Measuring the Care Economy along the lifecycle

Stakeholders meeting on Care Policy 10/01/2024
Ció Patxot (BEAT, Universitat de Barcelona)
1. Motivation: a wider approach on role of the welfare state

2. A quantification of the role of the welfare state along the lifecycle

3. Visualizing the size of the care economy: comparable EU data
What happened?: Development is a strong social transformation process with three axis

- **Economic** development
  - Technological change
  - Marketization

- **Demographic** change
  - Mortality decrease
  - Fertility decrease
  (+/- migration)

- **Political** change
  - Democratization
  - Social policies development
    (Education, pensions, welfare state)
A strong social transformation process with three axis

Economic development
- Technological change
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Demographic change
- Mortality decrease
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(+/- migration)

Political change
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Changes in family structure:
- Child labor
- Household labor division
- Fertility
- Women empowerment

Structure change
Rural exodus to cities

Changes in family structure:
- Child labor
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Rethinking the role of the Welfare State (WS)

Economic development
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Demographic change
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- Social policies development (Education, pensions, welfare state)

Changes in family structure:
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=> fertility and mortality reduction (influenced by educational transition)

INTRA generational income redistribution +:
- Merit or basic goods provision
- Income substitution, insurance...

WS: Substitutes family transfers =>
- INTER generational redistribution (more if PAYGO)
- It implies intertemporal shift of resources (government saving?)
2. A quantification of the role of the welfare state along the lifecycle the National Transfers Accounts (NTA) project: SNA by age

Surpluses finance deficits by: Asset based reallocations and transfers (public and private)
The National Transfer Accounts identity

• The NTA project estimates the flow of resources among age groups.
• Starting from the SNA identity and rearranging:

\[ C_{x,s} - Y^l_{x,s} = TG^+_{x,s} - TG^-_{x,s} + TF^+_{x,s} - TF^-_{x,s} + Y^a_{x,s} - S_{x,s} \]

- LifeCycleDeficit
- PublicTransfers
- PrivateTransfers
- AssetBasedReallocations

• The equation holds at each age (x) and gender (s) and also at the aggregate level (uprate to NA aggregates)
• The household head (main earner) owns the assets, gives transfers and saves
• SNA by age + estimation of private transfers YF
NTA age profiles measure intergenerational income redistribution

Lifecycle Deficit (LCD) is financed using public (TG) or private transfers (TF) or Asset based reallocations (ABR)

NTA populates with data those 3 axis of development
  • It breaks down SNA by age => how resources move across age groups
  • Adds an otherwise missing estimation of family transfers
  • It permits measuring intergenerational redistribution produced by welfare state transfers
A key result of the NTA project: % Consumption financed by net public transfers (children vss elderly)

In Spain the crises => back to low protection for children

Source: Sole et al., (2020) JEOA

Still missing TIME transfers => National Time Transfer Accounts
In Spain the crises => back to low protection for children
Adding non-market production: Total economic “dependency”

Source: Renteria et al., (2016) DR.
Time transfers: Who gives/receives CARE

Time transfers: Who gives/receives HOME PRODUCTION

Source: Renteria et al., (2016) DR.
1. Motivation: a wider approach on the role of the welfare state
2. A quantification of the role of the welfare state along the lifecycle
   1. Standard NTA-NTTA and inter-generational income redistribution
   2. Bringing NTA-NTTA further at micro level: Adding intra-generational income redistribution
3. Visualizing the size of the care economy: comparable EU data
2.2. Bringing NTA-NTTA further at micro level

- The family dimensions is intrinsic to NTA-NTTA [1st comprehensive estimation of family transfers] => Make it more visible
- It requires microsimulation
- Build a dynamic microsimulation model to capture this. A first prototype build in a previous project (www.microwelt.eu) incorporating NTA accounting logic
- Individual characteristics beyond age and gender (education and family status) allow for measuring \textit{intra} generational income redistribution
microWELT model structure: Population dynamics

Main events (determinants)

EUROMOD (EU-SILC)
Starting Population

Birth

Education

Emancipation

Fertility & partnership

Mortality

1\textsuperscript{ST} birth and childlessness by mother’s education and cohort

Intergenerational education transmission (1)

