

## Supplement Index

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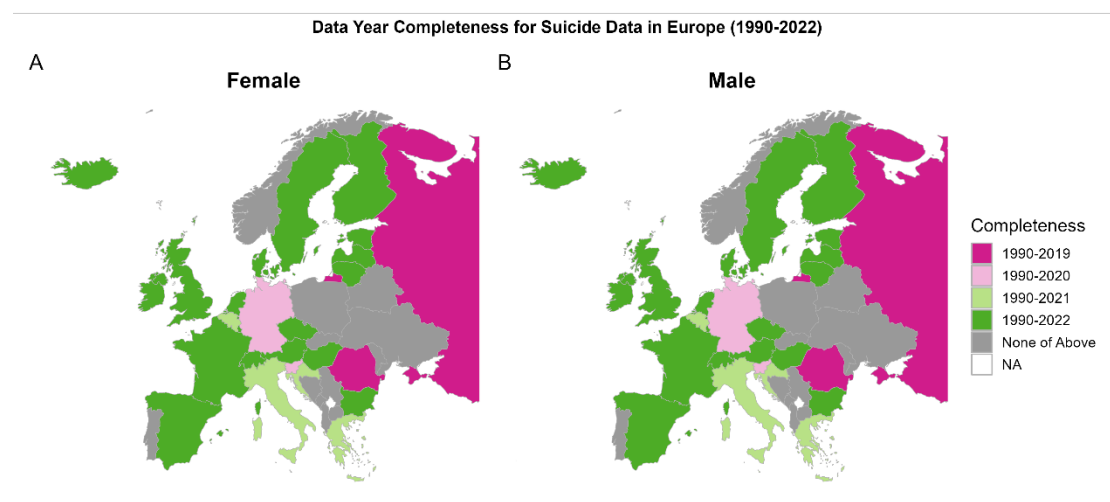


Figure S1. Completeness of European suicide data in WHO mortality database

Table S1. United Nations Geoscheme of Europe

| Subregion of Europe | Countries  |
|---------------------|--|
| Eastern Europe      | Belarus, Bulgaria, Czech Republic, Hungary, Poland, Republic of Moldova,<br>Romania, Russian Federation, Slovakia, Ukraine   |
| Northern Europe     | Åland Islands, Channel Islands (Guernsey, Jersey, Sark), Denmark, Estonia,<br>Faroe Islands, Finland, Iceland, Ireland, Isle of Man, Latvia, Lithuania,<br>Norway, Svalbard and Jan Mayen Islands, Sweden, United Kingdom of<br>Great Britain and Northern Ireland |
| Southern Europe     | Albania, Andorra, Bosnia and Herzegovina, Croatia, Gibraltar, Greece,<br>Holy See, Italy, Malta, Montenegro, Portugal, San Marino, Serbia,<br>Slovenia, Spain, The former Yugoslav Republic of Macedonia   |
| Western Europe      | Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco,<br>Netherlands, Switzerland  |

Table S2. Merged suicide means code in ICD10

| Category                               | ICD10 code  |
|--|---|
| Poisoning                              | X60, X61, X62, X63, X64, X65, X66, X67, X68,<br>X69 |
| Hanging, strangulation and suffocation | X70   |
| Drowning and submersion                | X71   |
| Firearm discharge                      | X72, X73, X74, X75                                  |
| Sharp or blunt objects                 | X78, X79  |
| Jumping from a high place              | X80   |
| Other or unspecified mean              | X76, X77, X81, X82, X83, X84, Y87.0                 |

Table S3. Longitudinal age curve of suicide mortality rate (per 100,000 population) by sex within reference cohort born in 1955, across four European subregions

| Age Group | Eastern Europe         |                      | Northern Europe     |                      | Southern Europe     |                      | Western Europe      |                      |
|-----------|------------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|
|           | Male Rate (95% CI)     | Female Rate (95% CI) | Male Rate (95% CI)  | Female Rate (95% CI) | Male Rate (95% CI)  | Female Rate (95% CI) | Male Rate (95% CI)  | Female Rate (95% CI) |
| 15-19     | 65.42 (59.86,71.50)    | 15.49 (14.16,16.94)  | 15.50 (14.54,16.52) | 3.65 (3.37,3.96)     | 5.63 (5.25,6.04)    | 1.85 (1.70,2.02)     | 15.23 (14.6,15.88)  | 5.37 (5.01,5.75)     |
| 20-24     | 109.42 (101.71,117.70) | 14.77 (13.61,16.03)  | 30.56 (29.09,32.10) | 5.42 (5.07,5.80)     | 11.2 (10.63,11.8)   | 2.38 (2.21,2.55)     | 27.09 (26.25,27.96) | 7.37 (6.97,7.78)     |
| 25-29     | 111.79 (104.62,119.45) | 14.06 (13.04,15.15)  | 30.82 (29.47,32.23) | 5.93 (5.59,6.30)     | 11.79 (11.25,12.36) | 2.75 (2.58,2.93)     | 28.26 (27.49,29.06) | 7.96 (7.60,8.35)     |
| 30-34     | 103.94 (97.85,110.41)  | 13.41 (12.53,14.36)  | 29.96 (28.73,31.24) | 6.22 (5.88,6.57)     | 11.72 (11.22,12.25) | 3.11 (2.94,3.29)     | 28.95 (28.24,29.69) | 8.55 (8.20,8.91)     |
| 35-39     | 90.92 (86.43,95.65)    | 12.6 (11.91,13.33)   | 29.06 (28.03,30.13) | 6.74 (6.43,7.07)     | 11.83 (11.37,12.03) | 3.48 (3.31,3.65)     | 30.40 (29.76,31.05) | 9.35 (9.03,9.69)     |
| 40-44     | 80.14 (76.46,84.01)    | 11.74 (11.15,12.37)  | 29.91 (28.90,30.96) | 7.14 (6.83,7.46)     | 12.94 (12.47,13.43) | 3.92 (3.75,4.11)     | 32.10 (31.47,32.75) | 10.45 (10.13,10.79)  |
| 45-49     | 69.31 (66.08,72.71)    | 10.71 (10.17,11.27)  | 28.44 (27.48,29.43) | 7.74 (7.41,8.07)     | 14.15 (13.66,14.67) | 4.22 (4.03,4.40)     | 32.53 (31.90,33.17) | 11.33 (10.99,11.67)  |
| 50-54     | 56.80 (53.91,59.83)    | 8.7 (8.24,9.18)      | 26.27 (25.36,27.22) | 7.66 (7.34,7.99)     | 15.28 (14.75,15.82) | 4.79 (4.59,5.00)     | 30.82 (30.22,31.44) | 11.45 (11.11,11.8)   |
| 55-59     | 43.19 (40.71,45.81)    | 6.32 (5.95,6.70)     | 23.02 (22.17,23.91) | 6.46 (6.17,6.76)     | 15.53 (14.99,16.10) | 4.60 (4.40,4.80)     | 28.09 (27.51,28.69) | 10.39 (10.07,10.72)  |
| 60-64     | 30.69 (28.64,32.90)    | 5.32 (4.99,5.67)     | 17.62 (16.88,18.40) | 5.35 (5.09,5.62)     | 15.41 (14.83,16.01) | 4.70 (4.49,4.92)     | 24.78 (24.21,25.37) | 9.02 (8.72,9.34)     |
| 65-69     | 27.65 (25.52,29.97)    | 4.67 (4.35,5.01)     | 14.96 (14.21,15.75) | 4.44 (4.19,4.71)     | 15.52 (14.85,16.22) | 4.56 (4.33,4.80)     | 24.25 (23.61,24.92) | 8.24 (7.92,8.57)     |
| 70-74     | 25.25 (23.03,27.68)    | 4.28 (3.97,4.62)     | 13.80 (13.02,14.62) | 3.88 (3.63,4.13)     | 17.24 (16.46,18.06) | 4.39 (4.15,4.63)     | 26.55 (25.80,27.33) | 7.83 (7.51,8.17)     |
| 75-79     | 24.36 (21.90,27.09)    | 4.18 (3.86,4.53)     | 13.75 (12.87,14.68) | 3.58 (3.34,3.84)     | 20.17 (19.2,21.18)  | 4.08 (3.85,4.32)     | 31.62 (30.67,32.61) | 7.54 (7.21,7.88)     |
| 80-84     | 23.83 (20.83,27.26)    | 4.19 (3.83,4.58)     | 14.57 (13.49,15.74) | 3.11 (2.87,3.38)     | 23.40 (22.17,24.7)  | 3.59 (3.36,3.83)     | 39.11 (37.80,40.46) | 7.36 (7.01,7.74)     |

Table S4. Period rate ratios of suicide mortality by sex referenced on period 2000-2004, across four European subregions

| Period Group | Eastern Europe   |                   | Northern Europe  |                   | Southern Europe  |                   | Western Europe   |                   |
|--------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
|              | Male Rate Ratio  | Female Rate Ratio | Male Rate Ratio  | Female Rate Ratio | Male Rate Ratio  | Female Rate Ratio | Male Rate Ratio  | Female Rate Ratio |
|              | (95% CI)         | (95% CI)          | (95% CI)         | (95% CI)          | (95% CI)         | (95% CI)          | (95% CI)         | (95% CI)          |
| 1990-1994    | 0.92 (0.89,0.96) | 1.16 (1.12,1.20)  | 1.18 (1.15,1.22) | 1.22 (1.18,1.27)  | 1.10 (1.07,1.13) | 1.16 (1.13,1.20)  | 1.18 (1.17,1.20) | 1.26 (1.23,1.29)  |
| 1995-1999    | 1.06 (1.02,1.10) | 1.14 (1.11,1.19)  | 1.14 (1.11,1.17) | 1.11 (1.07,1.14)  | 1.09 (1.06,1.12) | 1.10 (1.07,1.13)  | 1.09 (1.07,1.10) | 1.1 (1.07,1.12)   |
| 2000-2004    | -                | -                 | -                | -                 | -                | -                 | -                | -                 |
| 2005-2009    | 0.76 (0.73,0.79) | 0.80 (0.77,0.83)  | 0.88 (0.86,0.91) | 0.91 (0.88,0.94)  | 0.91 (0.88,0.93) | 0.88 (0.86,0.91)  | 0.89 (0.88,0.91) | 0.88 (0.86,0.90)  |
| 2010-2014    | 0.57 (0.54,0.59) | 0.60 (0.58,0.63)  | 0.86 (0.84,0.89) | 0.84 (0.81,0.87)  | 0.93 (0.91,0.96) | 0.87 (0.84,0.90)  | 0.85 (0.84,0.87) | 0.82 (0.80,0.84)  |
| 2015-2019    | 0.40 (0.38,0.42) | 0.42 (0.40,0.44)  | 0.82 (0.80,0.84) | 0.84 (0.81,0.87)  | 0.86 (0.84,0.88) | 0.86 (0.83,0.88)  | 0.76 (0.74,0.77) | 0.72 (0.70,0.73)  |



Table S5. Cohort rate ratios of suicide mortality by sex referenced on birth cohort 1955, across four European subregions

| Birth Cohort | Eastern Europe   |                   | Northern Europe  |                   | Southern Europe  |                   | Western Europe   |                   |
|--------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
|              | Male Rate Ratio  | Female Rate Ratio | Male Rate Ratio  | Female Rate Ratio | Male Rate Ratio  | Female Rate Ratio | Male Rate Ratio  | Female Rate Ratio |
|              | (95% CI)         | (95% CI)          | (95% CI)         | (95% CI)          | (95% CI)         | (95% CI)          | (95% CI)         | (95% CI)          |
| 1910         | 5.53 (4.28,7.13) | 9.42 (8.24,10.77) | 2.24 (1.95,2.59) | 3.07 (2.69,3.51)  | 2.06 (1.87,2.26) | 2.85 (2.56,3.17)  | 2.53 (2.40,2.68) | 3.48 (3.23,3.75)  |
| 1915         | 4.30 (3.60,5.12) | 7.99 (7.20,8.86)  | 1.92 (1.74,2.12) | 2.90 (2.64,3.19)  | 1.87 (1.74,2.00) | 2.41 (2.22,2.61)  | 2.14 (2.05,2.24) | 2.98 (2.81,3.17)  |
| 1920         | 3.08 (2.66,3.57) | 6.23 (5.69,6.83)  | 1.61 (1.49,1.75) | 2.32 (2.14,2.51)  | 1.59 (1.49,1.68) | 2.14 (2.00,2.29)  | 1.72 (1.66,1.79) | 2.33 (2.21,2.45)  |
| 1925         | 2.72 (2.44,3.03) | 4.71 (4.35,5.10)  | 1.45 (1.35,1.55) | 2.03 (1.89,2.18)  | 1.47 (1.40,1.55) | 1.80 (1.69,1.91)  | 1.53 (1.48,1.59) | 1.90 (1.81,1.99)  |
| 1930         | 2.72 (2.50,2.97) | 3.84 (3.57,4.13)  | 1.37 (1.29,1.45) | 1.77 (1.66,1.89)  | 1.34 (1.28,1.41) | 1.51 (1.43,1.6)   | 1.37 (1.33,1.41) | 1.60 (1.53,1.67)  |
| 1935         | 2.17 (2.01,2.35) | 2.83 (2.64,3.03)  | 1.27 (1.21,1.34) | 1.43 (1.35,1.52)  | 1.18 (1.12,1.23) | 1.36 (1.29,1.43)  | 1.23 (1.19,1.26) | 1.40 (1.34,1.45)  |
| 1940         | 1.87 (1.75,2.00) | 2.23 (2.09,2.38)  | 1.20 (1.15,1.26) | 1.32 (1.25,1.39)  | 1.05 (1.01,1.10) | 1.22 (1.16,1.28)  | 1.12 (1.09,1.15) | 1.29 (1.24,1.33)  |
| 1945         | 1.39 (1.31,1.49) | 1.60 (1.50,1.71)  | 1.05 (1.01,1.10) | 1.17 (1.12,1.23)  | 0.95 (0.91,0.99) | 1.06 (1.01,1.11)  | 1.01 (0.98,1.03) | 1.16 (1.12,1.20)  |
| 1950         | 1.18 (1.11,1.24) | 1.22 (1.15,1.29)  | 1.02 (0.98,1.06) | 1.07 (1.02,1.12)  | 0.97 (0.94,1.01) | 0.98 (0.93,1.02)  | 1.00 (0.98,1.02) | 1.04 (1.01,1.07)  |
| 1955         | -                | -                 | -                | -                 | -                | -                 | -                | -                 |
| 1960         | 0.81 (0.77,0.85) | 0.80 (0.76,0.85)  | 0.92 (0.89,0.96) | 0.96 (0.91,1.00)  | 1.04 (1.00,1.08) | 0.99 (0.95,1.04)  | 0.94 (0.92,0.96) | 0.94 (0.91,0.97)  |
| 1965         | 0.63 (0.59,0.67) | 0.66 (0.62,0.70)  | 0.87 (0.84,0.91) | 0.87 (0.83,0.91)  | 1.01 (0.97,1.05) | 0.96 (0.92,1.01)  | 0.84 (0.82,0.86) | 0.83 (0.8,0.86)   |
| 1970         | 0.49 (0.46,0.52) | 0.56 (0.53,0.60)  | 0.78 (0.75,0.81) | 0.78 (0.74,0.82)  | 0.96 (0.92,1.00) | 0.94 (0.89,0.99)  | 0.76 (0.74,0.78) | 0.72 (0.70,0.75)  |
| 1975         | 0.46 (0.44,0.50) | 0.50 (0.46,0.54)  | 0.68 (0.65,0.71) | 0.74 (0.70,0.79)  | 0.89 (0.85,0.93) | 0.87 (0.82,0.92)  | 0.65 (0.64,0.67) | 0.61 (0.58,0.64)  |
| 1980         | 0.43 (0.40,0.46) | 0.45 (0.42,0.49)  | 0.62 (0.59,0.65) | 0.73 (0.69,0.78)  | 0.82 (0.78,0.86) | 0.82 (0.76,0.87)  | 0.59 (0.57,0.61) | 0.52 (0.49,0.55)  |
| 1985         | 0.37 (0.34,0.40) | 0.40 (0.36,0.43)  | 0.56 (0.53,0.60) | 0.73 (0.68,0.78)  | 0.73 (0.68,0.77) | 0.73 (0.67,0.79)  | 0.53 (0.51,0.55) | 0.51 (0.48,0.54)  |
| 1990         | 0.32 (0.29,0.35) | 0.36 (0.33,0.40)  | 0.53 (0.50,0.57) | 0.77 (0.71,0.84)  | 0.65 (0.61,0.70) | 0.70 (0.64,0.78)  | 0.46 (0.44,0.48) | 0.47 (0.44,0.51)  |
| 1995         | 0.25 (0.22,0.29) | 0.32 (0.28,0.37)  | 0.47 (0.43,0.51) | 0.81 (0.73,0.90)  | 0.60 (0.55,0.66) | 0.69 (0.61,0.79)  | 0.41 (0.39,0.43) | 0.46 (0.42,0.50)  |
| 2000         | 0.20 (0.15,0.26) | 0.31 (0.25,0.38)  | 0.47 (0.41,0.54) | 0.90 (0.78,1.04)  | 0.67 (0.57,0.78) | 0.76 (0.64,0.91)  | 0.39 (0.35,0.42) | 0.52 (0.45,0.59)  |

