Material Deprivation and Intra-household Inequality in Europe

Eleni Karagiannaki and Tania Burchardt

UNECE Expert meeting on measuring poverty and inequality, Vienna

29-30 November 2018
Background

• Poverty and deprivation are usually assessed using household level indicators
  ➢ children and adults as properties of their households - if household is 'poor/deprived' then all its members are also 'poor/deprived' (Gordon, 2017)
  ➢ underlying assumption: equal sharing within households

• Previous research on couples shows unequal incomes can predict unequal sharing of resources among partners (and hence individual risks of poverty and deprivation)

• Evidence for children mixed – some suggest that the living standards of children improve when mother’s bargaining power improves while others find no effect
Purpose of this presentation

Summarise key findings from 2 papers

1. Intra-household inequality and adult material deprivation
   i. Examine the % of adults who live in multi-family household
   ii. Document the extend to which intra-household inequality contributes to adult material deprivation outcomes and how this varies by
      ➢ family and co-residence status (i.e. one-family vs multi-family hh)
      ➢ country

2. Living arrangements, intra-household inequality and children’s deprivation
   i. Document the % of children who live in multi-family households (i.e. with grandparents or adult siblings)
   ii. Study whether there are financial gains/losses from shared living arrangements for children living in different types of multi-family hhs
   iii. Examine the extent to which intra-household sharing has implications on children’s deprivation risk?

Both paper focus on multi-family households
1. Intra-household inequality and adult material deprivation
<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS: Serbia</td>
<td>59.2</td>
</tr>
<tr>
<td>SK: Slovakia</td>
<td>52.5</td>
</tr>
<tr>
<td>HR: Croatia</td>
<td>45.3</td>
</tr>
<tr>
<td>RO: Romania</td>
<td>43.0</td>
</tr>
<tr>
<td>PL: Poland</td>
<td>42.0</td>
</tr>
<tr>
<td>BG: Bulgaria</td>
<td>39.0</td>
</tr>
<tr>
<td>MT: Malta</td>
<td>36.0</td>
</tr>
<tr>
<td>LV: Latvia</td>
<td>34.0</td>
</tr>
<tr>
<td>SI: Slovenia</td>
<td>30.0</td>
</tr>
<tr>
<td>CY: Cyprus</td>
<td>29.0</td>
</tr>
<tr>
<td>PT: Portugal</td>
<td>28.0</td>
</tr>
<tr>
<td>HU: Hungary</td>
<td>28.0</td>
</tr>
<tr>
<td>ES: Spain</td>
<td>27.0</td>
</tr>
<tr>
<td>EL: Greece</td>
<td>25.0</td>
</tr>
<tr>
<td>IT: Italy</td>
<td>24.0</td>
</tr>
<tr>
<td>LT: Lithuania</td>
<td>24.0</td>
</tr>
<tr>
<td>CZ: Czech Republic</td>
<td>23.0</td>
</tr>
<tr>
<td>IS: Iceland</td>
<td>23.0</td>
</tr>
<tr>
<td>IE: Ireland</td>
<td>23.0</td>
</tr>
<tr>
<td>AT: Austria</td>
<td>23.0</td>
</tr>
<tr>
<td>EE: Estonia</td>
<td>22.0</td>
</tr>
<tr>
<td>LU: Luxembourg</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>36.7</td>
</tr>
<tr>
<td>BE: Belgium</td>
<td>30.0</td>
</tr>
<tr>
<td>UK: United Kingdom</td>
<td>30.0</td>
</tr>
<tr>
<td>CH: Switzerland</td>
<td>30.0</td>
</tr>
<tr>
<td>NL: Netherlands</td>
<td>30.0</td>
</tr>
<tr>
<td>FR: France</td>
<td>29.0</td>
</tr>
<tr>
<td>DE: Germany</td>
<td>28.0</td>
</tr>
<tr>
<td>DK: Denmark</td>
<td>28.0</td>
</tr>
<tr>
<td>NO: Norway</td>
<td>27.0</td>
</tr>
<tr>
<td>FI: Finland</td>
<td>27.0</td>
</tr>
<tr>
<td>SE: Sweden</td>
<td>17.3</td>
</tr>
</tbody>
</table>

Percentage of adults who live in a ‘complex household’ containing members beyond a nuclear family

Dependent child threshold: age under 18

Source: Authors’ calculations based on 2014 EU-SILC cross-sectional data UDB ver. 2014-2 1-8-16.
To what extent intra-household inequality contributes to adult deprivation outcomes?

**Empirical strategy**

Use adult individual level deprivation data included in 2014 EU-SILC to construct a deprivation indicator which defines individuals as deprived if lack because of lack of resources 2+ items

Estimate probit models predicting the probability an individual being deprived in terms of individual level deprivation indicator (PD2)

\[
Prob(PD_i = 1) = X_i \beta_i + \gamma w_i + \varepsilon_i
\]

- **X**: vector of socio-economic controls (e.g. gender, age and age squared, family and household type, homeownership, log of equivalised net household income)

- **w**: individual income as a proportion (‘share’) of total household income

*used as a proxy of individual’s control over household resources*

If resources are fully shared within hh (and controlling for income and other characteristics) the individual’s independent income should have no effect on individual deprivation risk \( \gamma = 0 \)
**Pooled model (all countries all family types)**

**Individual income share is a strong predictor of adult deprivation risk**

Model predict a 6ppt difference in deprivation risk between someone who does not contribute at all to household income and someone who is the sole contributor.

