Income distribution in Austria

Redistribution by the State and
First evidence on the impact of COVID-19 on household incomes

Silvia Rocha-Akis

Evidence-Based Policy Making - A collaborative event of WIFO, IHS and CEU
Thursday, May 27, 2021
Distinguishing features of WIFO redistribution studies

- Conducted since 1980s, since 2000 at 5-year intervals

- **Comprehensive** depiction of redistributive process
  - Inclusion of benefits in kind (health, education, unemployment, housing ..)
  - Inclusion of indirect taxes
  → More realistic measure of household economic welfare

- **Comparability** of results with previous studies, evolution over time

- Based on realised data
  - redistributive effects of changes in the structure of population, households, employment and consumption implicitly included
Austria has a relatively high tax-to-GDP ratio (2015: 43.9%; 2019: 43.1%) → high redistribution potential

Market incomes distributed very unevenly → traditionally important role of the state

Not only reforms, but also systematic and structural changes (socio-demographic changes, labour force composition, bracket creeping ...) have an impact on the income (re-)distribution

Regular (5-year interval) monitoring required to understand where the “ship is steering” → compass function
Redistribution by the State in Austria 2015

- **Aim**
  - Examine *income situation* of private households *before and after redistribution* in the year 2015 (latest available Household Budget Survey)
  - Changes between 2010 and 2015 (years after financial and economic crisis in 2008/09)

- **Project team**
  - Jürgen Bierbaumer-Polly, Julia Bock-Schappelwein, Martina Einsiedl, Michael Klien, Thomas Leoni, Simon Loretz, Hedwig Lutz, Christine Mayrhuber, Silvia Rocha-Akis

- **Funding**
  - Austrian Ministry of Social Affairs, Federal Chancellary of Austria, Anniversary Fund of the Oesterreichische Nationalbank
Redistribution: Schematic representation

- Gross income from labour and capital
- Private supplementary incomes
- Imputed housing rents, net of loan repayments
- Statutory pensions
- Public cash transfers
- Income tax, social contributions
- Public welfare benefits in kind
- Indirect taxes

Market income

Primary income alternative version

Primary income baseline version

Total gross income

Disposable income

Enlarged income

Secondary income
Composition of primary incomes, 2015

- Income from dependent employment: 62%
- Pensions: 23%
- Income from rent and lease: 2%
- Interest and dividends: 1%
- Private supplementary income: 1%
- Self-employed income: 9%
- Net imputed rents: 3%
- Pensions: 23%

S: Statistik Austria, EU-SILC 2016; OeNB, HFCS 2014; WIFO calculations.
### Distribution of market income components, 2015

**Quantiles in terms of total gross income**

<table>
<thead>
<tr>
<th></th>
<th>Income from dependent employment</th>
<th>Income from self-employment</th>
<th>Income from rent and lease</th>
<th>Interest, dividends</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; decile</td>
<td>0.9</td>
<td>0.9</td>
<td>.</td>
<td>0.6</td>
</tr>
<tr>
<td>5&lt;sup&gt;th&lt;/sup&gt; decile</td>
<td>7.3</td>
<td>4.5</td>
<td>4.8</td>
<td>2.5</td>
</tr>
<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt; decile</td>
<td>27.3</td>
<td>51.5</td>
<td>60.1</td>
<td>62.6</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; tercile</td>
<td>8.8</td>
<td>9.0</td>
<td>5.2</td>
<td>3.4</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; tercile</td>
<td>27.1</td>
<td>18.1</td>
<td>12.4</td>
<td>10.5</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; tercile</td>
<td>64.1</td>
<td>72.9</td>
<td>82.5</td>
<td>86.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

→ **Earned and capital income very unevenly distributed**

S: Statistik Austria, EU-SILC 2016; OeNB, HFCS 2014; WIFO calculations. – "." ... Result is based on low case numbers in the sample.
Distribution of primary income and its components, 2015

Quantiles in terms of total gross income

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Market income</th>
<th>Pensions</th>
<th>Net-imputed rents</th>
<th>Primary income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st decile</td>
<td>1.1</td>
<td>2.9</td>
<td>2.6</td>
<td>1.6</td>
</tr>
<tr>
<td>5th decile</td>
<td>6.8</td>
<td>10.4</td>
<td>8.4</td>
<td>7.8</td>
</tr>
<tr>
<td>10th decile</td>
<td>31.5</td>
<td>17.2</td>
<td>17.3</td>
<td>27.4</td>
</tr>
<tr>
<td>1st tercile</td>
<td>9.1</td>
<td>20.6</td>
<td>16.4</td>
<td>12.3</td>
</tr>
<tr>
<td>2nd tercile</td>
<td>25.3</td>
<td>35.9</td>
<td>34.3</td>
<td>28.3</td>
</tr>
<tr>
<td>3rd tercile</td>
<td>65.6</td>
<td>43.5</td>
<td>49.3</td>
<td>59.3</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total¹)</td>
<td>160.5</td>
<td>48.5</td>
<td>5.7</td>
<td>214.6</td>
</tr>
</tbody>
</table>