Table S6. Local drift (%) of suicide mortality by sex, 1990 to 2019, across four European subregions

| Age Group | Eastern Europe       |                      | Northern Europe      |                      | Southern Europe      |                      | Western Europe       |                      |
|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|           | Male Local Drift     | Female Local Drift   | Male Local Drift     | Female Local Drift   | Male Local Drift     | Female Local Drift   | Male Local Drift     | Female Local Drift   |
|           | (95% CI)             | (95% CI)             | (95% CI)             | (95% CI)             | (95% CI)             | (95% CI)             | (95% CI)             | (95% CI)             |
| 15-19     | -3.37 (-4.16, -2.58) | -1.99 (-2.61, -1.37) | -1.52 (-1.92, -1.11) | 0.76 (0.31, 1.21)    | -1.41 (-1.88, -0.94) | -0.68 (-1.24, -0.11) | -2.20 (-2.49, -1.91) | -0.73 (-1.17, -0.30) |
| 20-24     | -2.61 (-3.05, -2.18) | -2.23 (-2.67, -1.79) | -1.88 (-2.12, -1.63) | 0.19 (-0.13, 0.51)   | -1.92 (-2.22, -1.63) | -1.31 (-1.71, -0.91) | -2.39 (-2.57, -2.21) | -1.74 (-2.04, -1.44) |
| 25-29     | -2.46 (-2.77, -2.16) | -2.34 (-2.68, -2.00) | -1.99 (-2.19, -1.79) | -0.45 (-0.72, -0.19) | -1.75 (-1.98, -1.52) | -1.37 (-1.69, -1.06) | -2.36 (-2.49, -2.22) | -2.28 (-2.52, -2.04) |
| 30-34     | -2.89 (-3.16, -2.63) | -2.70 (-3.00, -2.39) | -2.05 (-2.23, -1.87) | -1.09 (-1.33, -0.85) | -1.40 (-1.60, -1.21) | -1.21 (-1.48, -0.94) | -2.29 (-2.40, -2.17) | -2.60 (-2.81, -2.4)  |
| 35-39     | -3.47 (-3.72, -3.22) | -3.12 (-3.41, -2.84) | -1.95 (-2.12, -1.78) | -1.37 (-1.6, -1.14)  | -0.85 (-1.03, -0.67) | -0.81 (-1.04, -0.57) | -2.16 (-2.27, -2.06) | -2.65 (-2.83, -2.47) |
| 40-44     | -3.93 (-4.19, -3.68) | -3.57 (-3.85, -3.30) | -1.63 (-1.79, -1.46) | -1.51 (-1.73, -1.30) | -0.33 (-0.50, -0.16) | -0.44 (-0.65, -0.22) | -1.74 (-1.84, -1.64) | -2.14 (-2.3, -1.97)  |
| 45-49     | -4.09 (-4.36, -3.82) | -4.07 (-4.35, -3.80) | -1.18 (-1.34, -1.02) | -1.55 (-1.75, -1.35) | 0.13 (-0.04, 0.30)   | -0.36 (-0.57, -0.16) | -1.14 (-1.23, -1.04) | -1.74 (-1.89, -1.59) |
| 50-54     | -4.05 (-4.32, -3.78) | -4.67 (-4.94, -4.41) | -1.15 (-1.32, -0.98) | -1.57 (-1.77, -1.36) | 0.05 (-0.12, 0.22)   | -0.77 (-0.97, -0.57) | -0.93 (-1.02, -0.83) | -1.62 (-1.76, -1.48) |
| 55-59     | -3.92 (-4.20, -3.63) | -5.01 (-5.27, -4.75) | -1.24 (-1.43, -1.06) | -1.67 (-1.88, -1.45) | -0.43 (-0.59, -0.26) | -1.29 (-1.48, -1.09) | -0.95 (-1.05, -0.85) | -1.62 (-1.76, -1.47) |
| 60-64     | -4.00 (-4.31, -3.69) | -5.33 (-5.59, -5.07) | -1.34 (-1.55, -1.13) | -2.17 (-2.40, -1.95) | -1.22 (-1.39, -1.05) | -1.82 (-2.01, -1.63) | -1.30 (-1.4, -1.19)  | -1.89 (-2.04, -1.74) |
| 65-69     | -3.57 (-3.93, -3.20) | -5.36 (-5.62, -5.09) | -1.46 (-1.69, -1.23) | -2.55 (-2.79, -2.31) | -1.83 (-2.01, -1.66) | -2.39 (-2.58, -2.19) | -1.78 (-1.9, -1.67)  | -2.29 (-2.45, -2.14) |
| 70-74     | -3.00 (-3.46, -2.53) | -5.20 (-5.48, -4.91) | -1.56 (-1.82, -1.29) | -2.77 (-3.03, -2.50) | -2.10 (-2.29, -1.92) | -2.70 (-2.9, -2.49)  | -2.12 (-2.24, -2.00) | -2.71 (-2.87, -2.54) |
| 75-79     | -2.94 (-3.49, -2.37) | -4.98 (-5.29, -4.68) | -1.76 (-2.08, -1.44) | -3.11 (-3.41, -2.81) | -2.19 (-2.4, -1.98)  | -2.78 (-3.01, -2.54) | -2.47 (-2.61, -2.34) | -3.32 (-3.50, -3.14) |
| 80-84     | -3.46 (-4.23, -2.68) | -4.74 (-5.12, -4.35) | -2.24 (-2.68, -1.80) | -3.06 (-3.46, -2.65) | -2.18 (-2.46, -1.90) | -2.96 (-3.28, -2.64) | -2.87 (-3.04, -2.70) | -3.73 (-3.95, -3.51) |

