**Appendix I**

**Table A1. Overview of the hypotheses**

|  |  |  |
| --- | --- | --- |
| **1. Positive versus negative policy feedback** | | |
| H1a | The more welfare policies are targeted at lower (or higher) incomes, the more citizens will support low-income (or high-income) targeting. | Positive feedback hypothesis |
| H1b | The more welfare policies are targeted at lower (or higher) incomes, the less citizens will support low-income (or high-income) targeting. | Negative feedback hypothesis |
| **2. De jure policy design versus de facto policy outcomes** | | |
| H2a | The relationship between targeting preferences and targeting outcomes is stronger than their relationship with targeting designs. | Outcomes-matter-more hypothesis |
| H2b | The relationship between targeting preferences and targeting designs is stronger than their relationship with targeting outcomes. | Designs-matter-more hypothesis |

**Appendix II**

In the following, we compare the targeting design indicator for unemployment benefits and income tax rates with the outcomes achieved by these policy instruments. The left-hand panel of Figure A1 plots the targeting design of tax rates, measured on a distribution of similar hypothetical single person households, with incomes ranging from 0 to 220% of the average wage in each country. We calculate the extent to which higher tax rates are due by higher earning individuals, and show large cross-national variation in the extent to which tax systems are characterized by low-income targeting (i.e. beneficial to lower incomes). The targeting design indicator is positively related with the actual targeting outcomes achieved by the tax system. The negative concentration coefficient calculated on the tax shares paid by each actual respondent of the EU-SILC shows that also in reality, higher earning individuals face higher tax rates. The correlation, at .43, is significant but far from perfect. Even though there may be a lean progressive tax design, the real-world constellation of the population, in which children of a certain age may qualify household heads for tax reductions, certain income sources are taxed differently from others, or in which higher earning individuals may “optimize” their tax declarations, clearly obfuscates these intentions.

The right-hand panel of Figure A1 investigates the relationship between the targeting design of unemployment benefits, and the targeting outcomes achieved by those benefits in different countries. A value of zero on the targeting design indicator depicted on the x-axis (as is the case in Greece and the United Kingdom) means that everyone receives the same amount, whereas positive amounts indicate that (previously) higher earning individuals receive higher amounts. This is the case in all other countries, indicating that unemployment benefit amounts appear to be somewhat targeted towards those who previously had higher incomes. What does this mean regarding the targeting outcomes of unemployment benefits? As unemployment benefits are only received by those that are currently unemployed (and hence out of employment income), unemployment benefits do appear to end up with those that are poorer (i.e. a negative targeting outcomes indicator). Also here, the correlation with targeting outcomes of unemployment benefits is significant but far from perfect (0.46). We find that in countries in which benefits are higher for those that were previously higher earners (and hence also where replacement rates for this group are higher), the targeting outcomes are closer to (or above) zero, indicating a non-targeted unemployment benefit system in terms of outcomes.

**Figure A1. Correlations between targeting design and targeting outcomes for tax rates and unemployment benefit amounts**



Source: Targeting intentions indicator from Marchal and Van Lancker (2019). Targeting outcomes calculated on data from the EU-SILC.

