

# Romania

## Detailed Human Capital projections to 2060

| Demographic indicators, Medium Scenario (SSP2) |           |           |           |           |           |           |
|------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                | 2010      | 2020      | 2030      | 2040      | 2050      | 2060      |
| Population (in millions)                       | 21.5      | 20.8      | 20.0      | 19.0      | 17.8      | 16.4      |
| Proportion age 65+                             | 0.15      | 0.18      | 0.21      | 0.27      | 0.33      | 0.37      |
| Proportion below age 20                        | 0.21      | 0.19      | 0.17      | 0.16      | 0.16      | 0.15      |
|                                                | 2005-2010 | 2015-2020 | 2025-2030 | 2035-2040 | 2045-2050 | 2055-2060 |
| Total Fertility Rate                           | 1.33      | 1.32      | 1.47      | 1.50      | 1.50      | 1.51      |
| Life expectancy at birth (in years)            |           |           |           |           |           |           |
| Male                                           | 69.57     | 72.48     | 75.15     | 77.62     | 79.93     | 81.91     |
| Female                                         | 76.82     | 79.59     | 81.89     | 84.09     | 86.21     | 88.01     |
| Five-year immigration flow (in '000)           | 42        | 42        | 44        | 45        | 45        | 44        |
| Five-year emigration flow (in '000)            | 142       | 87        | 73        | 63        | 55        | 48        |

| Human Capital indicators, Medium Scenario (SSP2)                                           |       |       |       |       |       |       |
|--------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|
|                                                                                            | 2010  | 2020  | 2030  | 2040  | 2050  | 2060  |
| <b>Population age 25+: highest educational attainment</b>                                  |       |       |       |       |       |       |
| E1 - no education                                                                          | 0.03  | 0.01  | 0.01  | 0.01  | 0.00  | 0.00  |
| E2 - incomplete primary                                                                    | 0.01  | 0.01  | 0.00  | 0.00  | 0.00  | 0.00  |
| E3 - primary                                                                               | 0.10  | 0.06  | 0.03  | 0.02  | 0.01  | 0.01  |
| E4 - lower secondary                                                                       | 0.23  | 0.19  | 0.15  | 0.12  | 0.09  | 0.06  |
| E5 - upper secondary                                                                       | 0.50  | 0.58  | 0.64  | 0.68  | 0.70  | 0.72  |
| E6 - post-secondary                                                                        | 0.14  | 0.16  | 0.17  | 0.18  | 0.19  | 0.21  |
| Mean years of schooling (in years)                                                         | 10.52 | 11.21 | 11.67 | 11.99 | 12.25 | 12.49 |
| <b>Gender gap (population age 25+): highest educational attainment (ratio male/female)</b> |       |       |       |       |       |       |
| E1 - no education                                                                          | 0.44  | 0.49  | 0.57  | 0.60  | 0.59  | 0.60  |
| E2 - incomplete primary                                                                    | 0.60  | 0.54  | 0.56  | 0.66  | 0.74  | 0.77  |
| E3 - primary                                                                               | 0.55  | 0.50  | 0.57  | 0.72  | 0.83  | 0.83  |
| E4 - lower secondary                                                                       | 0.77  | 0.72  | 0.69  | 0.70  | 0.72  | 0.74  |
| E5 - upper secondary                                                                       | 1.29  | 1.24  | 1.19  | 1.15  | 1.12  | 1.10  |
| E6 - post-secondary                                                                        | 1.08  | 0.92  | 0.82  | 0.77  | 0.77  | 0.80  |
| minus female)                                                                              | 0.97  | 0.60  | 0.28  | 0.06  | -0.06 | -0.10 |
| <b>Women age 20-39: highest educational attainment</b>                                     |       |       |       |       |       |       |
| E1 - no education                                                                          | 0.01  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| E2 - incomplete primary                                                                    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| E3 - primary                                                                               | 0.03  | 0.01  | 0.01  | 0.00  | 0.00  | 0.00  |
| E4 - lower secondary                                                                       | 0.18  | 0.12  | 0.10  | 0.09  | 0.08  | 0.08  |
| E5 - upper secondary                                                                       | 0.61  | 0.66  | 0.68  | 0.69  | 0.68  | 0.68  |
| E6 - post-secondary                                                                        | 0.18  | 0.20  | 0.21  | 0.22  | 0.24  | 0.24  |
| Mean years of schooling (in years)                                                         | 11.66 | 12.14 | 12.34 | 12.50 | 12.59 | 12.64 |