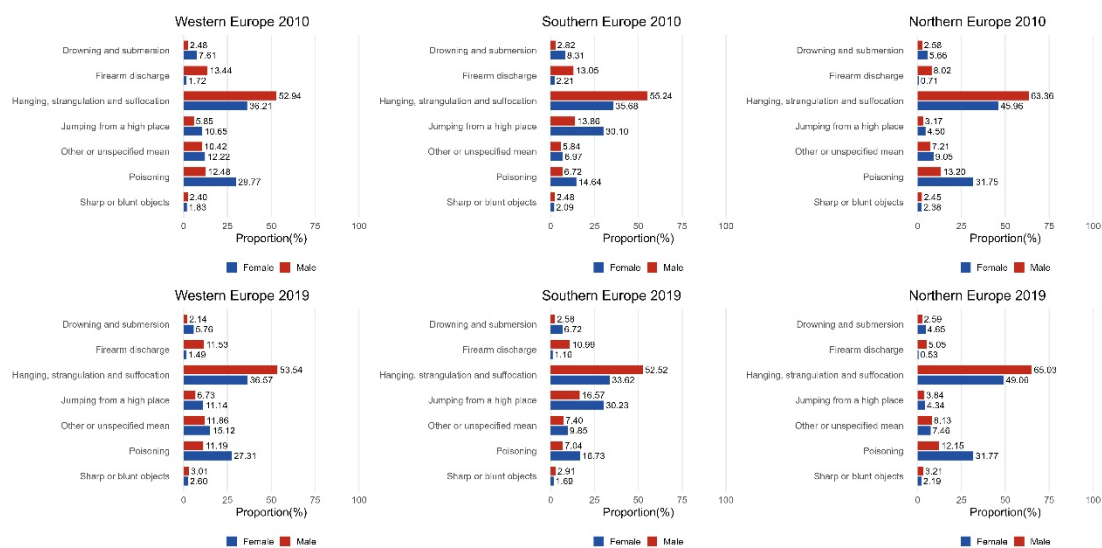


Figure S2. Suicide mean proportions in 2010 and 2019

# Austria

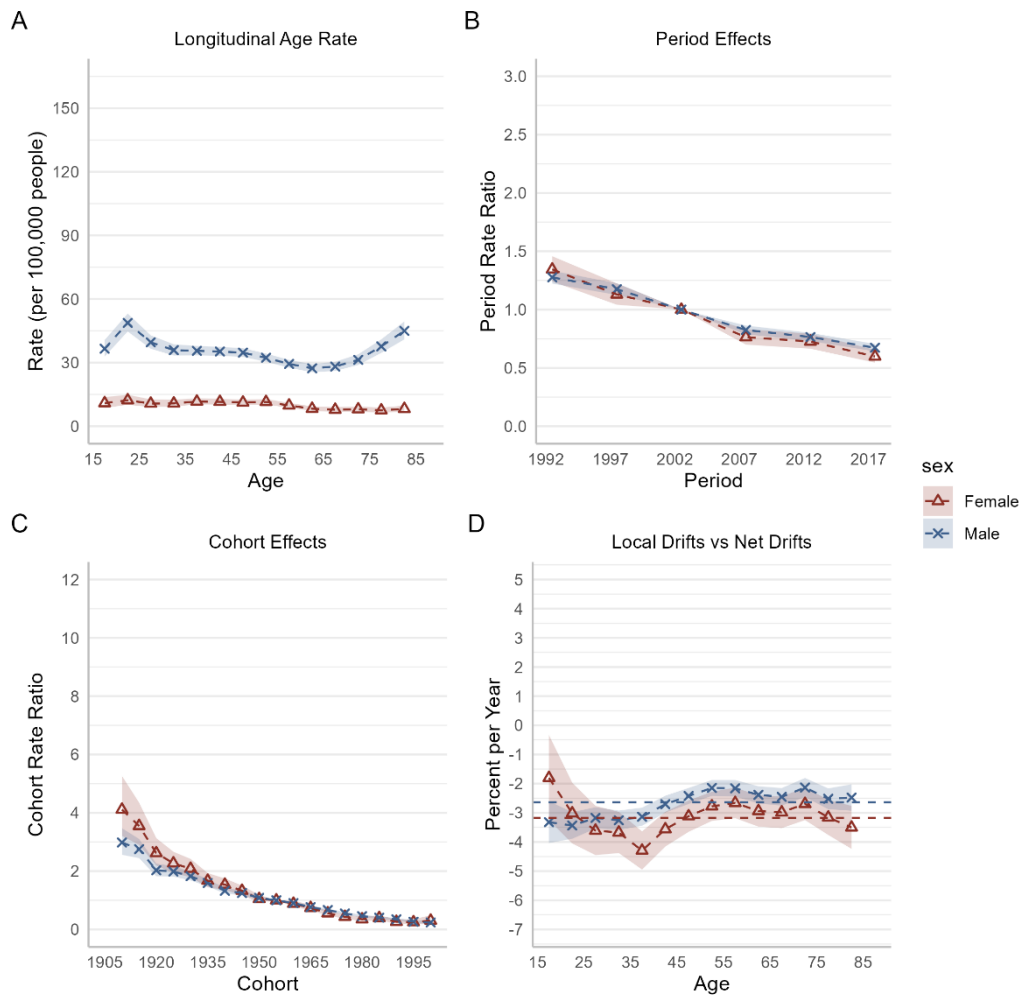


Figure S3. Age period cohort results of Austria

# Belgium

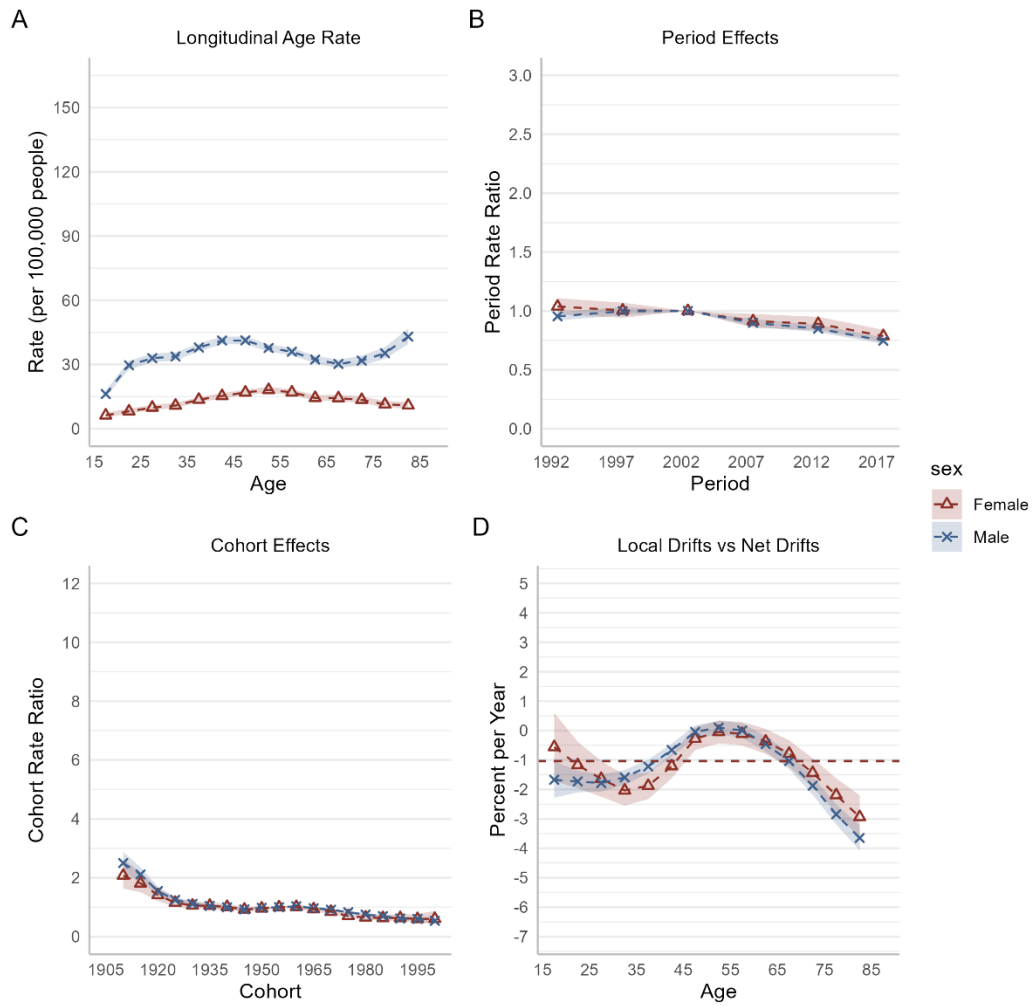


Figure S4. Age period cohort results of Belgium

# Bulgaria

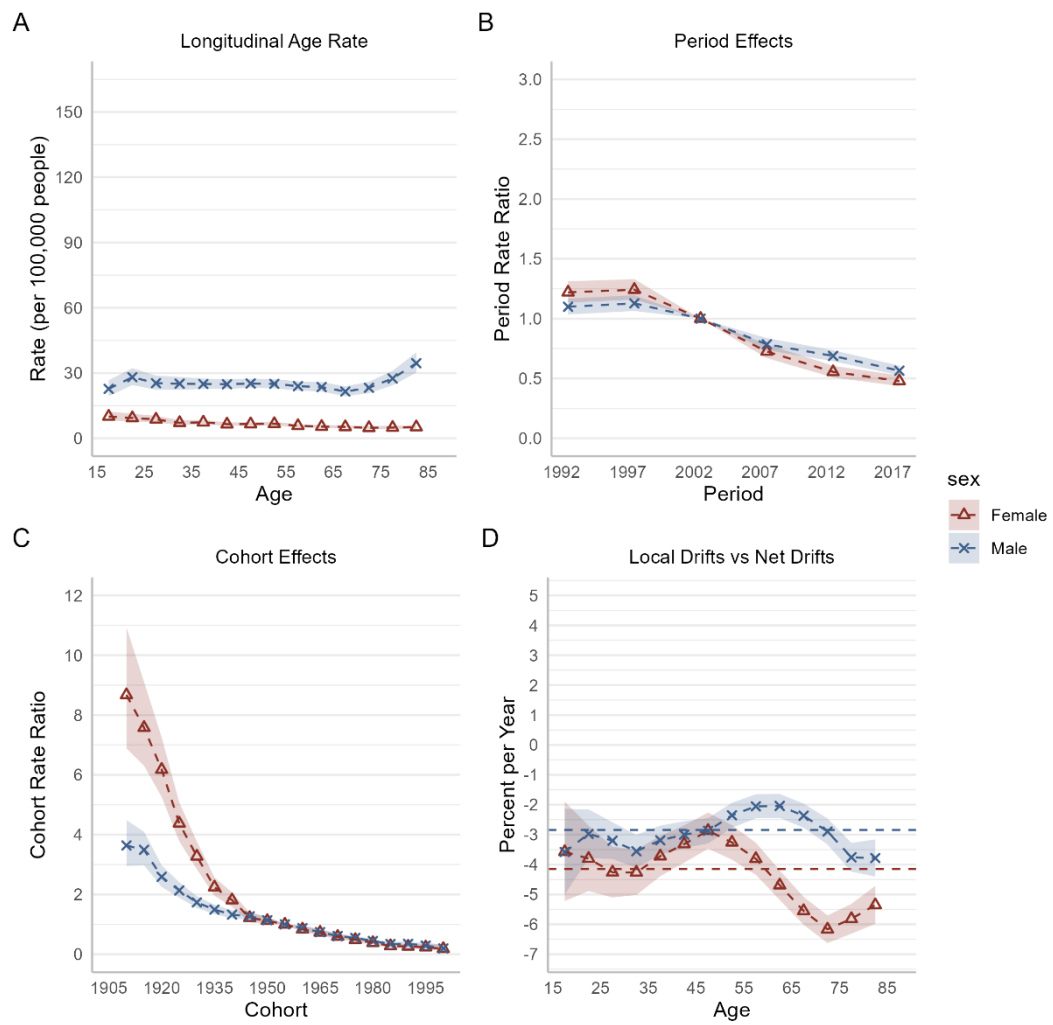


Figure S5. Age period cohort results of Bulgaria

# Croatia

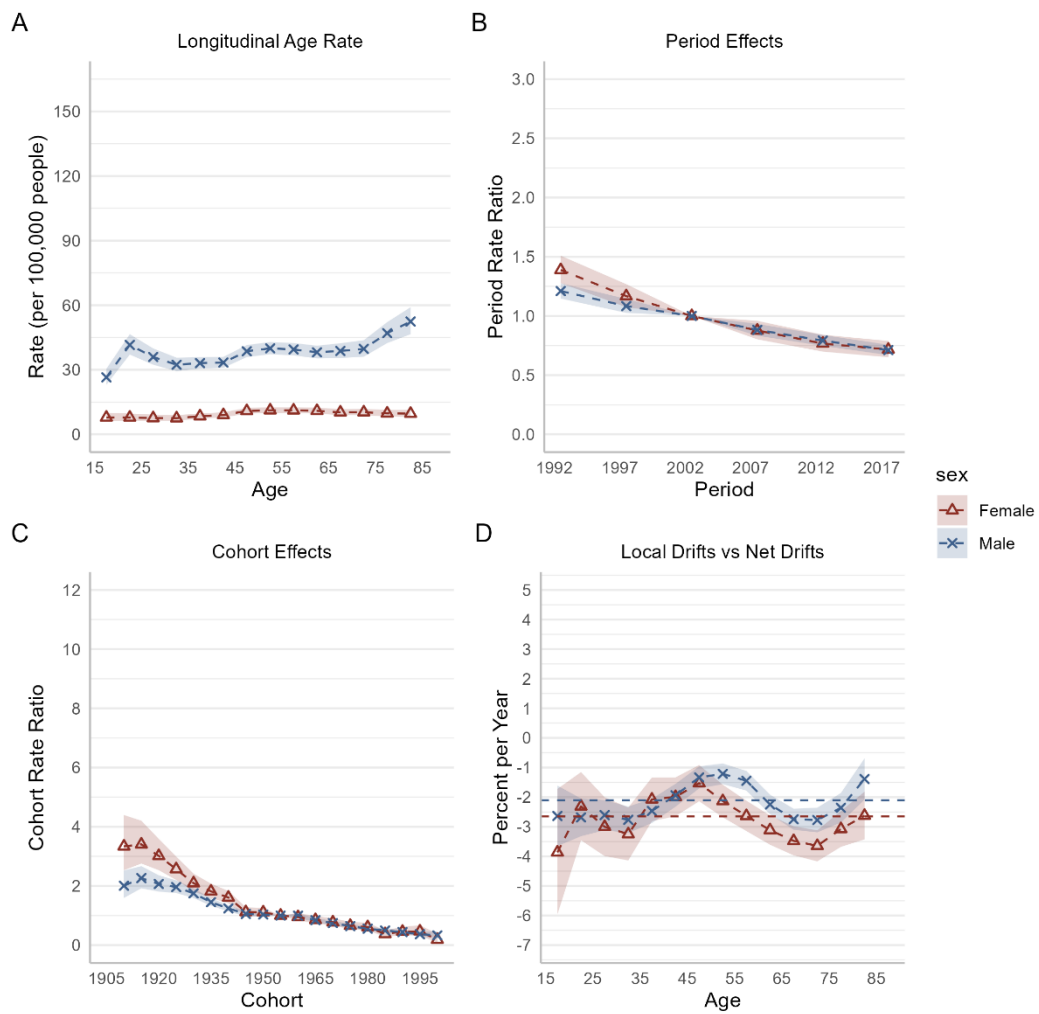


Figure S6. Age period cohort results of Croatia

# Czech Republic

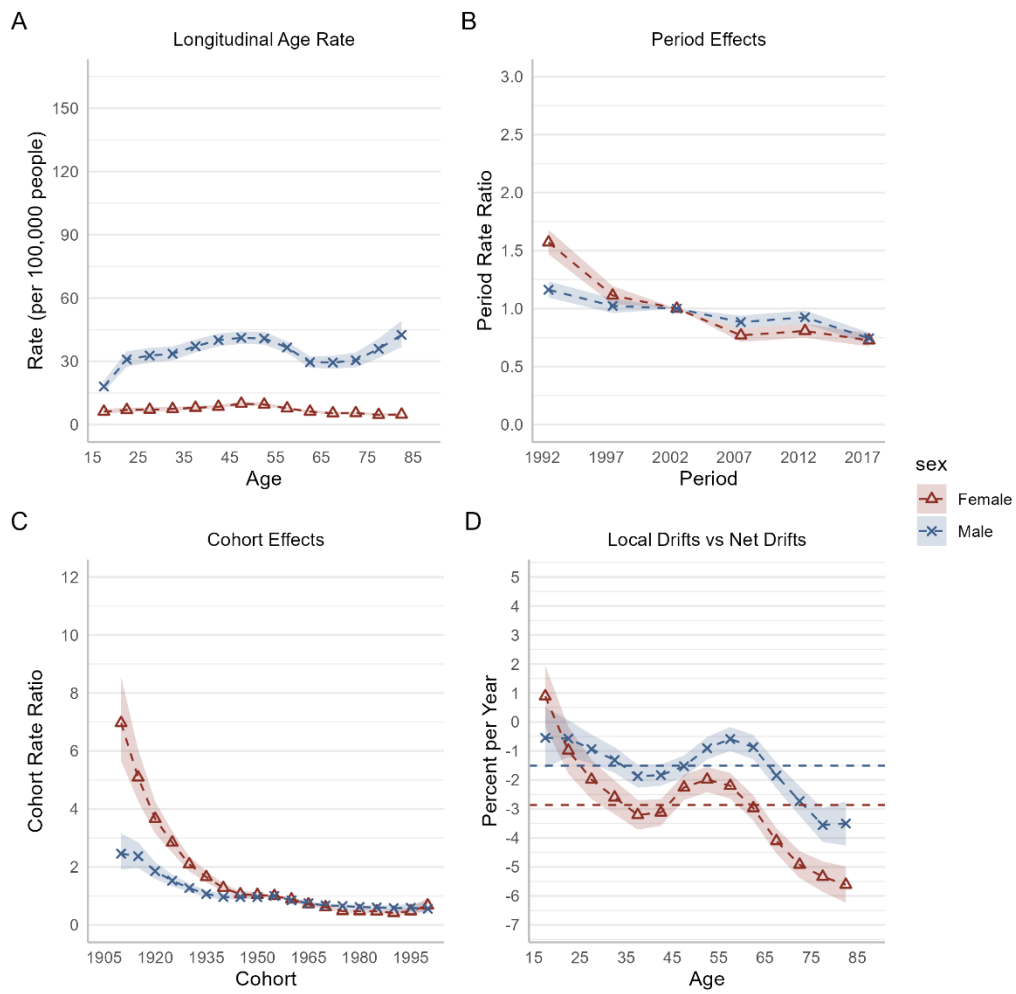