**Appendix III**

**Table A2. Targeting preferences for unemployment benefits and income taxes, per country**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Country** | **Unemployment benefits** | | | **Income taxes** | | |
|  | ***Low-income targeting***  (= higher benefits for lower earners) | ***No targeting***  (=equal benefits for higher and lower earners) | ***High-income targeting***  (=higher benefits for higher earners) | ***Low-income targeting***  (=higher share for higher earners) | ***No targeting***  (=equal share for higher and lower earners) | ***High-income targeting***  (=equal amount for higher and lower earners) |
| BE | 13.4% | 61.8% | 24.7% | 50.8% | 40.7% | 8.5% |
| BG | 6.2% | 53.0% | 40.8% | 52.3% | 42.0% | 5.8% |
| CH | 9.4% | 51.2% | 39.4% | 55.8% | 40.9% | 3.3% |
| CY | 17.9% | 58.6% | 23.5% | 57.3% | 39.3% | 3.4% |
| CZ | 6.2% | 46.9% | 46.9% | 55.2% | 39.2% | 5.5% |
| DE | 6.8% | 34.0% | 59.2% | 46.9% | 45.9% | 7.2% |
| DK | 7.7% | 78.1% | 14.2% | 49.0% | 39.7% | 11.3% |
| EE | 8.3% | 69.3% | 22.4% | 45.9% | 42.5% | 11.5% |
| ES | 7.6% | 35.3% | 57.1% | 58.2% | 38.2% | 3.7% |
| FI | 15.0% | 54.1% | 30.9% | 57.3% | 37.2% | 5.5% |
| FR | 14.2% | 47.5% | 38.3% | 42.5% | 50.5% | 7.0% |
| GB | 13.9% | 71.6% | 14.5% | 46.4% | 41.7% | 11.9% |
| GR | 19.6% | 71.1% | 9.3% | 49.7% | 47.2% | 3.1% |
| HR | 8.4% | 80.3% | 11.4% | 36.6% | 52.4% | 10.9% |
| HU | 24.1% | 54.5% | 21.4% | 52.9% | 40.6% | 6.5% |
| IE | 12.9% | 73.1% | 14.0% | 64.8% | 25.8% | 9.5% |
| IL | 13.7% | 43.3% | 43.0% | 71.8% | 20.5% | 7.7% |
| LV | 7.1% | 41.9% | 51.0% | 43.9% | 49.6% | 6.5% |
| NL | 10.3% | 59.6% | 33.1% | 52.3% | 39.9% | 7.8% |
| NO | 11.7% | 59.6% | 28.7% | 49.3% | 44.6% | 6.0% |
| PL | 6.4% | 67.1% | 26.5% | 47.6% | 42.4% | 10.0% |
| PT | 10.0% | 28.0% | 62.0% | 35.8% | 57.1% | 7.0% |
| RO | 17.1% | 53.9% | 28.9% | 45.1% | 47.5% | 7.4% |
| RU | 4.1% | 55.7% | 40.2% | 50.1% | 44.0% | 5.9% |
| SE | 10.5% | 59.5% | 30.0% | 44.4% | 46.7% | 8.8% |
| SI | 20.2% | 59.7% | 20.1% | 57.2% | 37.8% | 5.1% |
| SK | 5.8% | 44.1% | 50.1% | 47.0% | 48.0% | 5.0% |
| TR | 38.6% | 51.9% | 9.5% | 44.3% | 50.4% | 5.3% |
| UA | 2.9% | 54.4% | 42.7% | 49.6% | 44.2% | 6.3% |

**Appendix IV**

**Table A3. Robustness check with country-level controls**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Unemployment benefits** (ref.= no targeting) | | | | | | | |
|  | Low-income targeting | | | | High-income targeting | | | |
|  | M1 | M2 | M3 | M4 | M1 | M2 | M3 | M4 |
| **Targeting design** |  |  |  |  |  |  |  |  |
| benefit amount | .034 | .041 | .022 | .041 | **.401\*\*** | **.418\*\*** | **.433\*\*\*** | **.435\*\*\*** |
| **Targeting outcome** |  |  |  |  |  |  |  |  |
| concentration coefficient | -.123 | -.122 | -.084 | -.087 | .118 | .257 | .078 | .153 |
| **Country-level controls** |  |  |  |  |  |  |  |  |
| GDP | .012 |  |  |  | -.115 |  |  |  |
| Gini (pre transfers) |  | .022 |  |  |  | .234\* |  |  |
| Gini (post transfers) |  |  | .017 |  |  |  | .232\* |  |
| Unemployment spending |  |  |  | .093 |  |  |  | .185 |
| **Model information** |  |  |  |  |  |  |  |  |
| AIC | 74497 | 74198 | 71605 | 71602 | 74497 | 74198 | 71605 | 71602 |
| BIC | 74628 | 74329 | 71735 | 71731 | 74628 | 74329 | 71735 | 71731 |
| N country level | 23 | 23 | 22 | 22 | 23 | 23 | 22 | 22 |
| N individual level | 40922 | 40922 | 39626 | 39626 | 40922 | 40922 | 39626 | 39626 |
|  | **Income taxation** (ref.= no targeting) | | | | | | | |
|  | Low-income targeting | | | | High-income targeting | | | |
|  | M5 | M6 | M7 | M8 | M5 | M6 | M7 | M8 |
| **Targeting design** |  |  |  |  |  |  |  |  |
| tax rate | .097 | -.096 | -.071 | -.092 | .215 | -.057 | -.009 | .022 |
| **Targeting outcome** |  |  |  |  |  |  |  |  |
| concentration coefficient | -.193 | -.036 | -.057 | -.029 | **-.362\*\*\*** | **-.147\*\*** | **-.189\*\*\*** | **-.233\*\*\*** |
| **Country-level controls** |  |  |  |  |  |  |  |  |
| GDP | .243 |  |  |  | .302\* |  |  |  |
| Gini (pre transfers) |  | -.100\*\*\* |  |  |  | .077 |  |  |
| Gini (post transfers) |  |  | -.135\* |  |  |  | -.102 |  |
| Tax level |  |  |  | .041 |  |  |  | .228\*\*\* |
| **Model information** |  |  |  |  |  |  |  |  |
| AIC | 73237 | 73264 | 70908 | 64007 | 73237 | 73264 | 70908 | 64007 |
| BIC | 73368 | 73395 | 71083 | 64134 | 73368 | 73395 | 71083 | 64134 |
| N country level | 23 | 23 | 22 | 20 | 23 | 23 | 22 | 20 |
| N individual level | 41483 | 41483 | 40127 | 36193 | 41483 | 41483 | 40127 | 36193 |