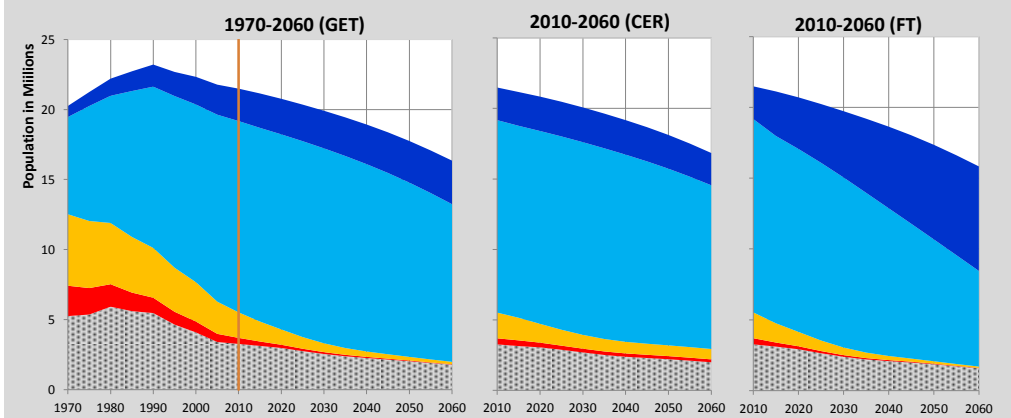
### Education scenarios

GET : Global Education Trend Scenario (Medium assumption also used for SSP2)

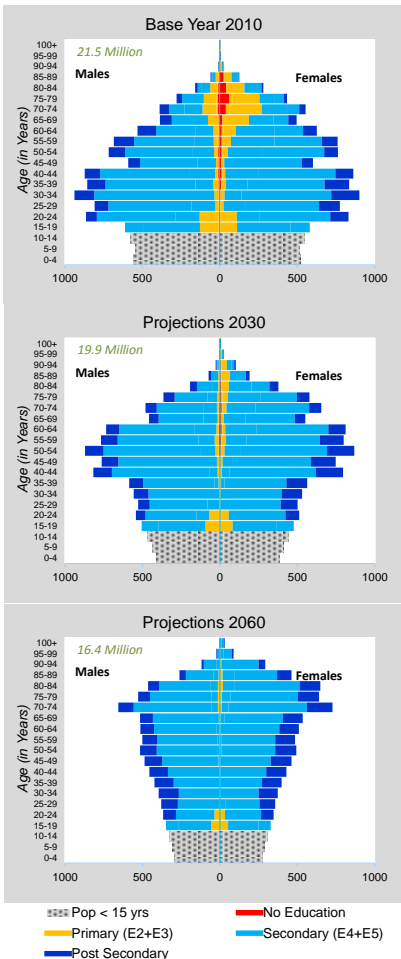
CER: Constant Enrollment Rates Scenario (assumption of no future improvements)

FT: Fast Track Scenario (assumption of education expansion according to fastest historical experience)

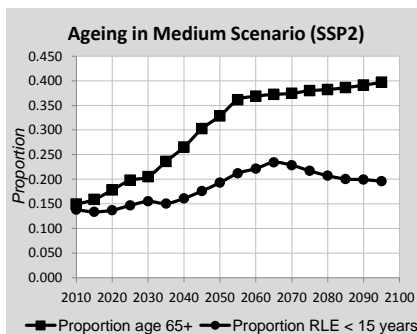
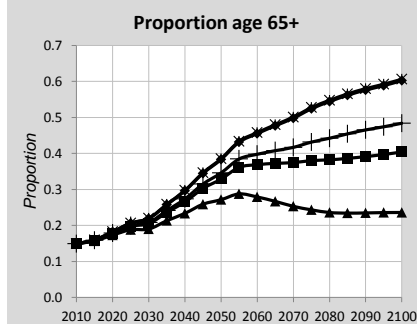
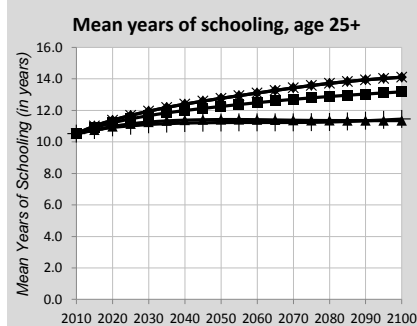
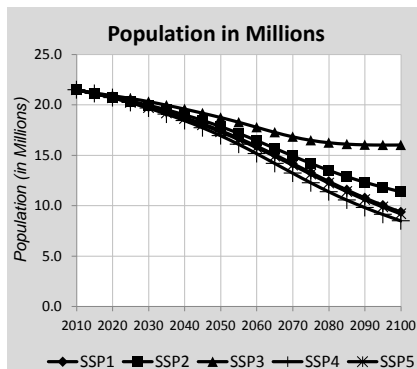
Population size by educational attainment according to three education scenarios: GET, CER, and FT