Figure S7. Age period cohort results of Czech Republic



# Denmark

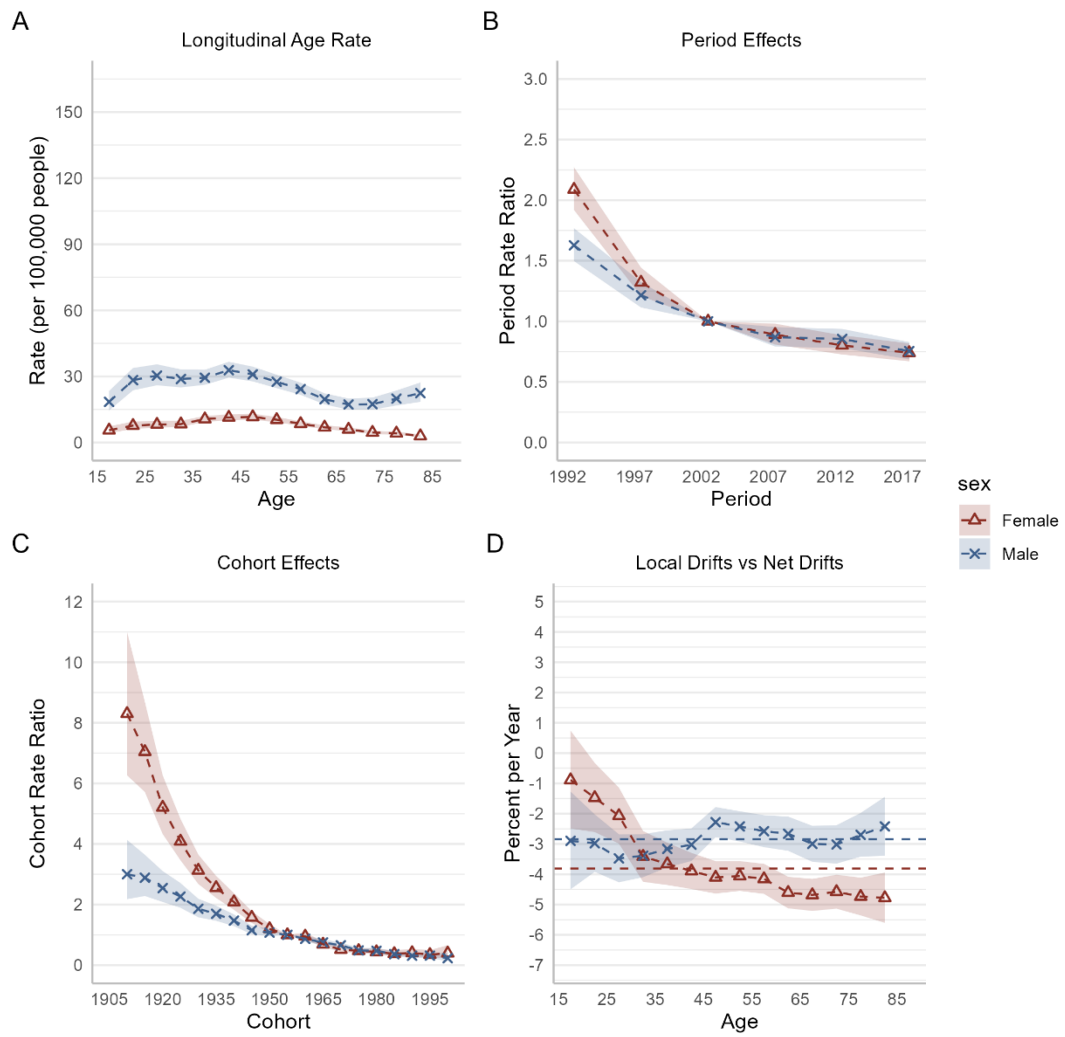


Figure S8. Age period cohort results of Denmark

# Estonia

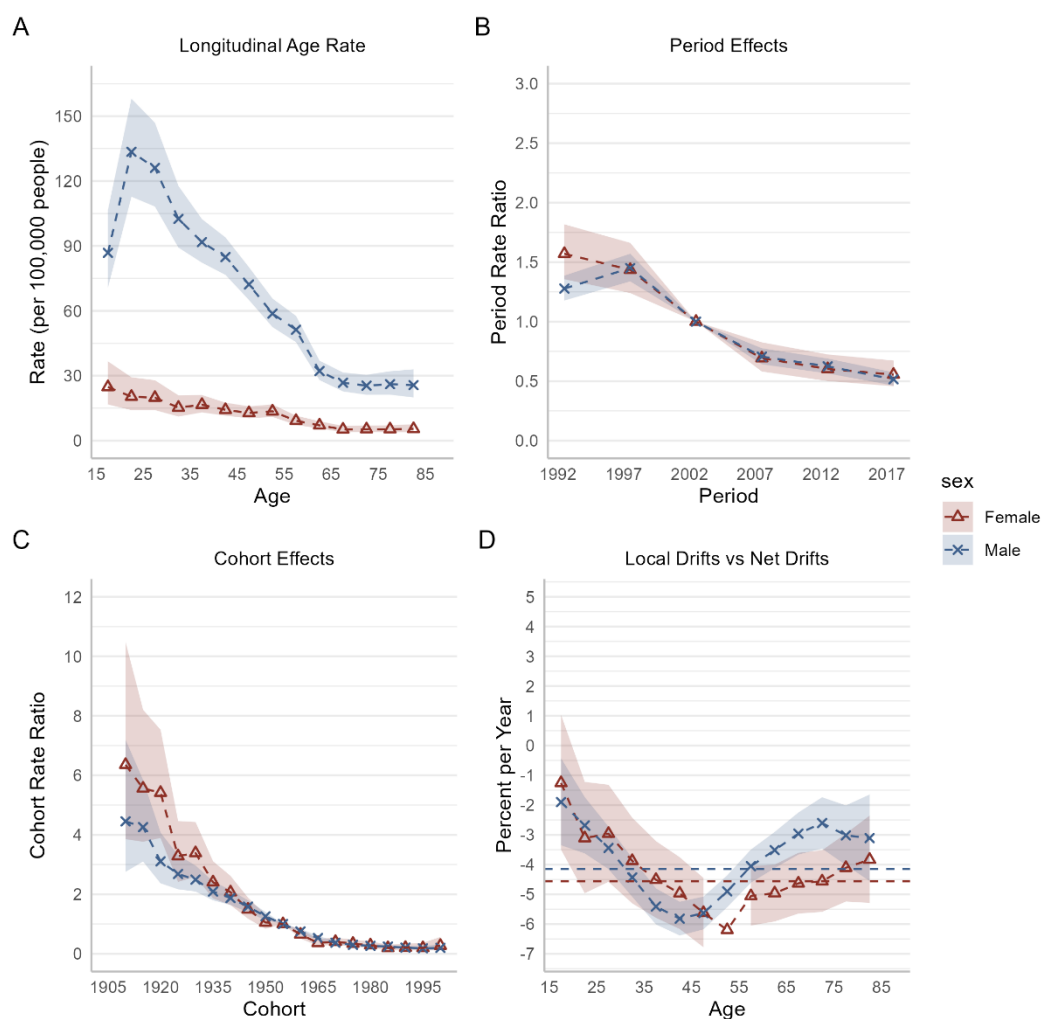


Figure S9. Age period cohort results of Estonia

# Finland

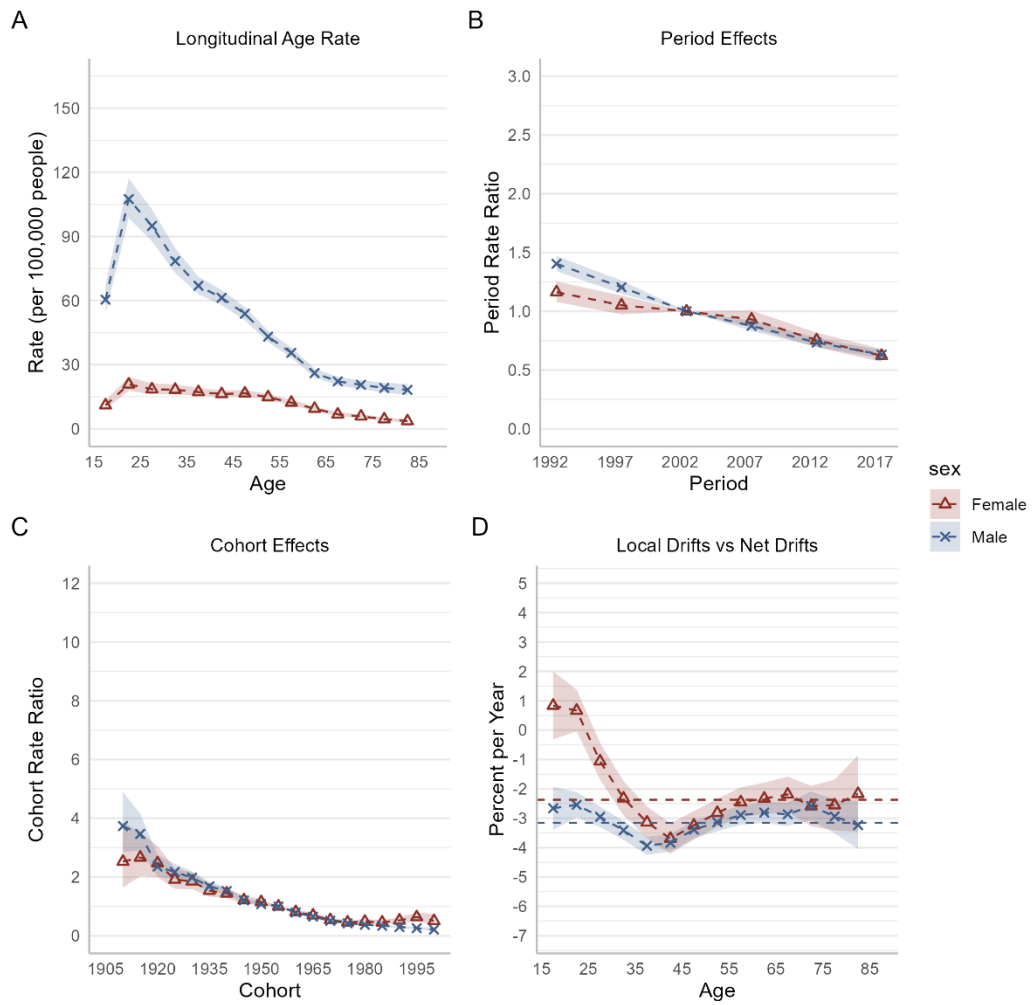


Figure S10. Age period cohort results of Finland

# France

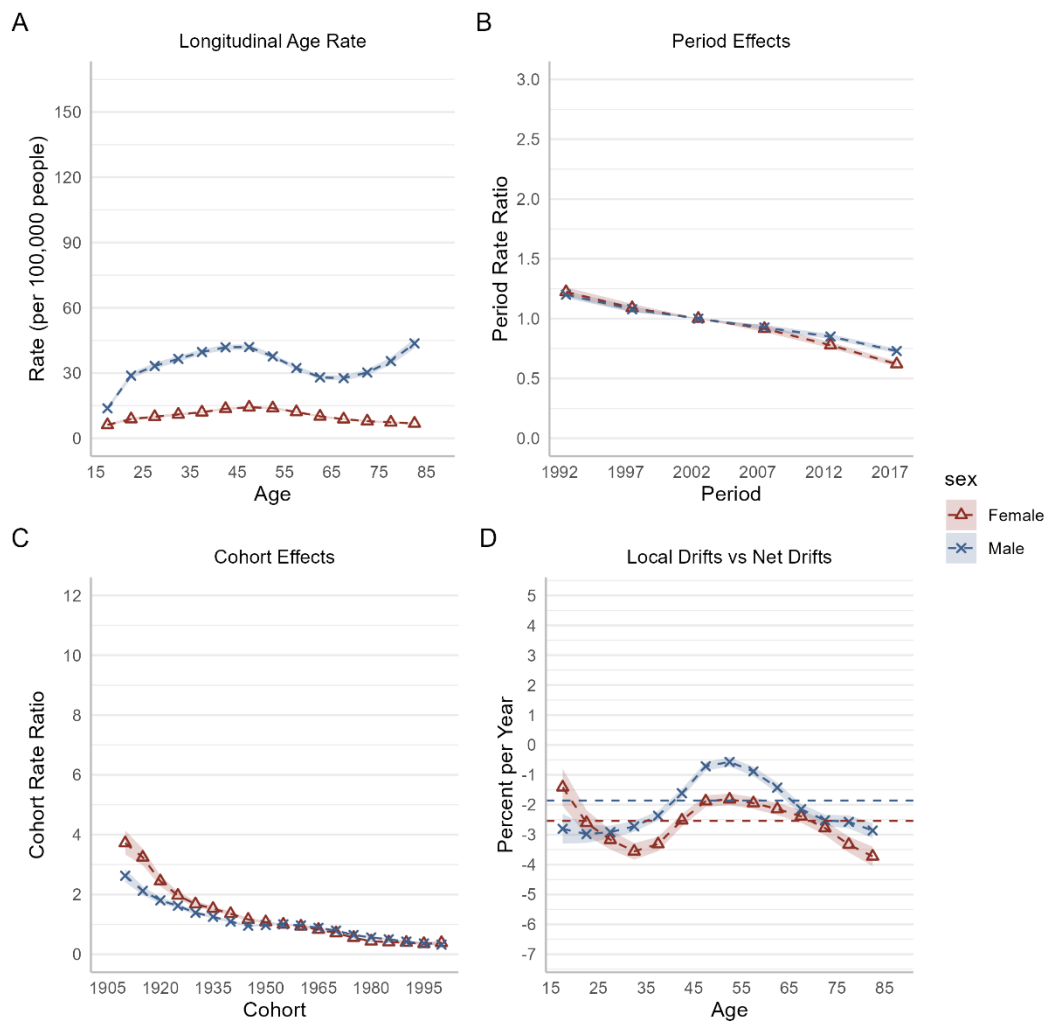


Figure S11. Age period cohort results of France

# Germany

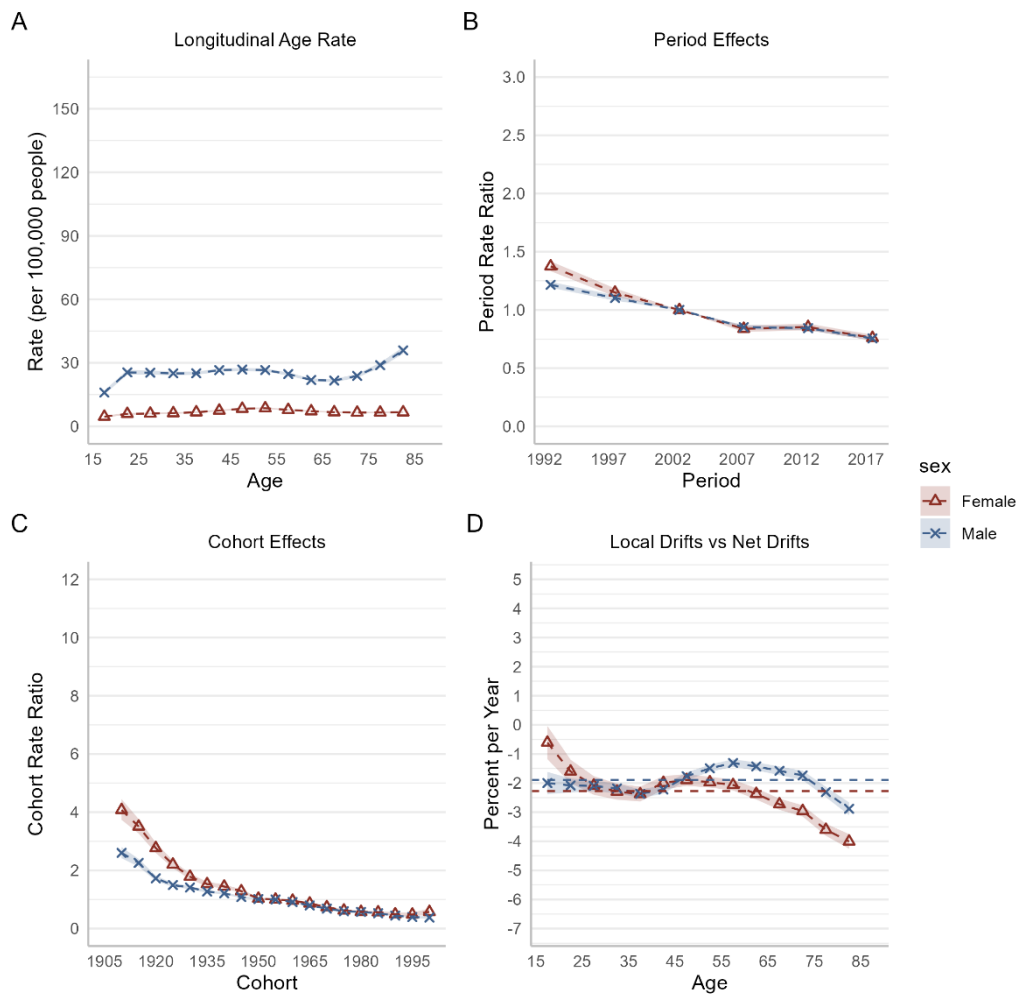


Figure S12. Age period cohort results of Germany

# Greece

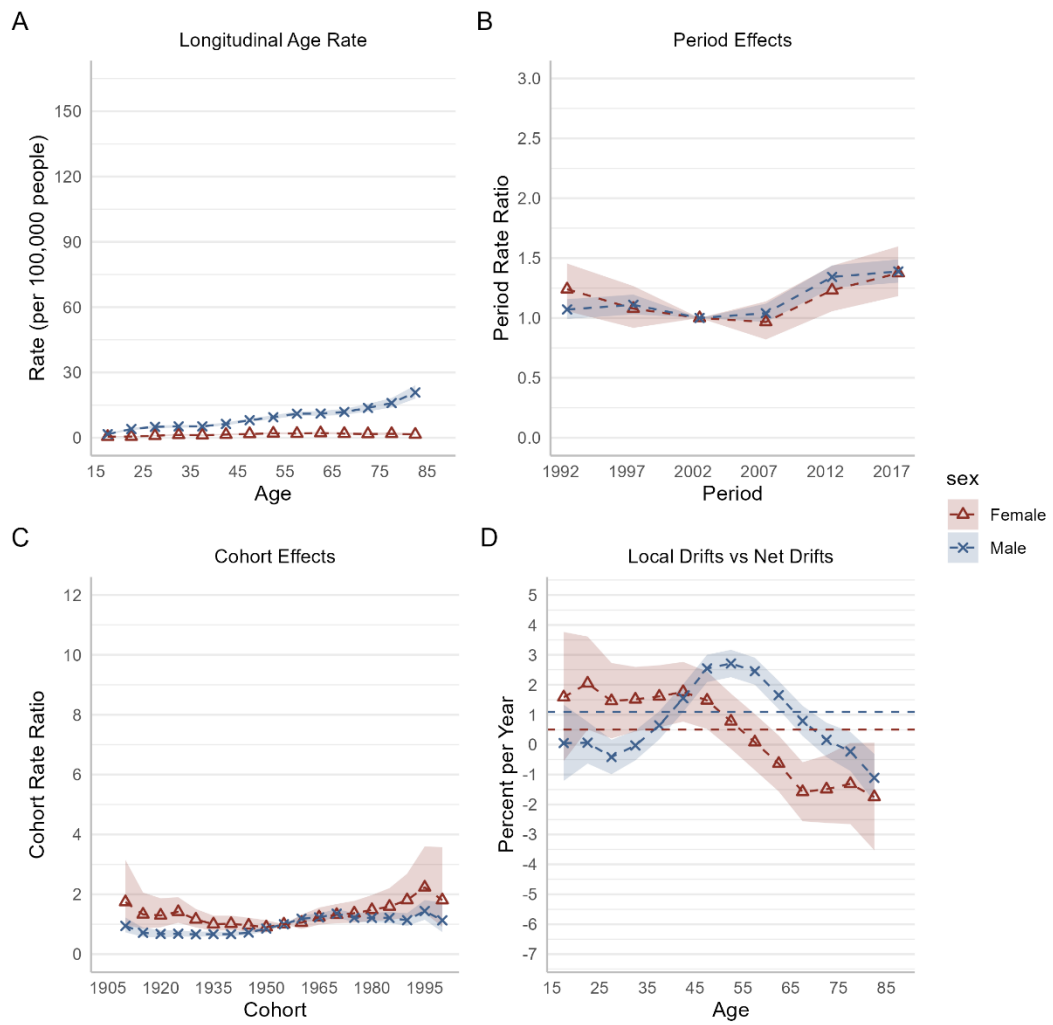