→ Primary income remains relatively concentrated

S: Statistik Austria, EU-SILC 2016; OeNB, HFCS 2014; WIFO calculations. – ¹) Non-equivalent values.
Revenue side of redistribution:
Tax and social contribution burden, all households

(progressive) income taxes play a secondary role

S: Statistik Austria, EU-SILC 2016, Consumer Survey 2014/15; OeNB, HFCS 2014; WIFO calculations.
Tax and social contribution burden, households with employed main earner

S: Statistik Austria, EU-SILC 2016; Consumer Survey 2014/15; OeNB, HFCS 2014; WIFO calculations.
Tax and social contribution burden, households with employed main earner

S: Statistik Austria, EU-SILC 2016, Consumer Survey 2014/15; OeNB, HFCS 2014; WIFO calculations.

Indirect taxes
Taxes from property and capital income
Income tax and social contributions from self-employed income
Employers' social contributions
Employees' social contributions
Wage tax

Incl. Employer's social contributions

Percentage of gross equivalent total income (including employers' social contributions)

Total gross income

1st decile 2nd decile 3rd decile 4th decile 5th decile 6th decile 7th decile 8th decile 9th decile 10th decile
Benefits in kind received by households accounted for more than 3/4 of total benefits considered.

Expenditure side of redistribution: Cash and non-cash benefits, 2015

Benefits in kind:
- Health: 40.2%
- Education: 27.9%
- Family: 10.7%
- Health, care: 4.1%
- Unemployment: 1.0%
- Family: 4.8%
- Housing: 2.8%
- Unemployment, means-tested minimum income: 6.8%
- Education: 0.5%
- Housing: 0.5%
- Survivors' benefits: 0.8%

S: Statistik Austria, EU-SILC 2016; WIFO calculations.
Distribution of cash and non-cash benefits, 2015

Quantiles in terms of total gross income

Universal health, education and family benefits distributed rel. evenly across the income groups

S: Statistik Austria, EU-SILC 2016; OeNB, HFCS 2014; WIFO calculations.
Importance of cash and non-cash benefits for the households concerned, 2015

<table>
<thead>
<tr>
<th>Gross total income</th>
<th>Passive, active labour market policy</th>
<th>Means-tested minimum income</th>
<th>Family benefits</th>
<th>Health</th>
<th>Care allowance</th>
<th>Education</th>
<th>Housing subsidy</th>
<th>Rent and interest advantage from subsidised housing/loans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In % of total gross income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st decile</td>
<td>86.4</td>
<td>38.9</td>
<td>48.6</td>
<td>37.8</td>
<td>24.4</td>
<td>77.8</td>
<td>162.2</td>
<td>9.3</td>
</tr>
<tr>
<td>5th decile</td>
<td>22.5</td>
<td>.</td>
<td>12.5</td>
<td>14.5</td>
<td>10.2</td>
<td>20.7</td>
<td>37.8</td>
<td>.</td>
</tr>
<tr>
<td>10th decile</td>
<td>.</td>
<td>.</td>
<td>3.0</td>
<td>4.0</td>
<td>3.3</td>
<td>5.7</td>
<td>11.0</td>
<td>.</td>
</tr>
<tr>
<td>1st tercile</td>
<td>61.5</td>
<td>31.4</td>
<td>26.3</td>
<td>25.1</td>
<td>16.9</td>
<td>40.9</td>
<td>83.7</td>
<td>8.4</td>
</tr>
<tr>
<td>2nd tercile</td>
<td>23.1</td>
<td>17.9</td>
<td>11.4</td>
<td>13.5</td>
<td>9.5</td>
<td>19.2</td>
<td>31.6</td>
<td>.</td>
</tr>
<tr>
<td>3rd tercile</td>
<td>13.4</td>
<td>.</td>
<td>4.7</td>
<td>6.0</td>
<td>6.3</td>
<td>9.7</td>
<td>15.9</td>
<td>.</td>
</tr>
<tr>
<td>Total</td>
<td>41.7</td>
<td>24.9</td>
<td>10.0</td>
<td>10.9</td>
<td>10.1</td>
<td>18.2</td>
<td>28.9</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Shares of affected households in % of all households

| Total | 7.6 | 3.6 | 29.3 | 100.0 | 8.1 | 19.0 | 8.8 | 4.5 | 27.7 |

S: Statistics Austria, EU-SILC 2016; OeNB, HFCS 2014; WIFO calculations. – "." ... Result is based on low case numbers in the sample.
Redistribution: Net payers and receivers, 2015

