Effectiveness of Poverty Reduction in the EU15: An Empirical Analysis

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At-risk-of-poverty rate after social transfers (PL 60), 2007

Poverty rate EU15:
- PL 40 = 5
- PL 50 = 10
- PL 60 = 17

PL 60 → EU25 = 16
PL EU60 = 22.5

Poverty line:
- PL EU = 60
- PL USA = 30

Poverty rate USA 2004 (LIS / OECD):
- PL 40 = 11
- PL 50 = 17
- PL 60 = 24

Source: Eurostat: ECHP/EU-SILC (2009)
Background

EU Millennium Goals – Lisbon Agenda:
(1) Economic Performance
(2) Social Inclusion

- Social Inclusion - Set of agreed Social Indicators
- Among them: Poverty (breakdown age / gender)
- Formal protocol measuring poverty
- Benchmarking – best practices -mutual learning
- Open Method of Coordination (soft law) is used to achieve convergence and improvements with respect to social cohesion (poverty rates)
Background (continued)

- Welfare state effort and poverty
  - European objective / Lisbon Agenda
  - EU15: 17 percent lives in poverty
  - Poverty rates have risen since 2000

- Persistence of poverty calls for an explanation
  - Why is there still sizable poverty?
  - Some counties are more effective: why?
  - What can explain cross-country differences in effectiveness?
Our focus: impact of income transfers on poverty reduction

Policy strategies to combat poverty

– Education
– Job opportunities
– Labor force participation
– Health care
– Income transfers (policy)
– Et cetera
Research design

• Cross-country analysis (EU15, OECD28)

• Measuring poverty incidence
  – Official EU-indicator: EU-SILC: 60% threshold
  – OECD: 50% threshold (40% and 60%)
  – LIS: 40%, 50%, and 60% threshold

• Measuring effects of taxes and transfers
  – Pre-tax-transfer poverty
  – Post-tax-transfer poverty
  – Absolute antipoverty effect
Research design (continued)

Measuring social effort / expenditure
- Gross public versus Net public
- Capturing of private social arrangements

Linkage social spending $\leftrightarrow$ poverty reduction
- Step 1: Antipoverty effect taxes and transfers: EU15 and OECD28
- Step 2: Is high social spending associated with high reduction of poverty rates?
- Step 3: Social policy areas (children and elderly)
Antipoverty effectiveness of social spending

Standard Musgravian approach:

• Antipoverty effect social transfers and taxes = (a) pre-tax-transfer poverty −/− (b) post-tax-transfer poverty

• Targeting effect (antipoverty effectiveness): poverty reduction per percentage point social spending GDP = [(a) − (b)] / social spending % GDP

• Indicator of Public Policy Effectiveness on Poverty Alleviation
Broadening the standard approach

- Special feature: treatment of pensions. Public versus private pension plans, and their antipoverty effects through transfers and taxes (contributions) *at one moment in time*.
- Overcoming this bias (pragmatically) by broadening the framework. We also compute the antipoverty effect of taxes and social transfers *other than pensions*. Recent data of Eurostat allow such a (new) approach.
Multidimensional approach poverty

- Complex undertaking (Haveman, 2009)

- Main difficulty: estimation of interaction between dimensions of poverty. One has to define a list of attributes to be taken into account and decide how much weight to give to each of these dimensions.

- EU-context: Social Inclusion – A set of agreed Social Indicators
Multidimensional approach poverty

- Thorbecke (2007, p. 17-18): “It should be clear that a complete mapping of combination of attributes into the utility space appears daunting, if not altogether utopian.” “..., there are too many unresolved questions left over to consider seriously using multidimensional measures in any truly operational sense.”

On this: Kakwani and Silber (2007 and 2008)
Antipoverty effect transfers and taxes
EU15, total population, 2007

Effect of social transfers and taxes
Poverty after social transfers and taxes

Mean EU15
Antipoverty effect transfers and taxes
EU15, total population, 2007

Effect of social transfers and taxes
Poverty after social transfers and taxes

Mean EU15
# Targeting effect of social expenditures on poverty reduction in the EU15

<table>
<thead>
<tr>
<th>Country</th>
<th>Poverty rate (PL 60), 2007</th>
<th>Net social expenditure 2005 (d)</th>
<th>Targeting effect (a-c)/d</th>
<th>(b-c)/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before (a)</td>
<td>Before (b)</td>
<td>After (c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>33</td>
<td>40</td>
<td>18</td>
<td>16.1</td>
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<tr>
<td>Finland</td>
<td>29</td>
<td>41</td>
<td>13</td>
<td>19.5</td>
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<td>Denmark</td>
<td>27</td>
<td>37</td>
<td>12</td>
<td>21.6</td>
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<td>Sweden</td>
<td>28</td>
<td>42</td>
<td>11</td>
<td>24.8</td>
</tr>
<tr>
<td>Austria</td>
<td>25</td>
<td>43</td>
<td>12</td>
<td>23.5</td>
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<tr>
<td>Belgium</td>
<td>28</td>
<td>42</td>
<td>15</td>
<td>26.8</td>
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<tr>
<td>Netherlands</td>
<td>21</td>
<td>35</td>
<td>10</td>
<td>23.3</td>
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<tr>
<td>France</td>
<td>26</td>
<td>46</td>
<td>13</td>
<td>29.0</td>
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<tr>
<td>Luxembourg</td>
<td>23</td>
<td>39</td>
<td>14</td>
<td>20.3</td>
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<td>UK</td>
<td>30</td>
<td>42</td>
<td>19</td>
<td>25.9</td>
</tr>
<tr>
<td>Germany</td>
<td>25</td>
<td>43</td>
<td>15</td>
<td>27.0</td>
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<tr>
<td>Portugal</td>
<td>24</td>
<td>40</td>
<td>18</td>
<td>21.4</td>
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<tr>
<td>Spain</td>
<td>24</td>
<td>39</td>
<td>20</td>
<td>19.1</td>
</tr>
<tr>
<td>Italy</td>
<td>24</td>
<td>43</td>
<td>20</td>
<td>23.1</td>
</tr>
<tr>
<td>Mean EU15</td>
<td>26</td>
<td>42</td>
<td>17</td>
<td>23.0</td>
</tr>
</tbody>
</table>
Linkage net social spending and poverty rate reduction EU15, 2005-2007