Figure S13. Age period cohort results of Greece

# Hungary

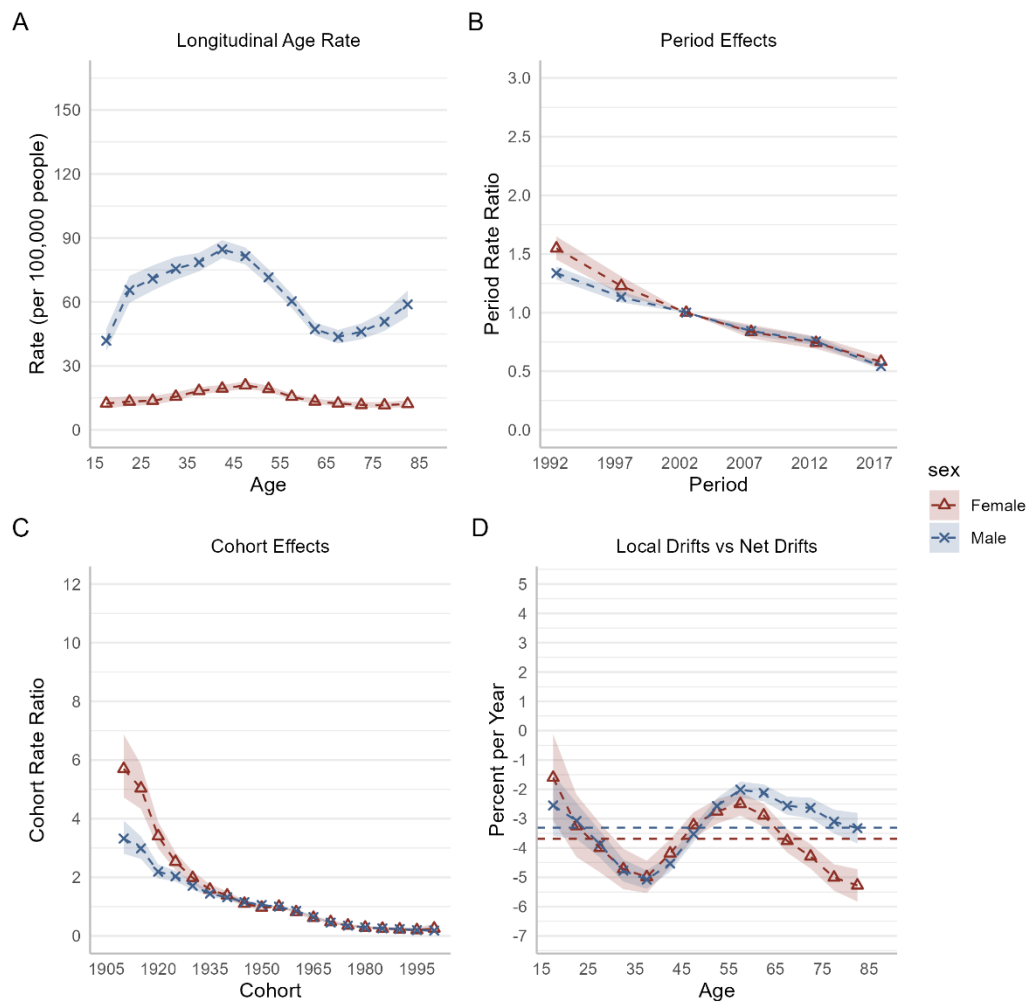


Figure S14. Age period cohort results of Hungary

# Iceland

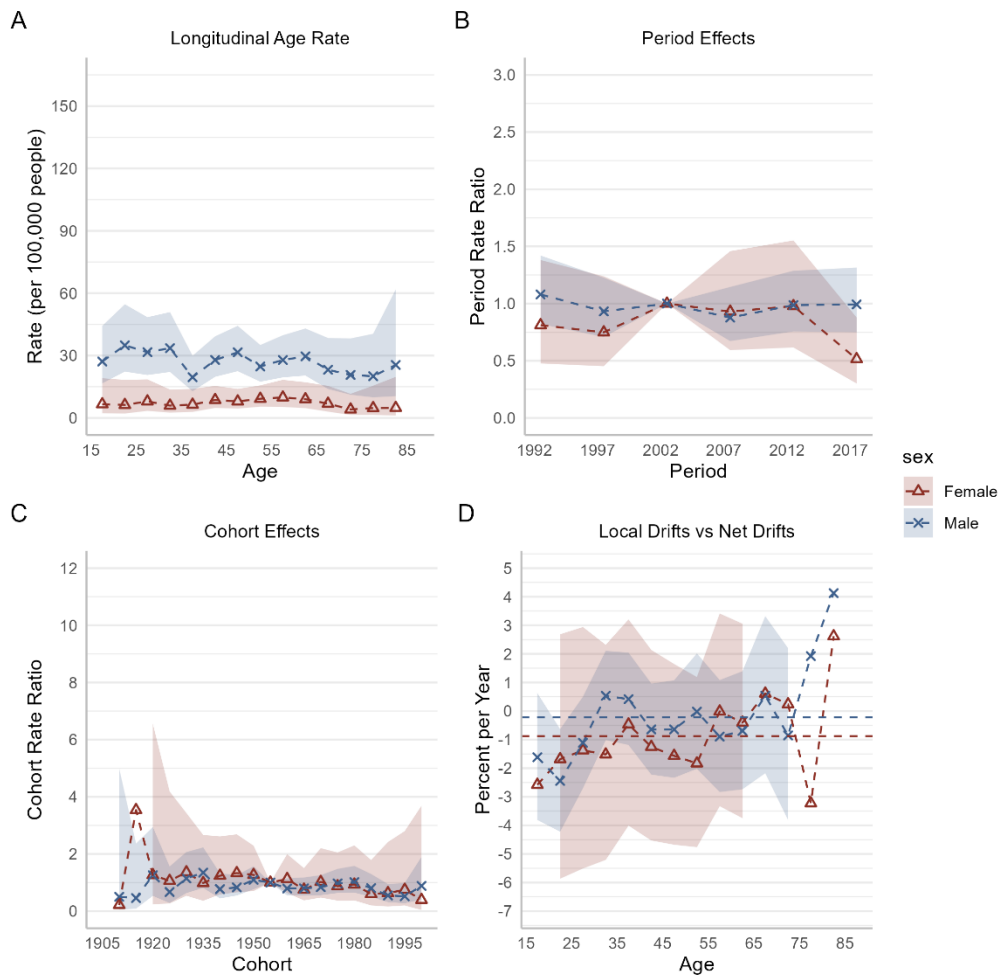


Figure S15. Age period cohort results of Iceland



# Ireland

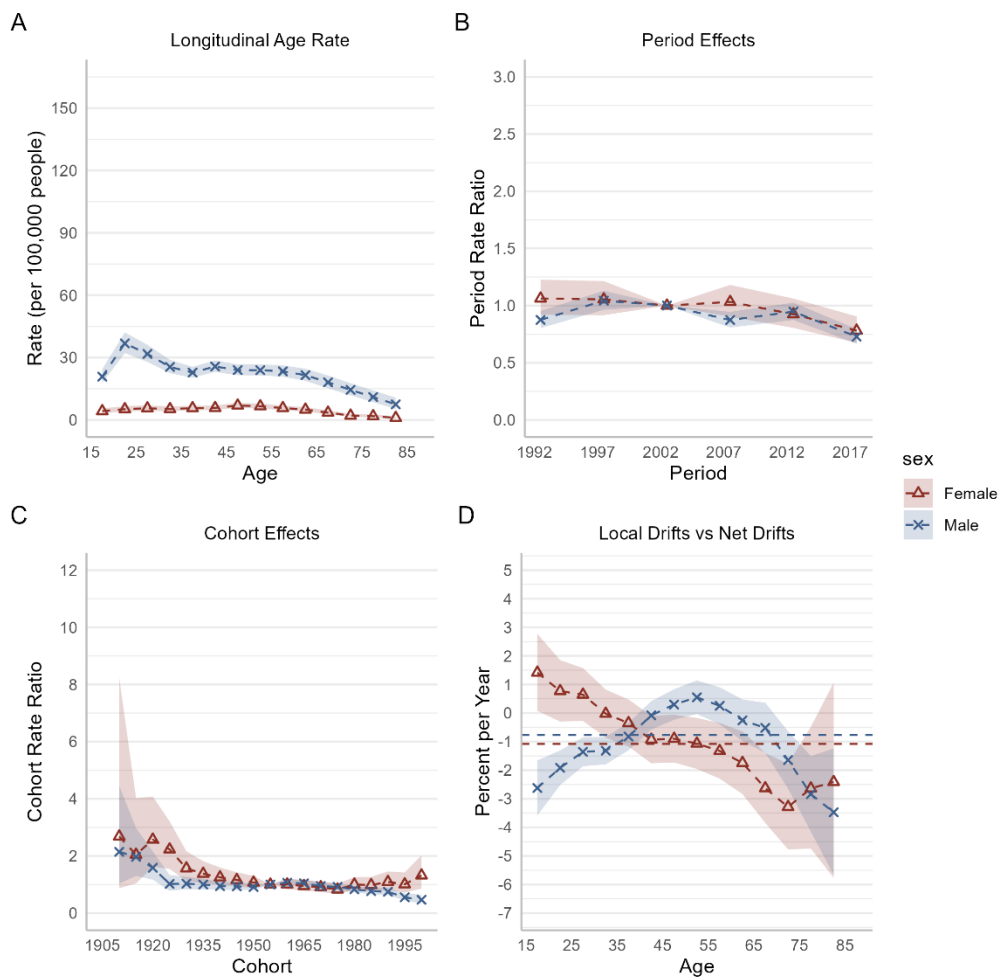


Figure S16. Age period cohort results of Ireland

# Italy

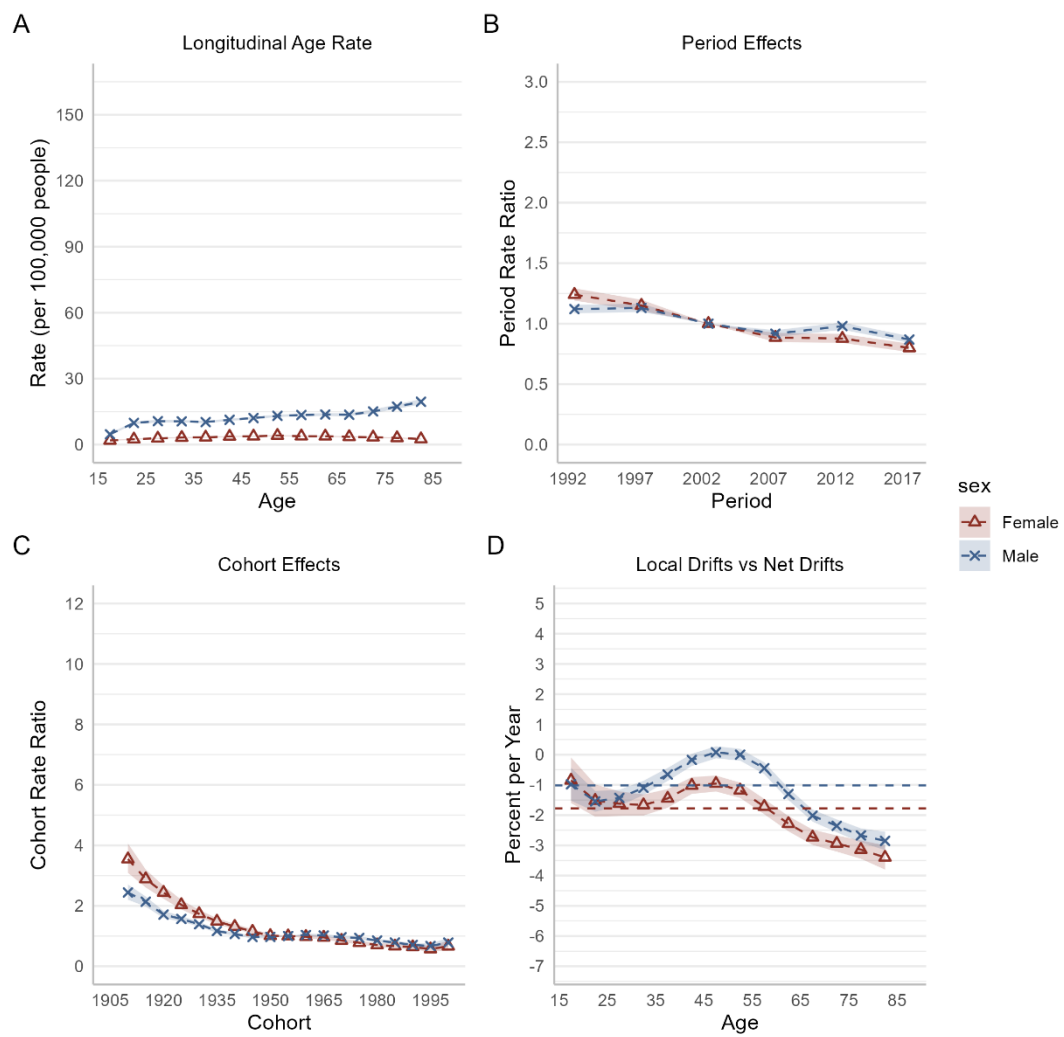


Figure S17. Age period cohort results of Italy

# Latvia

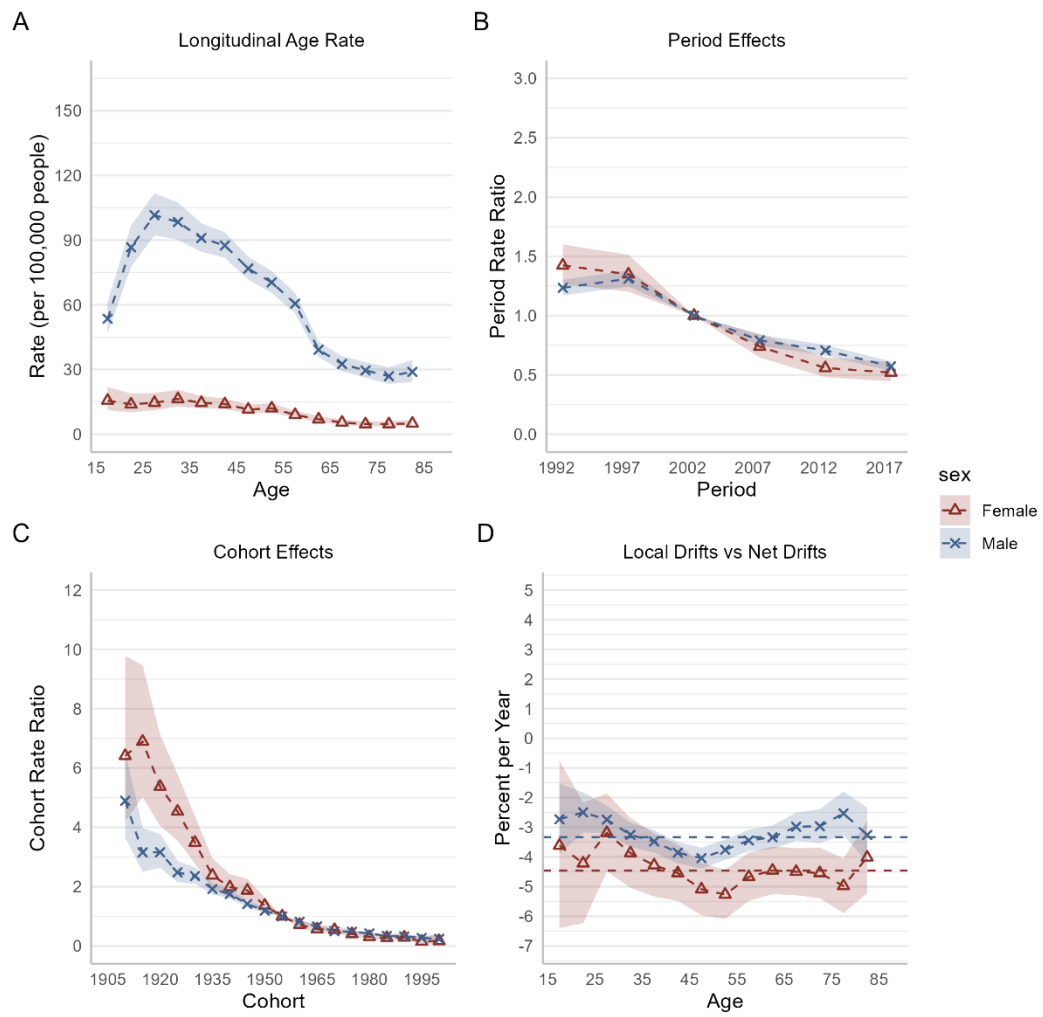


Figure S18. Age period cohort results of Latvia

