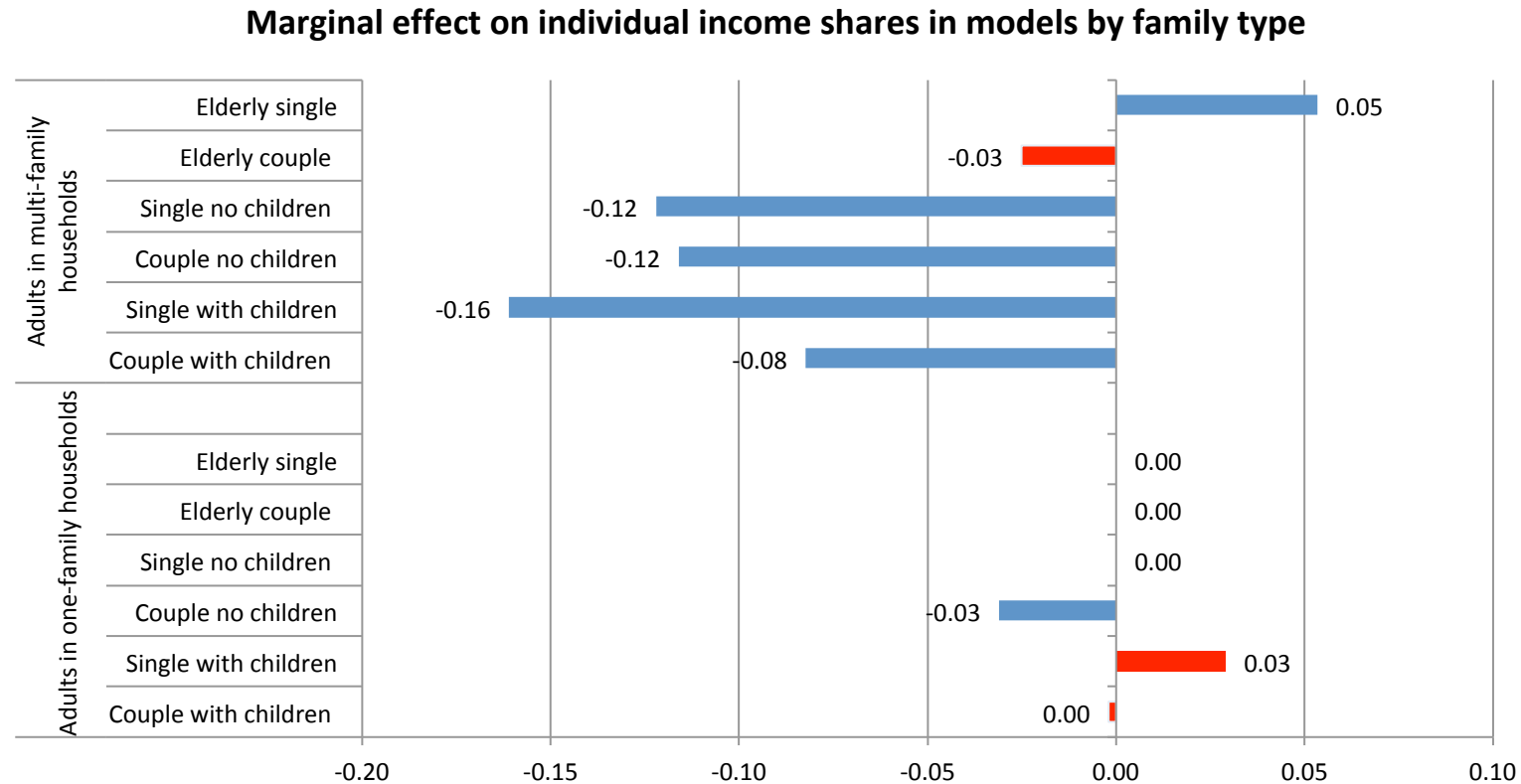
# The effect of individual income shares as predictor of PD2 risk varies substantially across different countries (country level models)

Marginal effects on the individual's income share estimated by country level models



**Note:** All blue shaded bars indicate statistical significance at least 10 per cent significance level.

# ...and across family types (family type level models)



**Note:** All blue shaded bars indicate statistical significance at least 10 per cent significance level.

# The combined HD-PD index

Treat HD and PD as two dimensions of an overall deprivation index following the Alkire & Foster (2007, 2011) adjusted headcount index methodology for the MPI

