Between a risk society and a welfare state: vulnerability to poverty in Lithuania

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Outline

- Aim
- Theoretical background
- Measuring vulnerability using microsimulation
- Results for Lithuania: unemployment and childbirth
Aim

- Analysis of the role tax-benefit system plays in mitigating the effects of widespread socio-economic risks:
  - links between risk, welfare state development, vulnerability
  - measures focusing on vulnerability and social protection
Risk society, welfare state & vulnerability

- Risk society thesis (Beck 1992, 2009, etc.)
  - ‘Democratic’ risks
  - Individualisation & responsibilisation in social protection
  - Welfare state’s role: re-distribution of risk rather than resources

*Through risk society lenses retrenchment of welfare provisions can be interpreted as a shift towards individualisation and promotion of more active, flexible and adaptive engagement with risk and individual responsibility (Kemshall 2002)*

- Concerns:
  - partial/biased knowledge & uncertainty
  - ‘democratisation’ of risks is questionable
  - multiple and cumulative effects of poverty and disadvantage
Implications

- Weakening of the protective / re-distributive function of the welfare state
- Increasing individual vulnerability to poverty

  - Did the weakening of social protection go unnoticed during economic boom?
  - Ways of timely monitoring of the resilience of tax-benefit system?
Measuring vulnerability

- **Vulnerability analysis:**
  - the magnitude of risk measured ex-ante
  - centrality of social protection
  - vulnerability viewed as welfare-reducing

- **Macro and micro level measures (＆ mixed):**
  - Macro: country’s proneness to shocks, ability to recover
  - Micro: individual vulnerability
    - as exposure to risk
    - as income volatility
    - as expected poverty
Atkinson (2009) on vulnerability analysis:

- Performance of tax-benefit systems ex-ante: ‘stress-testing’
- Usefulness of microsimulation techniques
- Focus on acute income shocks rather than volatility

Followed up by Figari et al. (2011), Fernandez Salgado et al. (2013) on the welfare compensation for unemployment.
Application

- Vulnerability as expected poverty
- Stress testing – simulating income loss due unemployment & childbirth:
  - Microsimulation model EUROMOD (version G1.0)
  - EU-SILC 2008 and 2010 data
  - Lithuanian policies of 2007-2012 (before, during and after crisis)
- Indicators of vulnerability reflect expected incidence and intensity of poverty risk within one year after the income loss
- Scope: population of insured individuals and household members
- Simulated income shock: one household member at a time, all possible combinations within the household
- Standard Foster-Greer-Thorbecke (FGT) poverty measures with a probabilistic term:

\[ V_\alpha = \frac{1}{N} \sum_{h=1}^{Q_s} \frac{1}{S_h} \left[ \frac{(z - y^h_s)}{z} \right]^\alpha \]
Lithuanian context:

- 2007-2008 rapid economic growth, financial recession of 2009-2010 and first signs of recovery since 2011
- Changes to major cash benefits: generous child/family protection 2007-2009, temporary cuts to social benefits in 2010-2011, some restored
- Unemployment, child and family benefits subject to cuts within the period

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Poverty risk rate at 60 percent of median equivalised income after social transfers, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Total population</td>
<td>19.1</td>
</tr>
<tr>
<td>Prime age (18-64):</td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>15.1</td>
</tr>
<tr>
<td>females</td>
<td>16.1</td>
</tr>
</tbody>
</table>
Context: unemployment & fertility
Context: unemployment & migration

[Graph showing trends in unemployment and migration from 2000 to 2013. The graph compares three metrics: total unemployment, unemployment below 25 years, and migration saldo.]

- **Unempl % (total)**
- **Unempl % (below 25 y.)**
- **Migration saldo, %**
Results (I)

**Fig 1** Vulnerability to poverty in the event of childbirth or unemployment measured using FGT class poverty measures

*Note: poverty line at 60% of the median is fixed at the level before simulation of the income loss*
Results (II)

Fig 2 Vulnerability to poverty in the event of childbirth or unemployment by income quintiles

*Notes: equivalent income, quintiles fixed before the income shock, threshold of 60% median*
### Results (III)

**Table 2** Decomposition of poverty risk (FGT0) by income components using the Shapley value, %

<table>
<thead>
<tr>
<th>Contribution by source:</th>
<th>Absolute contribution</th>
<th>Relative contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unemployment (1st year)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original income</td>
<td>-48.9</td>
<td>-48.8</td>
</tr>
<tr>
<td>Unemployment b.</td>
<td>-6.2</td>
<td>-6.1</td>
</tr>
<tr>
<td>Other benefits</td>
<td>-8.7</td>
<td>-10.3</td>
</tr>
<tr>
<td>Tax &amp; SIC</td>
<td>4.6</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Total reduction</strong></td>
<td>-59.2</td>
<td>-61.0</td>
</tr>
<tr>
<td><strong>Total FGT0</strong></td>
<td>40.8</td>
<td>39.0</td>
</tr>
<tr>
<td><strong>Childbirth (1st year)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original income</td>
<td>-77.0</td>
<td>-71.2</td>
</tr>
<tr>
<td>Child / family b.</td>
<td>-25.4</td>
<td>-29.5</td>
</tr>
<tr>
<td>Other benefits</td>
<td>-3.3</td>
<td>-3.9</td>
</tr>
<tr>
<td>Tax &amp; SIC</td>
<td>10.1</td>
<td>10.0</td>
</tr>
<tr>
<td><strong>Total reduction</strong></td>
<td>-95.6</td>
<td>-94.5</td>
</tr>
<tr>
<td><strong>Total FGT0</strong></td>
<td>4.4</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Childbirth (2nd year)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original income</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>Child / family b.</td>
<td>:</td>
<td>:</td>
</tr>
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</tr>
<tr>
<td><strong>Total reduction</strong></td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td><strong>Total FGT0</strong></td>
<td>:</td>
<td>:</td>
</tr>
</tbody>
</table>

*Note: Category child/family benefits include all contributory maternity and paternity benefits, child benefit, birth grant; unemployment benefit includes unemployment social insurance benefit.*

*Source: own calculations using DASP module in Stata*
To sum up: no need to wait for a new crisis

- Welfare state’s role: towards promotion of individual responsibility for risk management; protection/re-distribution need to stay in focus.

- Using vulnerability measures for monitoring: focus on social protection, on expected poverty rather than volatility, ex-ante measures.

- ‘Stress-testing’ using microsimulation for vulnerability analysis.

- In Lithuania for unemployment and childbirth:
  - imbalances in vulnerability levels produced by the welfare state policies
  - lack of the counter-cyclical social protection
  - traditional mutual support among the household members plays a major role, despite of the diminishing importance noted in the literature

- Potential for using stress testing:
  - scope for improvement measures: more risks and more elaborate measures
  - comparative vulnerability analysis – EUROMOD model covers EU27
Thank you!


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Using stress testing to measure vulnerability

- Advantages and limitations of using microsimulation:
  - complex evaluation of the functioning of the tax-benefit system
  - socio-demographic structure of the population
  - ex-ante analysis of the latest policy changes
  - reliability of data in the small population sub-groups
  - static simulation – first round effects
  - assumption of full benefit take-up and compliance to tax rules
Results (III)

Fig 3 Gross annual benefit replacement rate by income group and total