# Lithuania

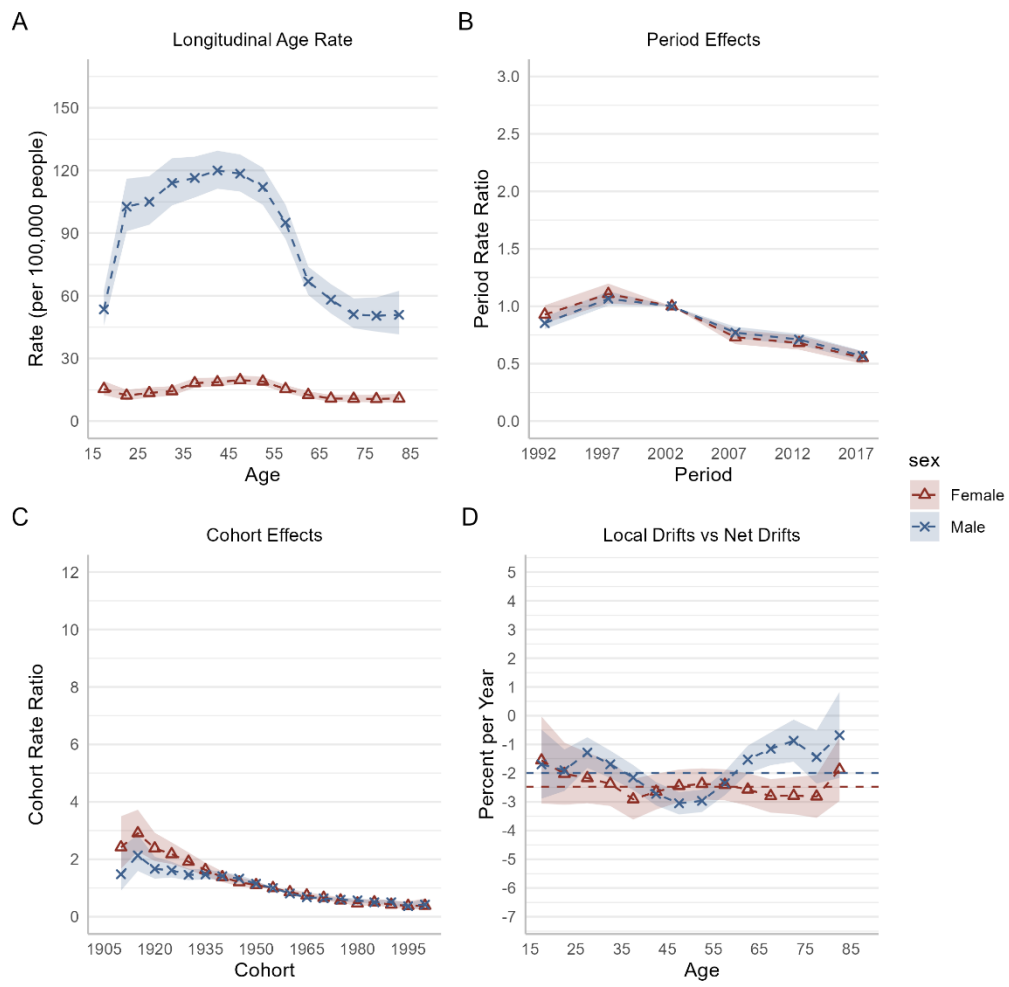


Figure S19. Age period cohort results of Lithuania

# Luxembourg

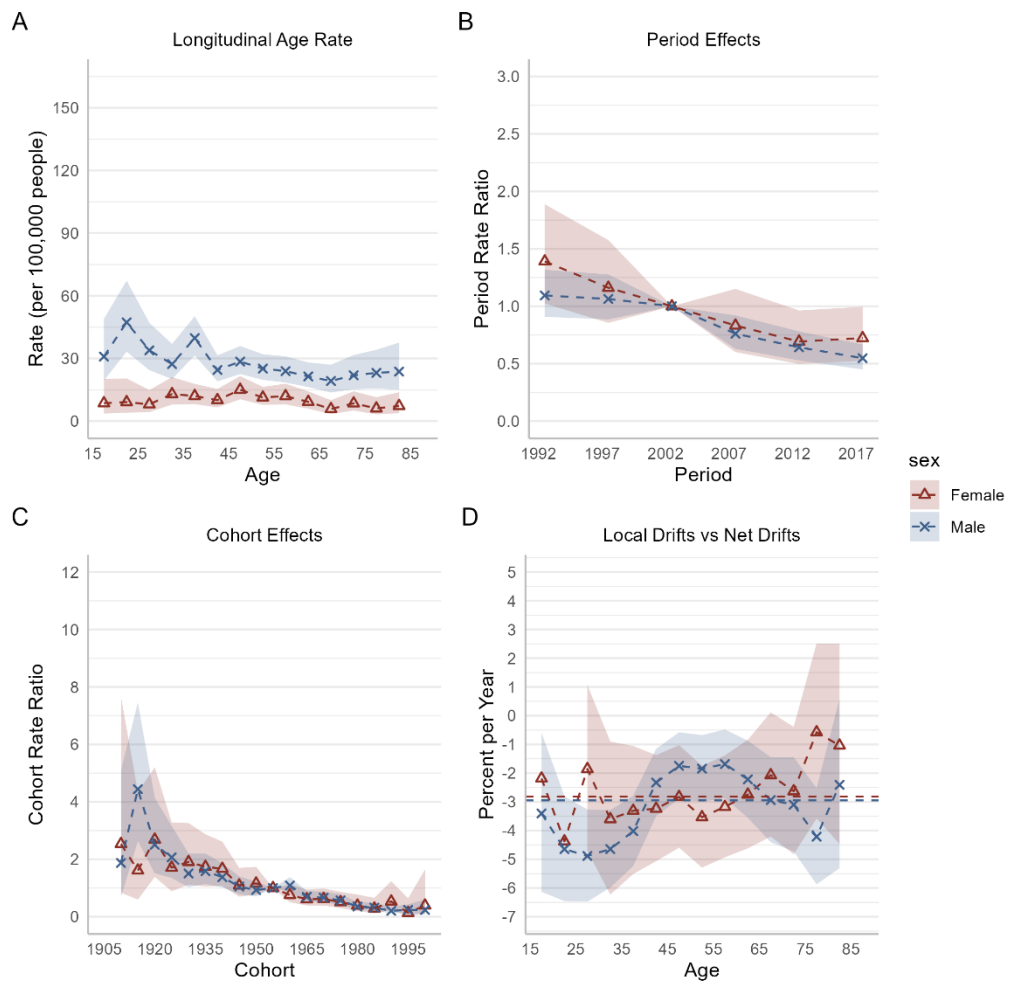


Figure S20. Age period cohort results of Luxembourg

# Malta

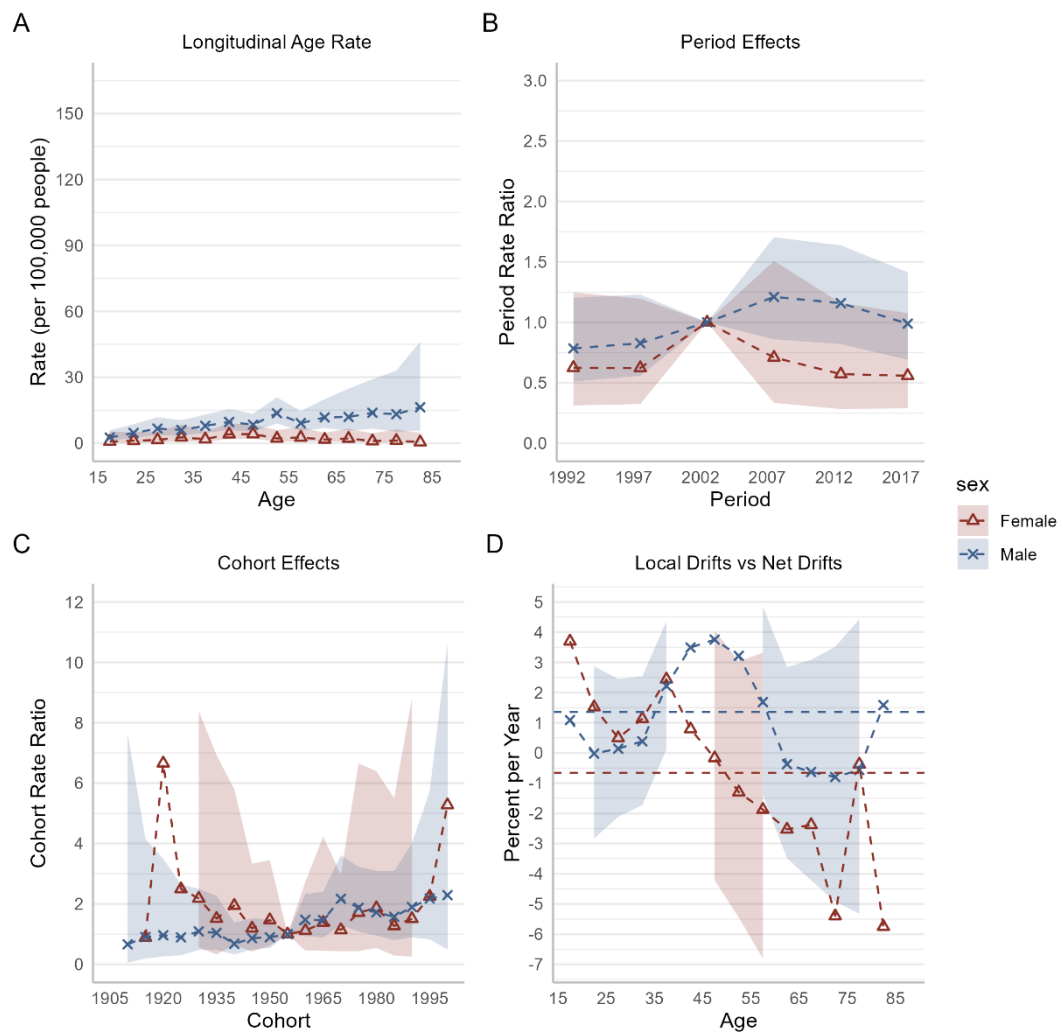


Figure S21. Age period cohort results of Malta

# Netherlands

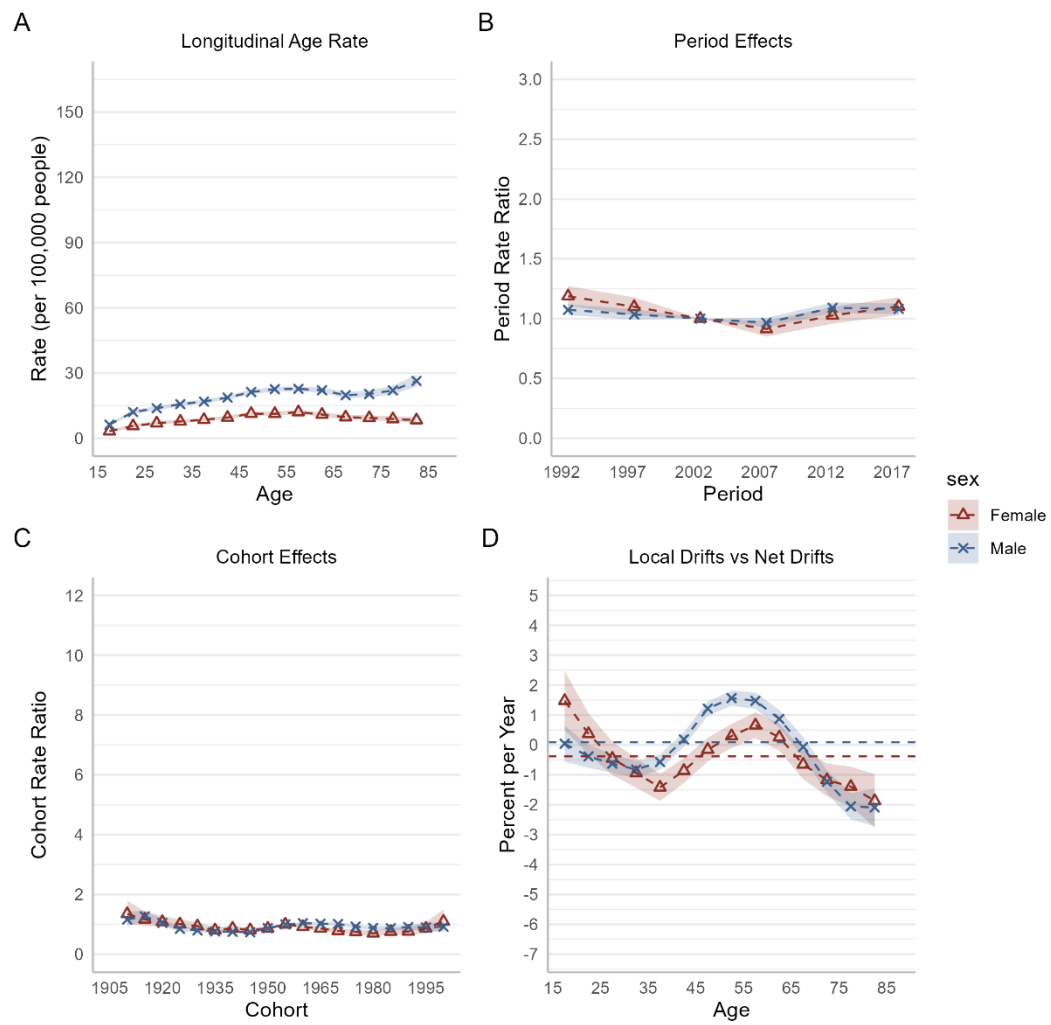


Figure S22. Age period cohort results of Netherlands

# Romania

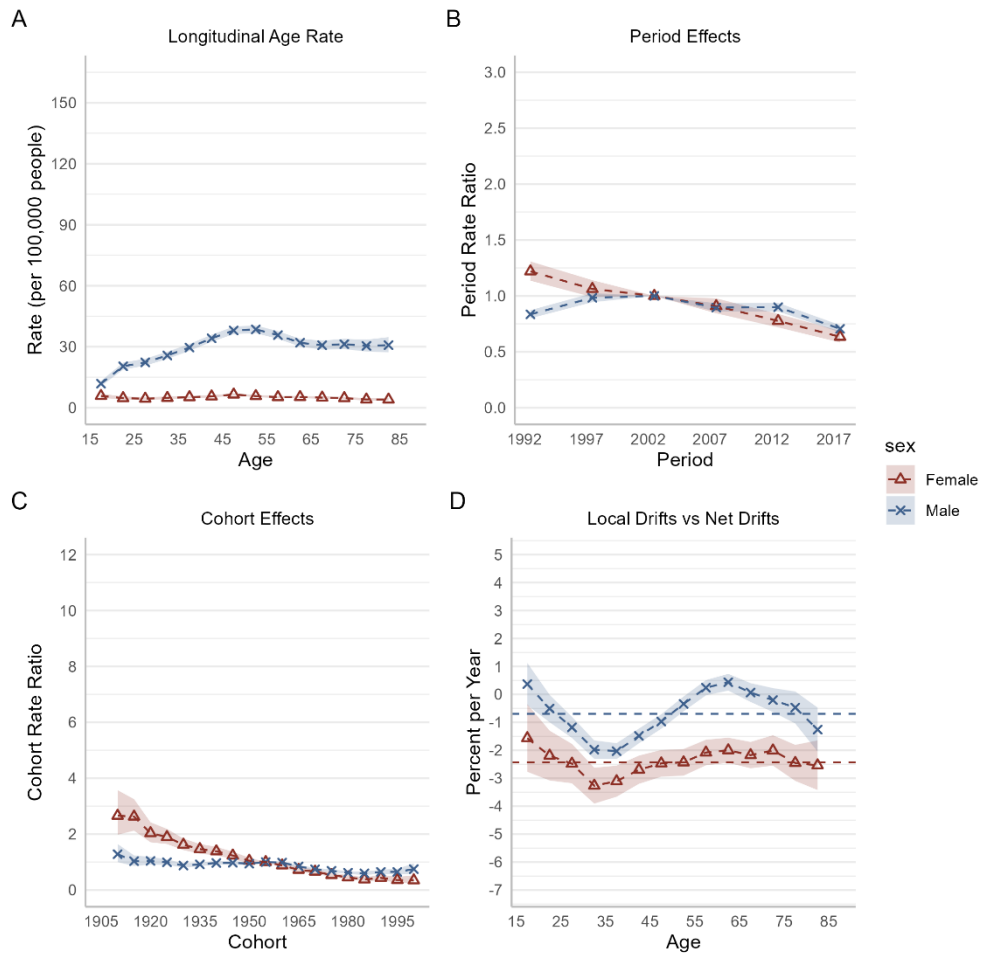


Figure S23. Age period cohort results of Romania



# Russian Federation

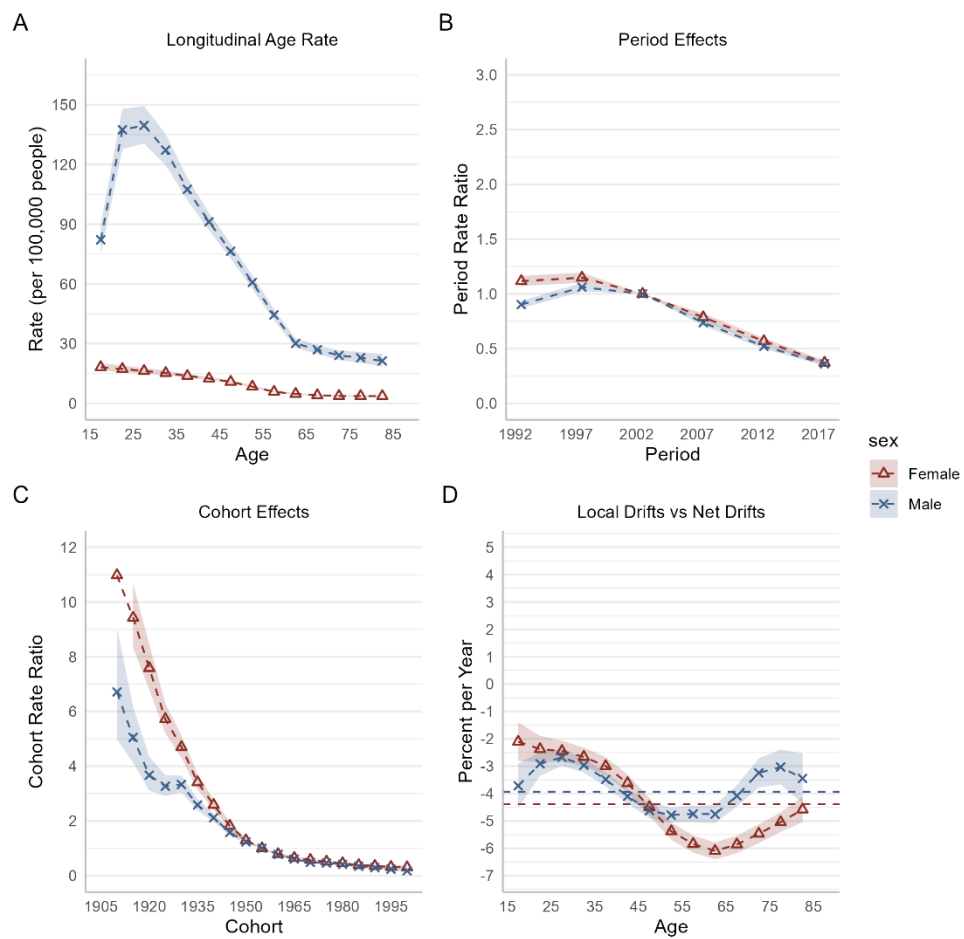