Quantiles in terms of primary income

<table>
<thead>
<tr>
<th></th>
<th>Baseline version</th>
<th></th>
<th>Alternative version</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary income</td>
<td>Disposable income</td>
<td>Secondary income</td>
<td>Primary income</td>
</tr>
<tr>
<td></td>
<td>incl. statutory</td>
<td></td>
<td></td>
<td>excl. statutory</td>
</tr>
<tr>
<td>income</td>
<td>pensions</td>
<td></td>
<td></td>
<td>pensions</td>
</tr>
<tr>
<td>1\textsuperscript{st} decile</td>
<td>272</td>
<td>900</td>
<td>1,378</td>
<td>0</td>
</tr>
<tr>
<td>2\textsuperscript{nd} decile</td>
<td>1,109</td>
<td>1,214</td>
<td>1,735</td>
<td>80</td>
</tr>
<tr>
<td>3\textsuperscript{rd} decile</td>
<td>1,571</td>
<td>1,469</td>
<td>1,898</td>
<td>277</td>
</tr>
<tr>
<td>4\textsuperscript{th} decile</td>
<td>1,973</td>
<td>1,710</td>
<td>2,095</td>
<td>762</td>
</tr>
<tr>
<td>5\textsuperscript{th} decile</td>
<td>2,341</td>
<td>1,929</td>
<td>2,291</td>
<td>1,681</td>
</tr>
<tr>
<td>6\textsuperscript{th} decile</td>
<td>2,733</td>
<td>2,190</td>
<td>2,518</td>
<td>2,479</td>
</tr>
<tr>
<td>7\textsuperscript{th} decile</td>
<td>3,189</td>
<td>2,468</td>
<td>2,729</td>
<td>3,214</td>
</tr>
<tr>
<td>8\textsuperscript{th} decile</td>
<td>3,759</td>
<td>2,784</td>
<td>3,032</td>
<td>4,048</td>
</tr>
<tr>
<td>9\textsuperscript{th} decile</td>
<td>4,662</td>
<td>3,311</td>
<td>3,476</td>
<td>5,158</td>
</tr>
<tr>
<td>10\textsuperscript{th} decile</td>
<td>8,165</td>
<td>5,423</td>
<td>5,412</td>
<td>8,826</td>
</tr>
<tr>
<td>1\textsuperscript{st} tercile</td>
<td>1,070</td>
<td>1,240</td>
<td>1,709</td>
<td>156</td>
</tr>
<tr>
<td>2\textsuperscript{nd} tercile</td>
<td>2,552</td>
<td>2,068</td>
<td>2,404</td>
<td>2,047</td>
</tr>
<tr>
<td>3\textsuperscript{rd} tercile</td>
<td>5,310</td>
<td>3,711</td>
<td>3,856</td>
<td>5,756</td>
</tr>
</tbody>
</table>

→ Poorest 40 (50) percent of households are net receivers and the richest 60 (50) percent are net payers

S: Statistics Austria, EU-SILC 2016, Consumer Survey 2014/15; OeNB, HFCS 2014; WIFO calculations.
Income spread massively reduced by redistribution

- Before redistribution, income in the top decile of the income distribution was 30 times that of households in the bottom decile; after redistribution, it was only 5.5 times higher

Redistribution mostly through expenditure side

- 41% of total redistribution attributable public benefits in kind, 31% to cash benefits
- Taxes and social contributions only accounted for 28% of redistribution
- The regressive effect of indirect taxes lowered the extent of redistribution

Monetary redistribution: Only for 20% poorest households monetary transfers outweigh the burden from income taxes and employees' social contributions

Total redistribution: The poorest 40% of households were net receivers and the richest 60 percent net payers (baseline version)

Survey data

- Gini coefficient of primary income (left axis)
- Gini coefficient of secondary income (left axis)
- Extent of redistribution (right axis)

Administrative data

# Change in poverty rates by household type, 2010 – 2015

<table>
<thead>
<tr>
<th></th>
<th>Income from labour and capital</th>
<th>Primary income</th>
<th>Total gross income</th>
<th>Disposable income</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relative poverty ratio 2015, percent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All households</td>
<td>34.8</td>
<td>23.2</td>
<td>19.2</td>
<td>15.5</td>
</tr>
<tr>
<td><strong>Change 2010-2015, percentage points</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All households</td>
<td>+1.2</td>
<td>+0.1</td>
<td>-0.1</td>
<td>+0.0</td>
</tr>
</tbody>
</table>