**NB.** Average deprivation risk 26%

**Source:** Authors’ calculations based on 2014 EU-SILC cross-sectional data UDB ver. 2014-2 1-8-16.
Family type level models

Multi-family households

Individual income shares make more difference to adult deprivation in multi-family households

One family households

Significant but smaller effects for couples (with or without children)

Source: Authors’ calculations based on 2014 EU-SILC cross-sectional data UDB ver. 2014-2 1-8-16.
Country level models

How much difference individual income shares make varies greatly across countries.

Source: Authors’ calculations based on 2014 EU-SILC cross-sectional data UDB ver. 2014-2 1-8-16.
2. Children’s deprivation and intra-household inequality
Percentage of children who live in a multi-family households

Source: Authors’ calculations based on 2014 EU-SILC cross-sectional data UDB ver. 2014-2 1-8-16.
Assessing the gains or losses of living in MFH: Summary of findings

• Calculate the difference between equivalised family income and equivalised household income.
  - This can be thought as capturing difference in the level of consumption that can be attained by the independent resources of children’s family (family income) and those that can be attained if the income of all household members is pooled and shared equally (household income)

• For two-parent children living with grandparents is associated with financial gains whereas co-residence with adult siblings with financial losses (though some benefits for children with very low family income)

• For lone-parent children living with either grandparents or adult siblings is associated with financial gains

• The above results should be seen the max gains/losses under the equal sharing assumption
Is sharing of resources affecting children’s deprivation outcomes: Summary of findings (1)

• Use children-level deprivation items from 2014 EU-SILC (11-items) to construct a child deprivation indicator. Children deprived if live in households lacking 3+ items

Two-parent children in one-family household:

• Empirical strategy
  - Estimate a probit model and test whether there is any association between mother’s income share and children’s deprivation risk. Under the equal sharing of resources assumption there should be no association

• Summary of findings
  - In most countries the effect of mother’s income share is insignificant – control over resources does not affect children deprivation risk
  - Statistically significant **negative effects** are estimated only for Greece, Italy, Portugal, Romania and Serbia... (?)
Intra-household sharing of resources and children’s deprivation (2)

Two-parent children living in multi-family households

• Empirical strategy
  - Estimate a probit model and test whether there is a negative association between children’s deprivation risk and 1) mother’s independent income as a share of total parental income  2) parent’s income as a share total household income

• Main findings
  - In most countries (for which sample size permits reliable estimates) the effects of both mother’s income share and parent’s income share are insignificant i.e. control over resources does not affect children deprivation risks.
  - Statistically significant negative effects for mother’s share are estimated only for Poland, Portugal, Romania and for parent’s share only for Portugal
Conclusions

CONCEPTS

• Poverty and deprivation are experienced by *individuals* within the context of their family and household.

• Households are more complex than usually thought.
  - One-third of *adults* and one-fifth of *children* in Europe are living in a household with members beyond nuclear family.

• Equal sharing assumption is even less valid for adults in these households than for couples in nuclear households.

• For *two-parent* children co-residence with grandparents is associated with financial gains whereas co-residence with adult siblings incurs losses (though some benefits for children with very low family income).

• For *lone-parent* children there are financial gains from co-residence with either grandparents or adult siblings.
Conclusions

MEASUREMENT

- Individual deprivation items should be included in the assessment of individual deprivation risk – inclusion of individual level deprivation items in EU deprivation measures is welcome
  - But ideally we need to combine household, adult and child deprivation in a way that allows each to be identified

POLICY

- Family/household structure and sharing are influenced by social and policy context, including, crucially, tax and social security

- Targeting poor *households* is not sufficient
  - especially complex households
  - especially where individual incomes are highly unequal
This work was supported by the Economic and Social Research Council grant number ES/P000525/1.

**Intra-household allocation of resources: Implications for Poverty, Deprivation and Inequality in the European Union**

http://sticerd.lse.ac.uk/case/_new/research/Intra-household/

Tania Burchardt  t.burchardt@lse.ac.uk
Eleni Karagiannaki  e.karagiannaki@lse.ac.uk
Individual level deprivation items included in EU-SILC 2014

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

PD2: Personal deprivation: whether the individual cannot afford two or more of the 7 items listed above

➢ What can the PD2 measure tell us about sharing within households?
Children deprivation items in EU-SILC 2014

- Some new (not second hand) clothes
- Two pairs of properly fitting shoes including a pair of all-weather shoes)
- Fruits and vegetables once a day
- One meal with meat, chicken or fish (or vegetarian equivalent) at least once a day
- Books at home suitable for their age
- Outdoor leisure equipment
- Indoor games
- Regular leisure activity
- Celebrations on special occasions
- Invite friends round to play
- Go on holiday away from home at least one week per year

MDC3: Children live in households that cannot afford 3 or more of the 11 items listed above

The following two items were not included as refered to school age children
- Participate in school trips and school events that cost money
- Suitable place to study or do homework
Percentage of adults who live in a ‘complex household’ containing members beyond a nuclear family

Source: Authors’ calculations based on 2014 EU-SILC cross-sectional data UDB ver. 2014-2 1-8-16.