Figure S24. Age period cohort results of Russian Federation

# Slovenia

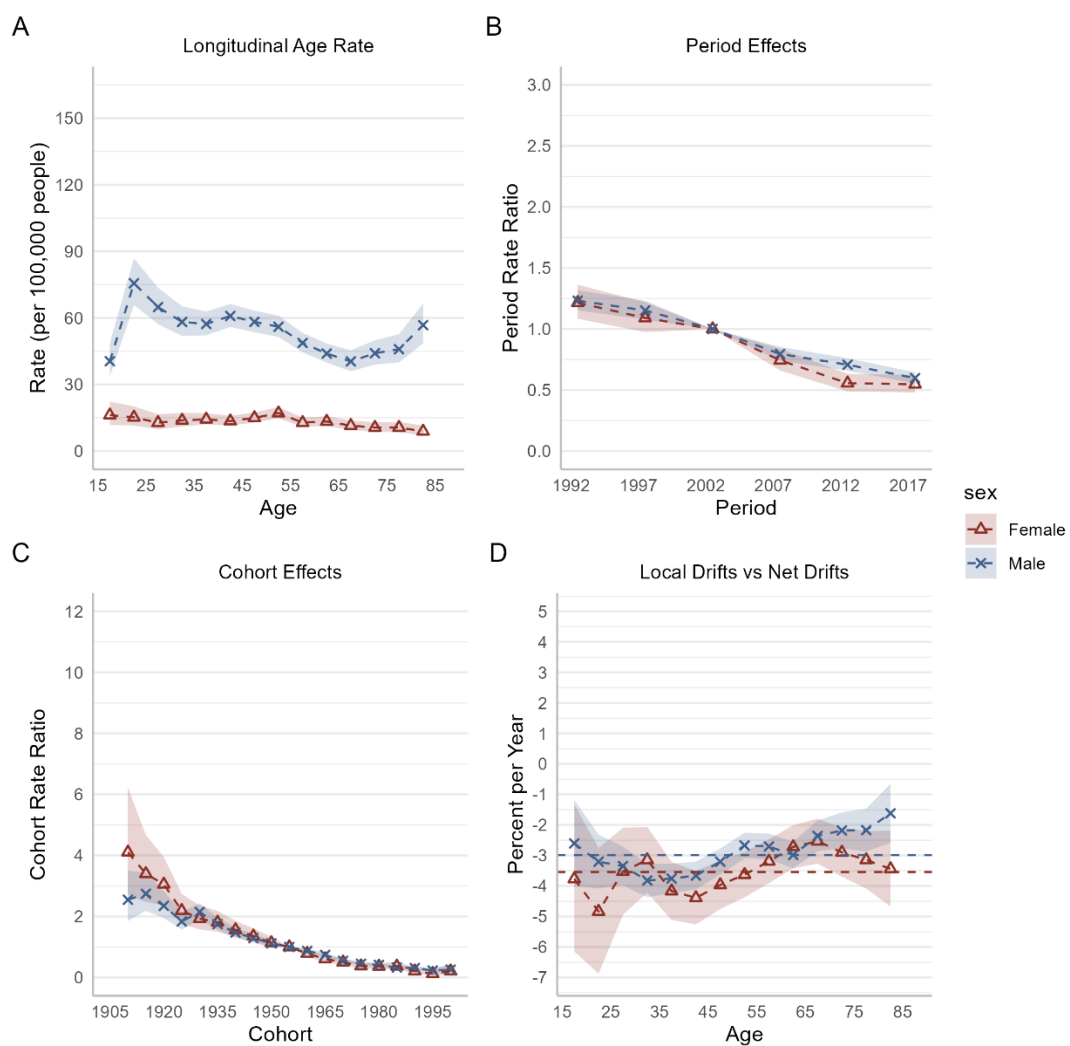


Figure S25. Age period cohort results of Slovenia

# Spain

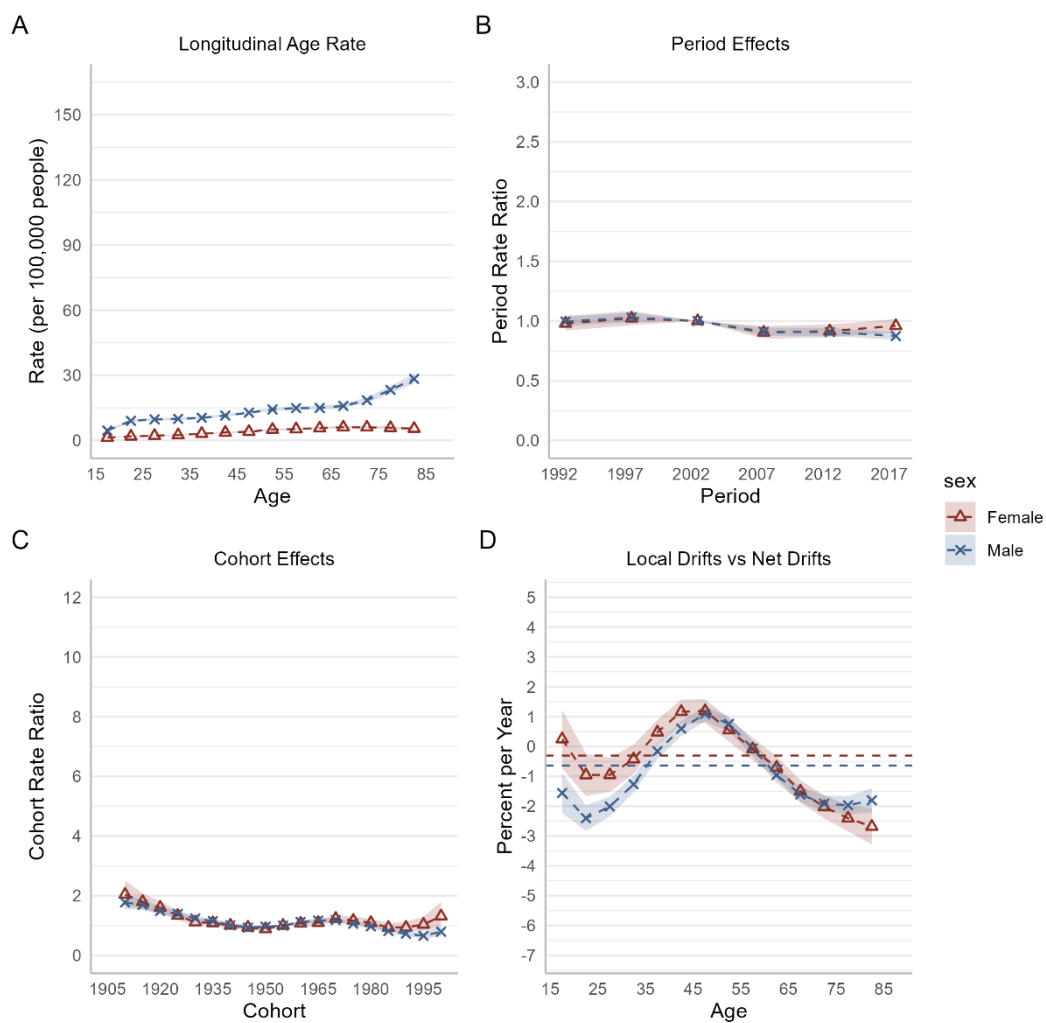


Figure S26. Age period cohort results of Spain

# Sweden

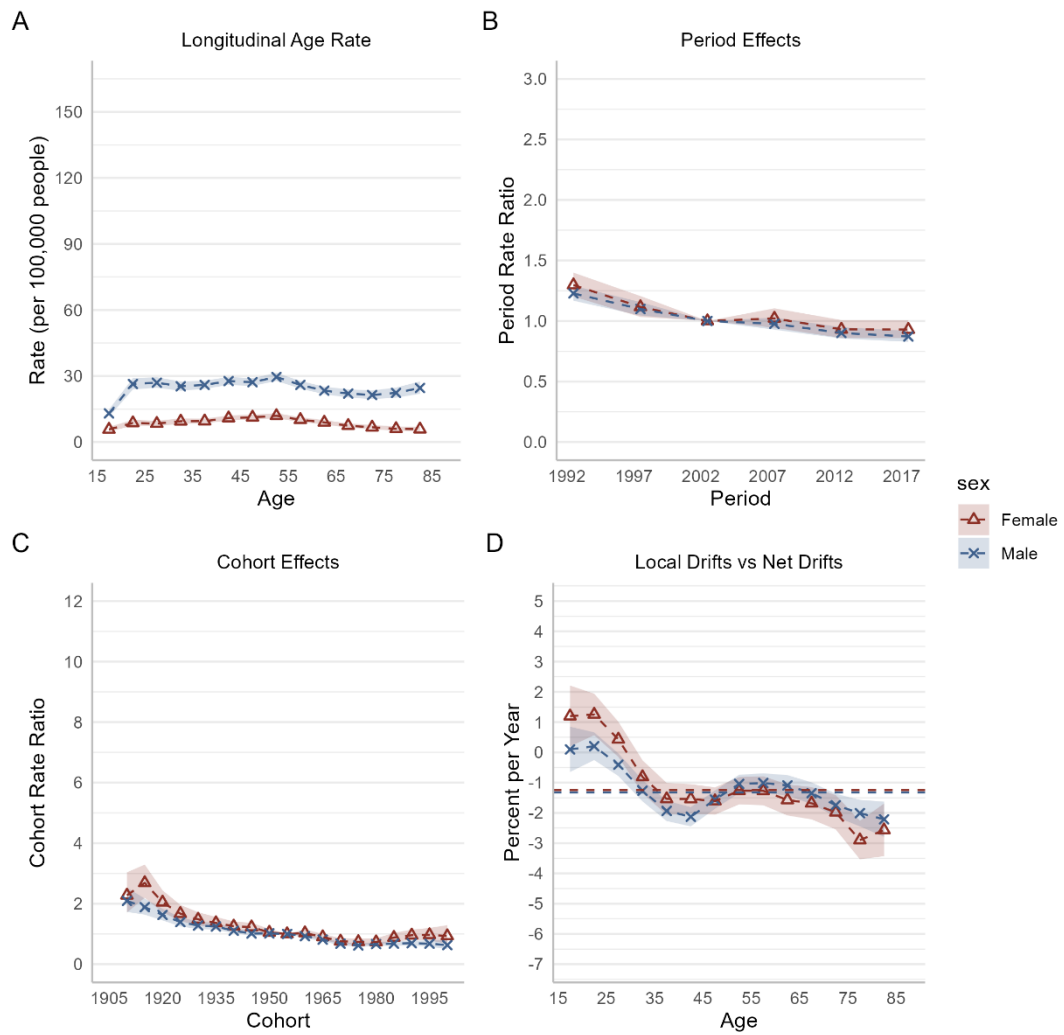


Figure S27. Age period cohort results of Sweden

# Switzerland

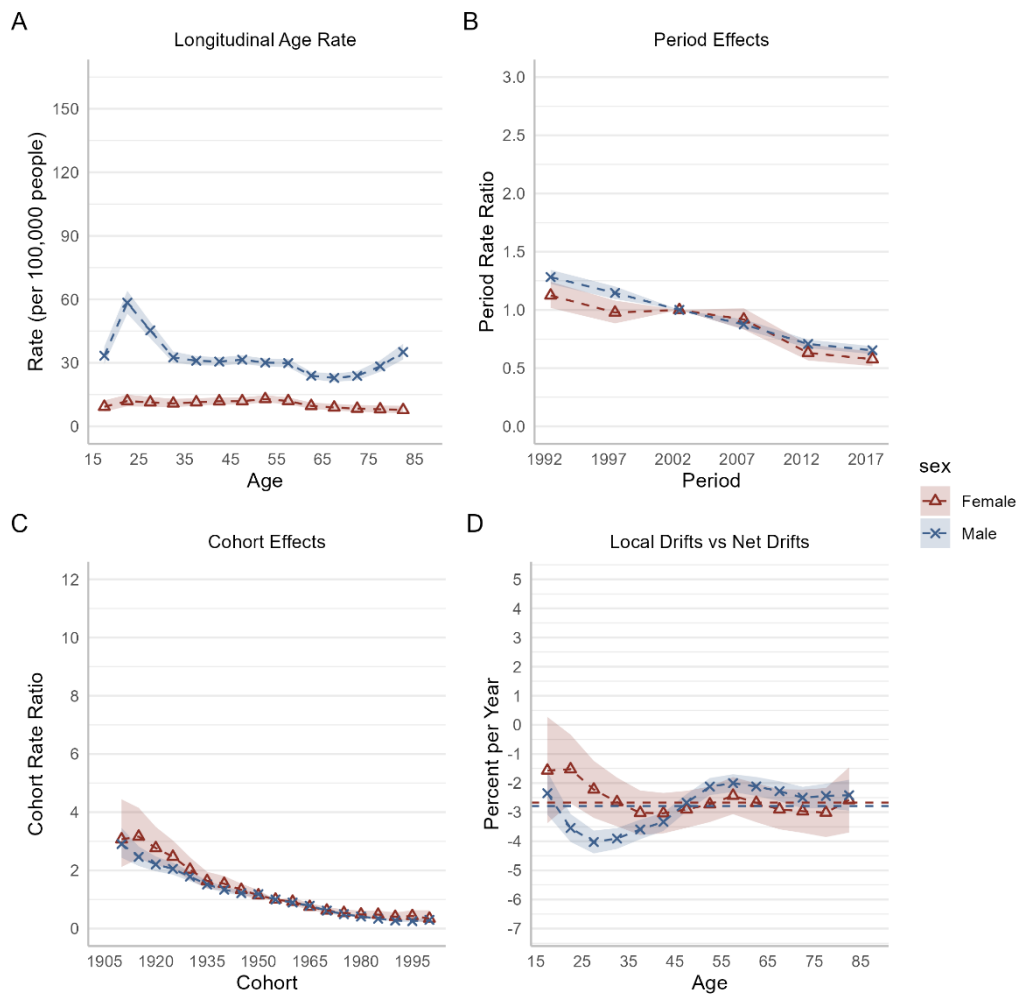


Figure S28. Age period cohort results of Switzerland

# United Kingdom

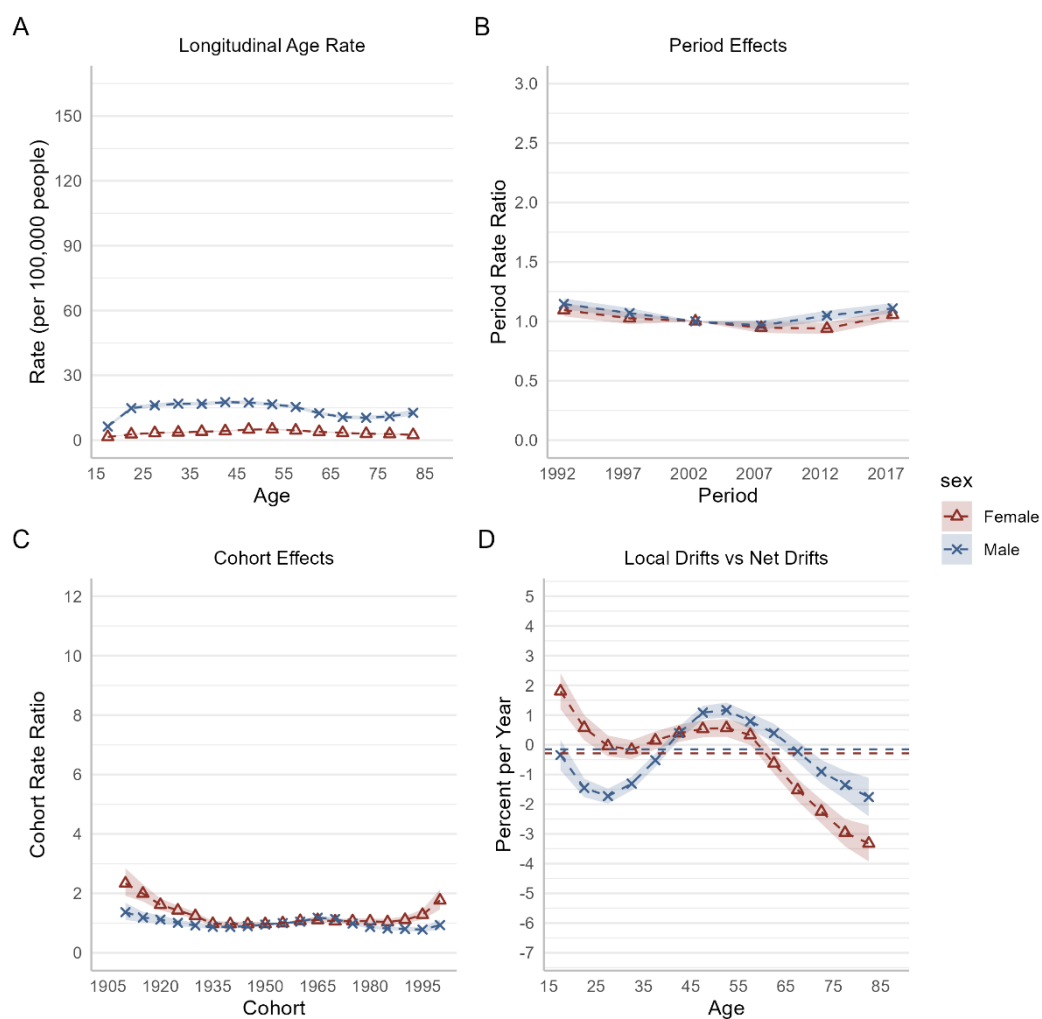


Figure S29. Age period cohort results of United Kingdom