Notes: \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. The figures reported in the table are standardized linear regression coefficients. Analyses weighted by: post-stratification weights provided by ESS. AIC=Aikake Information Criterion; BIC=sample-size adjusted Bayesian Information Criterion. “GDP” is measured as the GDP per capita at Purchasing Power Parity. “Gini (pre transfers)” is measured as the Gini coefficient of equivalized disposable income before social transfers, pensions included. “Gini (post transfers)” is measured as the Gini coefficient of equivalized disposable income after social transfers. “Unemployment spending” is measured as the level of spending on unemployment benefits as a percentage of GDP. “Tax level” is measured as the annual amount of general income taxes levied on individual or household income as a percentage of GDP. All country-level control variables are taken from Eurostat and/or OECD databases. The models also include the same individual-level controls as the main analyses reported in Table 2.

**Appendix V**

**Table A4. Robustness check with objective income indicator**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Unemployment benefits** (ref.= no targeting) | | | | | | | |
|  | Low-income targeting | | | | High-income targeting | | | |
|  | M1 | M2 | M3 | M4 | M1 | M2 | M3 | M4 |
| **Targeting design** |  |  |  |  |  |  |  |  |
| benefit amount | -.021 |  | .021 | **.029** | .454\*\*\* |  | .372\*\* | **.442\*\*\*** |
| **Targeting outcome** |  |  |  |  |  |  |  |  |
| concentration coefficient |  | .012 | -.058 | **-.078** |  | .232 | .150 | **.069** |
| **Individual-level controls** |  |  |  |  |  |  |  |  |
| Age |  |  |  | **.002** |  |  |  | **.002** |
| gender (ref.=male) |  |  |  | **-.031** |  |  |  | **-.127\*\*\*** |
| education (in years) |  |  |  | **-.048\*\*\*** |  |  |  | **.034\*\*** |
| objective income (in deciles) |  |  |  | **-.054\*\*\*** |  |  |  | **.024** |
| employment status (ref.=paid work) |  |  |  |  |  |  |  |  |
| Retired |  |  |  | **.066** |  |  |  | **.002** |
| unemployed/sick/disabled |  |  |  | **.155** |  |  |  | **.001** |
| education |  |  |  | **.142** |  |  |  | **-.369\*\*\*** |
| housework |  |  |  | **.178\*** |  |  |  | **-.014** |
| **Model information** |  |  |  |  |  |  |  |  |
| AIC | 87795 | 80132 | 76584 | **55611** | 87795 | 80132 | 76584 | **55611** |
| BIC | 81817 | 80154 | 76617 | **55724** | 81817 | 80154 | 76617 | **55724** |
| N country level | 24 | 24 | 23 | **21** | 24 | 24 | 23 | **21** |
| N individual level | 43687 | 42630 | 41572 | **30535** | 43687 | 42630 | 41572 | **30535** |
|  | **Income taxation** (ref.= no targeting) | | | | | | | |
|  | Low-income targeting | | | | High-income targeting | | | |
|  | M5 | M6 | M7 | M8 | M5 | M6 | M7 | M8 |
| **Targeting design** |  |  |  |  |  |  |  |  |
| tax rate | -.181\*\* |  | -.086 | **-.152\*** | -.176\*\* |  | -.050 | **-.052** |
| **Targeting outcome** |  |  |  |  |  |  |  |  |
| concentration coefficient |  | -.074 | -.040 | **.005** |  | -.166\*\*\* | -.148\*\*\* | **-.118\*** |
| **Individual-level controls** |  |  |  |  |  |  |  |  |
| Age |  |  |  | **.010\*\*\*** |  |  |  | **-.017\*\*\*** |
| gender (ref.=male) |  |  |  | **-.110\*\*\*** |  |  |  | **.018** |
| education (in years) |  |  |  | **.000** |  |  |  | **-.040\*\*** |
| objective income (in deciles) |  |  |  | **-.051\*\*\*** |  |  |  | **-.040\*\*** |
| employment status (ref.=paid work) |  |  |  |  |  |  |  |  |
| Retired |  |  |  | **.016** |  |  |  | **.303\*\*\*** |
| unemployed/sick/disabled |  |  |  | **.139\*** |  |  |  | **.296\*\*\*** |
| education |  |  |  | **.071** |  |  |  | **.186\*** |
| housework |  |  |  | **.003** |  |  |  | **.266\*\*** |
| **Model information** |  |  |  |  |  |  |  |  |
| AIC | 82701 | 77327 | 75463 | **54467** | 82701 | 77327 | 75463 | **54467** |
| BIC | 82723 | 77259 | 75485 | **54581** | 82723 | 77259 | 75485 | **54581** |
| N country level | 25 | 24 | 23 | **21** | 25 | 24 | 23 | **21** |
| N individual level | 46411 | 43203 | 42150 | **30845** | 46411 | 43203 | 42150 | **30845** |