By educational attainment, age and gender

Matching rates by age and education level

By age, gender and education

Economic variables: NTA by age, gender, education and family status

NTA summary magnitudes: \( C-Yl= TG+TF+ABR \) (Ya-S)

Build disaggregated by age, gender, education and family type => parameters in microWELT

Measures NTA along the lifecycle and the impact of ageing
Going deeper: **disaggregating** NTA and lifetime simulation

Present value (PV) of lifetime **Privat**, **Public** & Total transfers (net of taxes) / PV of lifetime income (parents versus childless individuals by level of education)

Austria

Going deeper: **disaggregating NTA and lifetime simulation**

Present value (PV) of lifetime **Privat, Public & Total transfers (net of taxes) / PV of lifetime income** (parents versus childless individuals by level of education)

Source: [Weltransim Project](https://www.microwelt.eu/Report/08_LongitudinalWFS/LongitudinalWFS-Index.html)
Outline

1. Motivation: an integrated approach of the welfare state
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   1. Standard NTA-NTTA and inter-generational income redistribution
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   1. Previous estimations of aggregate expenditure
   2. Micro data available to improve the projections
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- Individual characteristics beyond age and gender (education and family status) allow for measuring intra generational income redistribution
- A close look to care: visualize and project the future care along the lifecycle (implicit in the NTA-NTTA profiles) - WELLCARE project Comparable EU data available
3.1. Visualizing and quantifying the size of the care economy: Previous estimations of aggregate expenditure

<table>
<thead>
<tr>
<th>Care mix</th>
<th>Type of service</th>
<th>Aggregate expenditure estimations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public formal (government)</td>
<td>cash benefits</td>
<td>AWG report</td>
</tr>
<tr>
<td></td>
<td>in kind</td>
<td>institutional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>home care</td>
</tr>
<tr>
<td>Private formal (market) - mostly social</td>
<td>institutional &amp; home care</td>
<td>SHA</td>
</tr>
<tr>
<td>Private informal</td>
<td>home care</td>
<td>SPC report</td>
</tr>
</tbody>
</table>
Source: elaborated from Eurostat, SHA; AWG, the 2021 Ageing Report; and the SPC, 2021 Long-Term Care report.
Note: Informal is an average of “proxy good” and “opportunity cost” methods.
3.2 Visualizing and quantifying the size of the care economy: Micro data available to improve projections

<table>
<thead>
<tr>
<th>Care needs</th>
<th>Care services</th>
<th>Children</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal (home care*)</td>
<td>All</td>
<td>EHIS care needs (demand)</td>
<td>SILC (2016 module) supply &amp; hour intervals / EHIS (supply and hours) / HETUS (Supply)</td>
</tr>
<tr>
<td>Formal market</td>
<td>HETUS (supply in hours)</td>
<td>SILC Childcare cost</td>
<td>SILC 2016 extra module (demand of professional home care (market &amp; public))</td>
</tr>
<tr>
<td>Formal public</td>
<td>SILC Private education</td>
<td>NTA profile public education expenditure</td>
<td>Cash benefits (SILC)</td>
</tr>
<tr>
<td></td>
<td>NTA profile public education expenditure</td>
<td>Cash benefits (SILC)</td>
<td>Institutionalized only age and gender (CENSUS)</td>
</tr>
</tbody>
</table>