- Define an individual as 'poor' if they are deprived in *either* dimension (HD  $\geq 3$  or PD  $\geq 2$ )
- Headcount ratio (H) = individuals deprived in either dimension as a proportion of all individuals
- Intensity (A) = average number of deprivation items of the poor

$$\text{MPI} = H \times A$$

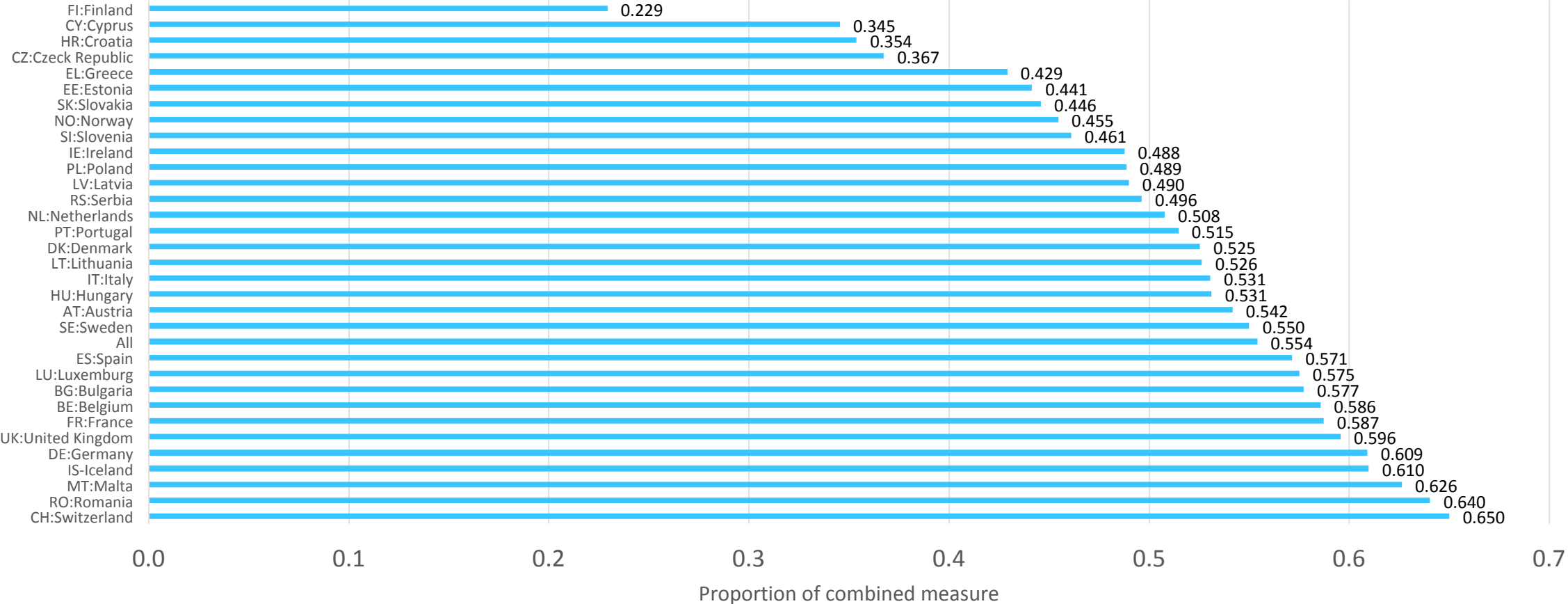
# PD accounts for just over half of combined deprivation measure across all countries

Combined HD PD MPI type measure	
Headcount	0.26
Intensity	0.32
Adjusted Headcount Ratio	0.08
% contribution of HD3	44.6%
% contribution of PD2	55.4%

EU-28 countries + 4 (Iceland, Norway, Switzerland, Serbia)

# ...but the relative importance of HD and PD varies across countries

Contribution of PD to combined MPI HD-PD measure, by country





# Conclusions and implications for policy and research

PD indicator captures some variation in the benefit obtained from household resources by different members

Control over resources (as proxied by individual's contribution to total household income) matters and **matters more** in multi-family households (i.e. between families sharing/pooling less complete)

Economic, social and cultural context matter - cross-national variations not wholly explained by compositional effects

Both HD and PD matter for individual living standard

Adopting a combined measure would provide extra information deprivation risk assessment

# **Thank you!**

For more information about the project visit the project website  
[http://sticerd.lse.ac.uk/case/\\_new/research/Intra-household/](http://sticerd.lse.ac.uk/case/_new/research/Intra-household/)