## Pyramids by education, Medium Scenario



## Romania (Continued)



### Alternative scenarios to 2100

#### Projection results by scenario (SSP 1-5)

|                                                                        | 2010  | 2020  | 2030  | 2040  | 2050  | 2075  | 2100  |
|------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| <b>Population (in millions)</b>                                        |       |       |       |       |       |       |       |
| SSP1 - Rapid Development                                               | 21.49 | 20.72 | 19.78 | 18.73 | 17.44 | 13.28 | 9.36  |
| SSP2 - Medium                                                          | 21.49 | 20.77 | 19.96 | 19.00 | 17.84 | 14.19 | 11.37 |
| SSP3 - Stalled Development                                             | 21.49 | 20.91 | 20.32 | 19.58 | 18.74 | 16.48 | 16.02 |
| SSP4 - Inequality                                                      | 21.49 | 20.70 | 19.67 | 18.43 | 16.93 | 12.27 | 8.49  |
| SSP5 - Conventional Dev.                                               | 21.49 | 20.69 | 19.71 | 18.62 | 17.31 | 13.11 | 9.18  |
| <b>Proportion age 65+</b>                                              |       |       |       |       |       |       |       |
| SSP1 - Rapid Development                                               | 0.15  | 0.18  | 0.22  | 0.30  | 0.38  | 0.52  | 0.60  |
| SSP2 - Medium                                                          | 0.15  | 0.18  | 0.21  | 0.27  | 0.33  | 0.38  | 0.40  |
| SSP3 - Stalled Development                                             | 0.15  | 0.17  | 0.19  | 0.23  | 0.27  | 0.24  | 0.24  |
| SSP4 - Inequality                                                      | 0.15  | 0.18  | 0.21  | 0.27  | 0.35  | 0.43  | 0.48  |
| SSP5 - Conventional Dev.                                               | 0.15  | 0.18  | 0.22  | 0.30  | 0.39  | 0.53  | 0.61  |
| <b>Proportion below age 20</b>                                         |       |       |       |       |       |       |       |
| SSP1 - Rapid Development                                               | 0.21  | 0.18  | 0.15  | 0.13  | 0.11  | 0.08  | 0.07  |
| SSP2 - Medium                                                          | 0.21  | 0.19  | 0.17  | 0.16  | 0.16  | 0.15  | 0.15  |
| SSP3 - Stalled Development                                             | 0.21  | 0.20  | 0.20  | 0.20  | 0.21  | 0.23  | 0.24  |
| SSP4 - Inequality                                                      | 0.21  | 0.19  | 0.16  | 0.14  | 0.13  | 0.11  | 0.10  |
| SSP5 - Conventional Dev.                                               | 0.21  | 0.18  | 0.15  | 0.13  | 0.11  | 0.08  | 0.07  |
| <b>Proportion of Women age 20-39 with at least secondary education</b> |       |       |       |       |       |       |       |
| SSP1 - Rapid Development                                               | 0.96  | 0.99  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| SSP2 - Medium                                                          | 0.96  | 0.98  | 0.99  | 1.00  | 1.00  | 1.00  | 1.00  |
| SSP3 - Stalled Development                                             | 0.96  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  |
| SSP4 - Inequality                                                      | 0.96  | 0.88  | 0.84  | 0.84  | 0.84  | 0.84  | 0.84  |
| SSP5 - Conventional Dev.                                               | 0.96  | 0.99  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| <b>Mean years of schooling, age 25+</b>                                |       |       |       |       |       |       |       |
| SSP1 - Rapid Development                                               | 10.52 | 11.38 | 11.95 | 12.40 | 12.77 | 13.58 | 14.11 |
| SSP2 - Medium                                                          | 10.52 | 11.21 | 11.67 | 11.99 | 12.25 | 12.80 | 13.18 |
| SSP3 - Stalled Development                                             | 10.52 | 10.98 | 11.26 | 11.38 | 11.42 | 11.37 | 11.35 |
| SSP4 - Inequality                                                      | 10.52 | 10.92 | 11.11 | 11.20 | 11.23 | 11.25 | 11.45 |
| SSP5 - Conventional Dev.                                               | 10.52 | 11.38 | 11.95 | 12.40 | 12.76 | 13.58 | 14.11 |