* Informal care can be inside or outside the household
<table>
<thead>
<tr>
<th>Type of care</th>
<th>Country</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Childcare inside</strong></td>
<td>AT</td>
<td>2.27</td>
<td>1.82</td>
<td>0.25</td>
<td>10.50</td>
</tr>
<tr>
<td></td>
<td>ES</td>
<td>2.39</td>
<td>1.95</td>
<td>0.17</td>
<td>11.83</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>1.90</td>
<td>1.76</td>
<td>0.17</td>
<td>13.5</td>
</tr>
<tr>
<td><strong>Childcare outside</strong></td>
<td>AT</td>
<td>3.26</td>
<td>2.30</td>
<td>0.25</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>ES</td>
<td>1.82</td>
<td>1.54</td>
<td>0.17</td>
<td>8.83</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>1.58</td>
<td>1.37</td>
<td>0.17</td>
<td>7.17</td>
</tr>
<tr>
<td><strong>Adult care inside</strong></td>
<td>AT</td>
<td>0.92</td>
<td>0.90</td>
<td>0.25</td>
<td>5.75</td>
</tr>
<tr>
<td></td>
<td>ES</td>
<td>1.16</td>
<td>1.55</td>
<td>0.17</td>
<td>14.67</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>0.76</td>
<td>0.88</td>
<td>0.17</td>
<td>10.83</td>
</tr>
<tr>
<td><strong>Adult care outside</strong></td>
<td>AT</td>
<td>1.32</td>
<td>0.98</td>
<td>0.25</td>
<td>4.25</td>
</tr>
<tr>
<td></td>
<td>ES</td>
<td>2.24</td>
<td>2.33</td>
<td>0.17</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>0.85</td>
<td>1.01</td>
<td>0.17</td>
<td>7.17</td>
</tr>
</tbody>
</table>

Distribution of adult caregivers by type of care and country (HETUS 2010)

Around 1/3 of population take care of people: children inside (around 20%), adults inside (9 to 6%) and others. Around 2% are “sandwich” caregivers.

Daily hours devoted to different types of care in Austria, Spain and the UK (HETUS 2010)

Hours of care inside underestimated (omission of secondary activity)?
Age profiles of care given (average daily hours), HETUS 2010

(a) whole population

(b) caregivers of each type
<table>
<thead>
<tr>
<th>Description</th>
<th>AT</th>
<th>ES</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care needs / use / unmet needs - EHIS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care needs (PC+HA)</td>
<td>35.96%</td>
<td>38.21%</td>
<td>28.95%</td>
</tr>
<tr>
<td>Care use (PC+HA)</td>
<td>34.79%</td>
<td>34.98%</td>
<td>26.45%</td>
</tr>
<tr>
<td>Unmet needs (PC+HA)</td>
<td>10.98%</td>
<td>13.71%</td>
<td>9.52%</td>
</tr>
<tr>
<td>PC needs</td>
<td>16.97%</td>
<td>17.41%</td>
<td>11.50%</td>
</tr>
<tr>
<td>PC use</td>
<td>16.14%</td>
<td>15.88%</td>
<td>10.10%</td>
</tr>
<tr>
<td>PC unmet needs</td>
<td>6.00%</td>
<td>6.33%</td>
<td>3.86%</td>
</tr>
<tr>
<td>Informal care use – SHARE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>care use (PC + HA) (at least weekly)</td>
<td>21.16%</td>
<td>18%</td>
<td>21.18%</td>
</tr>
<tr>
<td>PC use (at least weekly)</td>
<td>9.69%</td>
<td>12.09%</td>
<td>11.78%</td>
</tr>
<tr>
<td>Formal care - SILC (ad hoc module 2016)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received professional care (PC + HA)</td>
<td>6.45%</td>
<td>4.80%</td>
<td>4.23%</td>
</tr>
<tr>
<td>number of hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10</td>
<td>60.19%</td>
<td>33.50%</td>
<td>62.76%</td>
</tr>
<tr>
<td>10 to 20</td>
<td>11.19%</td>
<td>24.88%</td>
<td>18.17%</td>
</tr>
<tr>
<td>20+</td>
<td>28.62%</td>
<td>41.62%</td>
<td>19.07%</td>
</tr>
</tbody>
</table>

Descriptive statistics from unmet needs to service utilization, across countries and data sources (% of individuals aged 65 and above)
The care mix (formal – informal) received by 65+ reporting ADL-IADL (SHARE 2015)

Formal and Informal (% those with ADL-IADL)

* Informal care can be inside or outside the household, by spouse, children and other
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Build a dynamic microsimulation model to capture this. A first prototype build in a previous project (www.microwelt.eu) incorporating NTA accounting logic

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Comparable EU data available

SUSTAINWELL Project continues improving estimation of economic variables and adds Wealth Accounts
Main objective: Need for policies protecting the “Sandwich” generation in face of the ageing process

Thank you!