Notes: \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. The figures reported in the table are standardized linear regression coefficients. Analyses weighted by: post-stratification weights provided by ESS. AIC=Aikake Information Criterion; BIC=sample-size adjusted Bayesian Information Criterion. Income is measured in the ESS as the self-reported total household income after tax and compulsory deductions, which is then placed in the appropriate decile of the actual household income range in respondents’ country of residence. Data on the income variable are missing for Bulgaria, Cyprus and Slovakia.

**Appendix VI**

**Table A5. Targeting indicators per country**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country** | **Unemployment benefits** | | **Income taxes** | |
|  | **Targeting design** | **Targeting outcome** | **Targeting design** | **Targeting outcome** |
| BE | .036 | -.287 | -.239 | -.234 |
| BG | .099 | -.087 | -.039 | -.168 |
| CH | .298 | -.147 | -.166 | .019 |
| CY | NA | .483 | NA | -.179 |
| CZ | .245 | -.264 | -.177 | -.216 |
| DE | .209 | -.303 | -.169 | -.125 |
| DK | .038 | -.327 | -.140 | -.114 |
| EE | .326 | .016 | -.157 | -.180 |
| ES | .141 | .079 | -.196 | -.208 |
| FI | .186 | -.311 | -.188 | -.081 |
| FR | .317 | .011 | -.170 | -.123 |
| GB | .002 | -.507 | -.199 | -.253 |
| GR | .000 | -.212 | -.129 | -.061 |
| HR | NA | NA | NA | NA |
| HU | .143 | -.308 | -.186 | -.236 |
| IE | .046 | -.218 | -.365 | -.417 |
| IL | NA | NA | -.287 | NA |
| LV | .335 | .104 | -.132 | -.179 |
| NL | .151 | -.008 | -.211 | -.122 |
| NO | .231 | -.282 | -.189 | -.001 |
| PL | .089 | -.048 | -.070 | -.083 |
| PT | .272 | -.070 | -.230 | -.179 |
| RO | .090 | -.098 | -.091 | -.276 |
| RU | NA | NA | NA | NA |
| SE | .106 | -.250 | -.174 | -.130 |
| SI | .163 | -.172 | -.153 | -.214 |
| SK | .335 | .026 | -.146 | -.183 |
| TR | .133 | NA | -.112 | NA |
| UA | NA | NA | NA | NA |

NA = missing. For the multilevel analyses, the targeting indicators were standardized.