#### Demographic assumptions underlying SSPs

|                                                            | 2010-2015 | 2020-2025 | 2030-2035 | 2040-2045 | 2050-2055 | 2075-2080 | 2095-2100 |
|------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Total fertility rate</b>                                |           |           |           |           |           |           |           |
| SSP1 - Rapid Development                                   | 1.20      | 1.14      | 1.13      | 1.11      | 1.10      | 1.12      | 1.15      |
| SSP2 - Medium                                              | 1.25      | 1.40      | 1.50      | 1.50      | 1.50      | 1.55      | 1.58      |
| SSP3 - Stalled Development                                 | 1.36      | 1.70      | 1.90      | 1.96      | 1.99      | 2.06      | 2.12      |
| SSP4 - Inequality                                          | 1.23      | 1.25      | 1.23      | 1.20      | 1.18      | 1.21      | 1.24      |
| SSP5 - Conventional Dev.                                   | 1.20      | 1.14      | 1.13      | 1.11      | 1.10      | 1.12      | 1.15      |
| <b>Life expectancy at birth for females (in years)</b>     |           |           |           |           |           |           |           |
| SSP1 - Rapid Development                                   | 79.9      | 82.9      | 85.9      | 89.0      | 91.9      | 98.8      | 104.5     |
| SSP2 - Medium                                              | 78.3      | 80.7      | 83.0      | 85.2      | 87.1      | 91.7      | 95.3      |
| SSP3 - Stalled Development                                 | 79.0      | 80.1      | 81.1      | 82.2      | 83.0      | 84.8      | 86.3      |
| SSP4 - Inequality                                          | 79.4      | 81.4      | 83.5      | 85.5      | 87.3      | 91.4      | 94.9      |
| SSP5 - Conventional Dev.                                   | 79.9      | 82.9      | 85.9      | 89.0      | 91.9      | 98.8      | 104.5     |
| <b>Migration – net flow over five years (in thousands)</b> |           |           |           |           |           |           |           |
| SSP1 - Rapid Development                                   | -65       | -36       | -23       | -12       | -5        | 0         | 0         |
| SSP2 - Medium                                              | -64       | -37       | -24       | -14       | -7        | -1        | 0         |
| SSP3 - Stalled Development                                 | -54       | -18       | -12       | -7        | -4        | 0         | 0         |
| SSP4 - Inequality                                          | -65       | -36       | -23       | -11       | -4        | 1         | 0         |
| SSP5 - Conventional Dev.                                   | -76       | -55       | -36       | -20       | -10       | -2        | 0         |

#### Ageing indicators, Medium Scenario (SSP2)

|                           | 2010  | 2020  | 2030  | 2040  | 2050  | 2075  | 2095  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|
| Median Age                | 38.46 | 42.54 | 46.69 | 50.96 | 53.14 | 55.38 | 56.54 |
| Prospective Median Age    | 38.46 | 40.34 | 42.39 | 44.62 | 45.03 | 43.00 | 40.58 |
| Proportion age 65+        | 0.15  | 0.18  | 0.21  | 0.27  | 0.33  | 0.38  | 0.40  |
| Proportion RLE < 15 years | 0.14  | 0.14  | 0.16  | 0.16  | 0.19  | 0.22  | 0.20  |