**Main income earner**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Relative poverty ratio 2015, percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 45 years with child</td>
<td>+0.5 +4.3 +3.1 +3.1</td>
</tr>
<tr>
<td>Up to 45 years without child</td>
<td>+0.1 -2.9 -1.8 -1.2</td>
</tr>
<tr>
<td>46 to 65 years with child</td>
<td>+3.2 +1.2 +1.7 +2.3</td>
</tr>
<tr>
<td>46 to 65 years without child</td>
<td>+0.1 +0.1 +0.1 -1.0</td>
</tr>
<tr>
<td>66 years and older</td>
<td>+2.2 -4.9 -5.8 -4.7</td>
</tr>
</tbody>
</table>

S: Statistik Austria, EU-SILC 2011 (administrative data), EU-SILC 2016; HFCS 2009, HFCS 2014; WIFO calculations.

Relative poverty ratio: share of persons with income no higher than 60 percent of the median for the respective household income.
Real income growth or loss by household type between 2010 and 2015

Household types according to main earner

- Without children
- With children

Age groups:
- Up to 35 years
- 36 to 45 years
- 46 to 55 years
- 56 to 65 years
- 66 years and older

Primary income
Disposable income
Secondary income

Changes in overall redistribution: main results

- Primary income slightly **less unevenly distributed** in 2015 than in 2010 – after one decade of rising inequality

- Nevertheless extent of **redistribution** slightly **increased**
  - Automatic stabilisers (unemployment, income tax)
  - Demography

- **Stability on average masks** household **mobility** across the income distribution:
  - In contrast to other groups, households with **younger adults** experienced **real income losses** both before and after redistribution
    - **downward** shift in the income distribution

- Relative **at-risk-of-poverty rate** increased in households with children and decreased in households with pensioners
Impact of the Covid-19 crisis on the income distribution 2020

Fink, M., Moreau, C., Rocha-Akis, S. (2020)

- **Nowcasting and microsimulation** based on Labour Force Survey and other microdata up to **June 2020**
- Excludes self-employed
- Completion: August 2020
- Funded by the Ministry of Social Affairs

**Main results**

- **Heterogeneous effects** by socio-demographic characteristics
- **Poorest 20%** of population experienced **slightly positive effects** on disposable income due to implemented crisis measures and low attachment to labour force
- **Income losses** of affected workers **increase** both in absolute and relative terms **with rising pre-COVID income** (decreasing effective net replacement rates of unemployment benefits and short-time work)
Distribution of COVID-shock, 2020

Based on data up to June 2020.

S: WIFO Micromod. Data: Statistik Austria, EU-SILC 2018; Statistik Austria, Microcensus 2020; BMAFJ, Short-time work data; DVSV.
COVID-19 revenue and distributional effects of fiscal measures


- Cyclical, fiscal and distributional effects of selected measures at three successive levels: micro, macro and sectoral-regional levels
- Microsimulation based on Labour Force Survey and other microdata up to September 2020
- Completion: December 2020
- Funded by the Ministry of Finance

Main results disregarding short-time work:

- Distributional impact mainly determined by income tax reform and subsidies to self-employed (Hardship Fund): half of the volume goes to the upper third of the population

- Relative increase in disposable income strongest in the lower income third (+3.1%)
Effect of fiscal measures on disposable household income, 2020

S: WIFO Micromod. Data: Statistik Austria, EU-SILC 2018; Statistik Austria, Microcensus 2020; BMAFJ, Short-time work data; DVSV, WKO. Based on data up to September 2020.

- *) The unemployment bonus takes into account the first payment in September. The second payment in December could no longer be taken into account in this study due to the timing of the announcement.
Impact of short-time work

- Requires **counterfactual scenario**: developments in the labor market due to COVID-19 crisis **in the absence of the short-time work instrument**

**Main results**

- Increase in employment $\rightarrow$ increase in aggregate gross earned income (benefitting mostly middle and upper third)

- **Offsetting income effects:**
  - Increase in social security contributions and income taxes
  - Decrease in unemployment $\rightarrow$ decrease in unemployment insurance benefits

- **Modest net increase in aggregate disposable household income** due to short-time work instrument

- Yet, significant contribution to **stabilising employment** and preventing a stronger rise in unemployment and related consequences
Aggregate disposable household income effect of short-time work, 2020

Pre-COVID disposable income

- Gross earned income
- Employee social contributions
- Income tax
- Monetary transfers
- Disposable household income

S: WIFO Micromod. Data: Statistik Austria, EU-SILC 2018; Statistik Austria, Microcensus 2020; BMAFJ, Short-time work data; DVSV, WKO. Based on data up to September 2020.


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