Pensions treated as primary income

\[ y = 0.10x + 8.84 \]
\[ R^2 = 0.01 \]

Pensions treated as transfer income

\[ y = 0.70x + 9.88 \]
\[ R^2 = 0.38 \]
## Targeting effect non-EU15 (PL 50), 2005

<table>
<thead>
<tr>
<th><strong>EU15</strong></th>
<th><strong>Non-EU15</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>0.89 (1.48)</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>0.86 (1.23)</td>
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<tr>
<td>Italy</td>
<td>0.83 (1.11)</td>
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<tr>
<td>Belgium</td>
<td>0.77 (1.04)</td>
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<tr>
<td>Germany</td>
<td>0.76 (1.07)</td>
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<tr>
<td>France</td>
<td>0.73 (1.02)</td>
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<tr>
<td>Sweden</td>
<td>0.66 (0.84)</td>
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<tr>
<td>Portugal</td>
<td>0.65 (0.93)</td>
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<tr>
<td>United Kingdom</td>
<td>0.63 (0.88)</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.62 (0.78)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.58 (0.80)</td>
</tr>
<tr>
<td>Austria</td>
<td>0.57 (0.75)</td>
</tr>
<tr>
<td>Finland</td>
<td>0.38 (0.49)</td>
</tr>
<tr>
<td><strong>Mean EU15</strong></td>
<td><strong>0.68 (0.93)</strong></td>
</tr>
</tbody>
</table>
Linkage social spending and poverty reduction – sensitivity analysis

2005 - EU15: significant relationship (high) levels social spending and (high) antipoverty effects of social transfers and taxes across countries

2005 - non-EU15 countries: no significant relationship

Country-ranking of effectiveness of social spending for alleviating poverty didn’t alter (that much) since 1995.

Social policy areas / Vulnerable groups

Elderly and Children

- Antipoverty effect social transfers and taxes = (a) pre-tax-transfer poverty −/− (b) post-tax-transfer poverty

- Poverty reduction per percentage point spending GDP on specific social programs:
  = [(a) − (b)] / social spending programs % GDP
Elderly: Antipoverty effect transfers and taxes EU15, 2007

Mean EU15

Effect of social transfers and taxes
Poverty after social transfers and taxes
Elderly: Antipoverty effect transfers and taxes EU15, 2007

Effect of social transfers and taxes

Poverty after social transfers and taxes

Mean EU15: 69
Social policy areas / Elderly

Poverty alleviation elderly per point GDP social spending on old-age pension and survivor programs

**Best practice**
- Ireland (2.9 resp. 12.7)
- Denmark (1.7 resp. 8.0)

**Lowest scores**
- Germany (0.1 resp. 6.2)
- Italy (0.1 resp. 4.0)

No significant correlation gross social expenditure old age pension and survivors programs and LIS24 poverty rates:

- R² non-EU15 = 0.15
- R² EU15 = 0.18

Stability over time: Mid-1980’s, mid-1990’s and mid-2000’s
Social policy areas / Children

Child poverty alleviation per point GDP spending on social family programs

**Best practice**
- Ireland (8.4)
- Austria (8.2)

**Lowest scores**
- Luxembourg (3.6)
- Greece (3.6)

Correlation gross social expenditure family programs and LIS$_{24}$ poverty rates children:
- $R^2$ non-EU = 0.50
- $R^2$ EU = 0.12

Stability over time: Mid-1980’s, mid-1990’s and mid-2000’s
Summing-up

• Poverty alleviation important objective
EU ➔ poverty rates rose since Lisbon ➔
OMC not very effective (yet)

• Each point GDP net social spending
alleviates poverty in both EU15 and non-
EU15 countries on average by .7
percentage points.

• Social indicator of Public Policy
Effectiveness on Poverty Alleviation
Summing-up (continued)

• Empirical results draw heavily on how pensions are treated - as primary income or as transfer.

• Weak respectively strong relationship between levels of social spending and antipoverty effect of social transfers and taxes across EU15 countries.
Summing-up (final)

- Practices of poverty alleviation
  
  **Best practice**
  - Ireland
  - Scandinavia

  **Low scores**
  - Italy
  - Greece
  - Spain

- Country rankings rather stable over time
- Mutual learning and policy exchanges ....
Research team
Reforming
Social Security

www.hsz.leidenuniv.nl

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