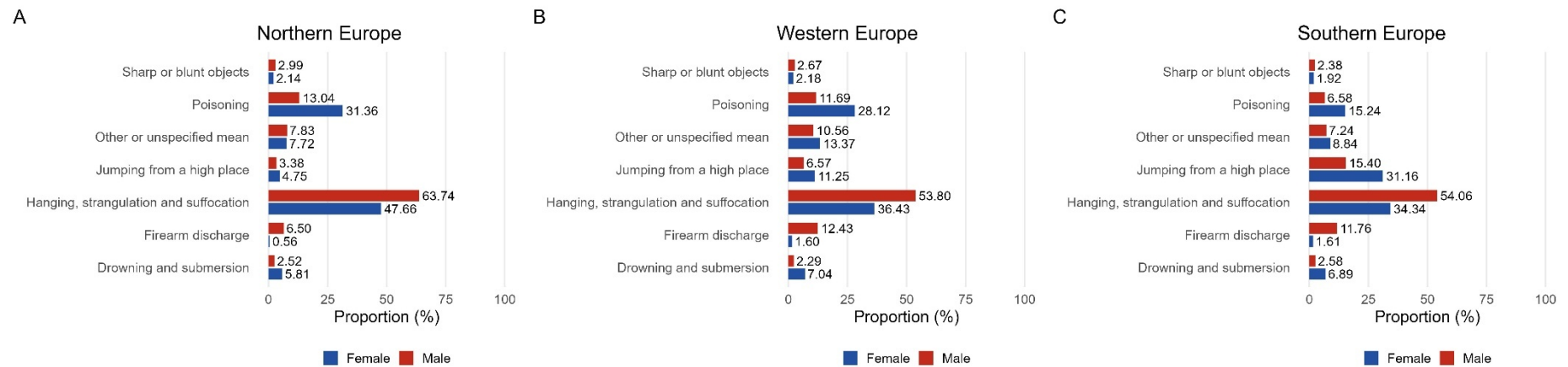


Figure S30. Proportional distribution of suicide means by sex in North, West, and South Europe between 2010 and 2019

- A. Proportional distribution of suicide means in Northern Europe by sex (2010 to 2019);
- B. Proportional distribution of suicide means in Western Europe by sex (2010 to 2019);
- C. Proportional distribution of suicide means in Southern Europe by sex (2010 to 2019).

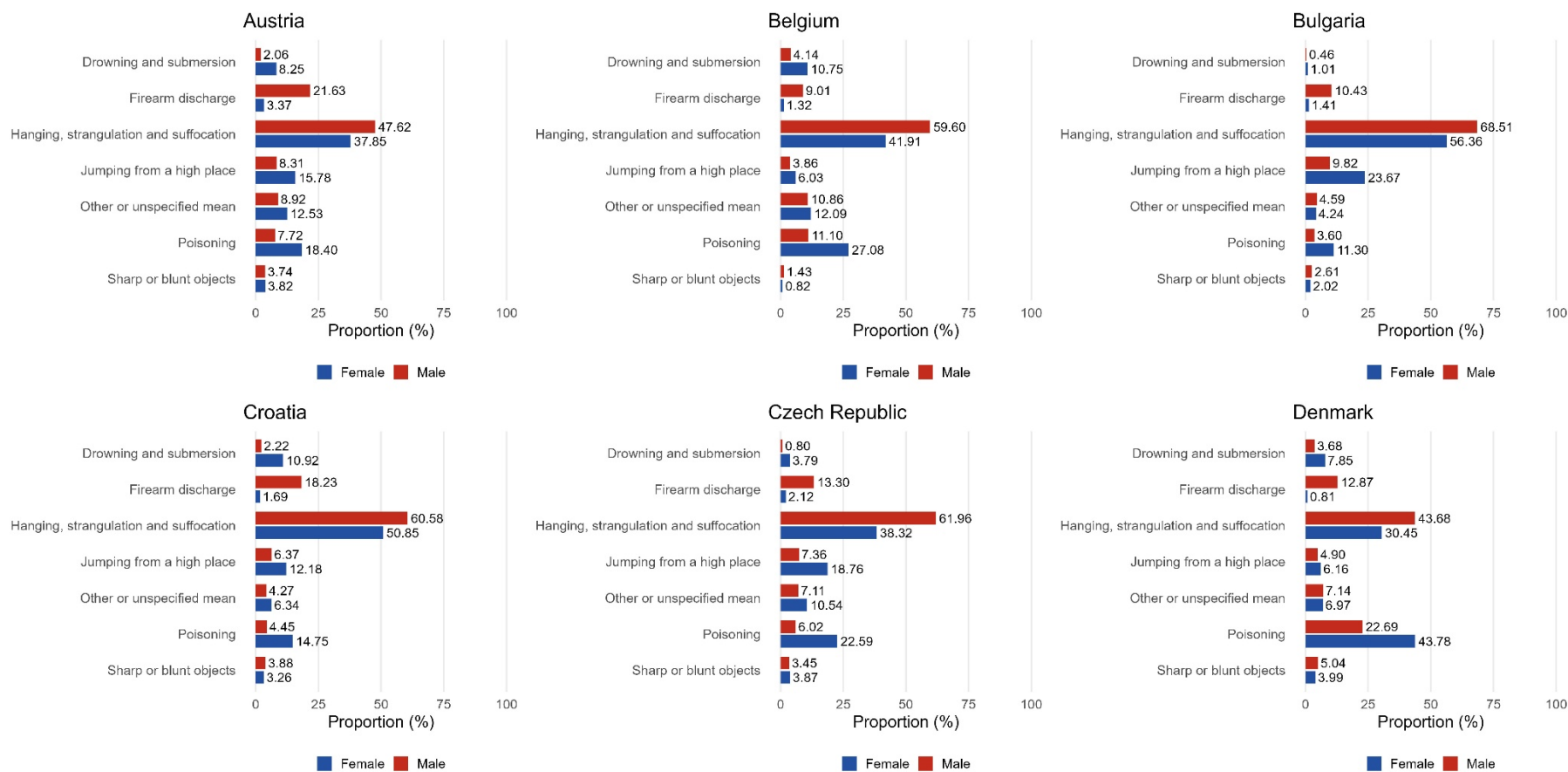


Figure S30. Proportional Distribution of Suicide Methods by Sex (Austria, Belgium, Bulgaria, Croatia, Czech Republic Denmark)



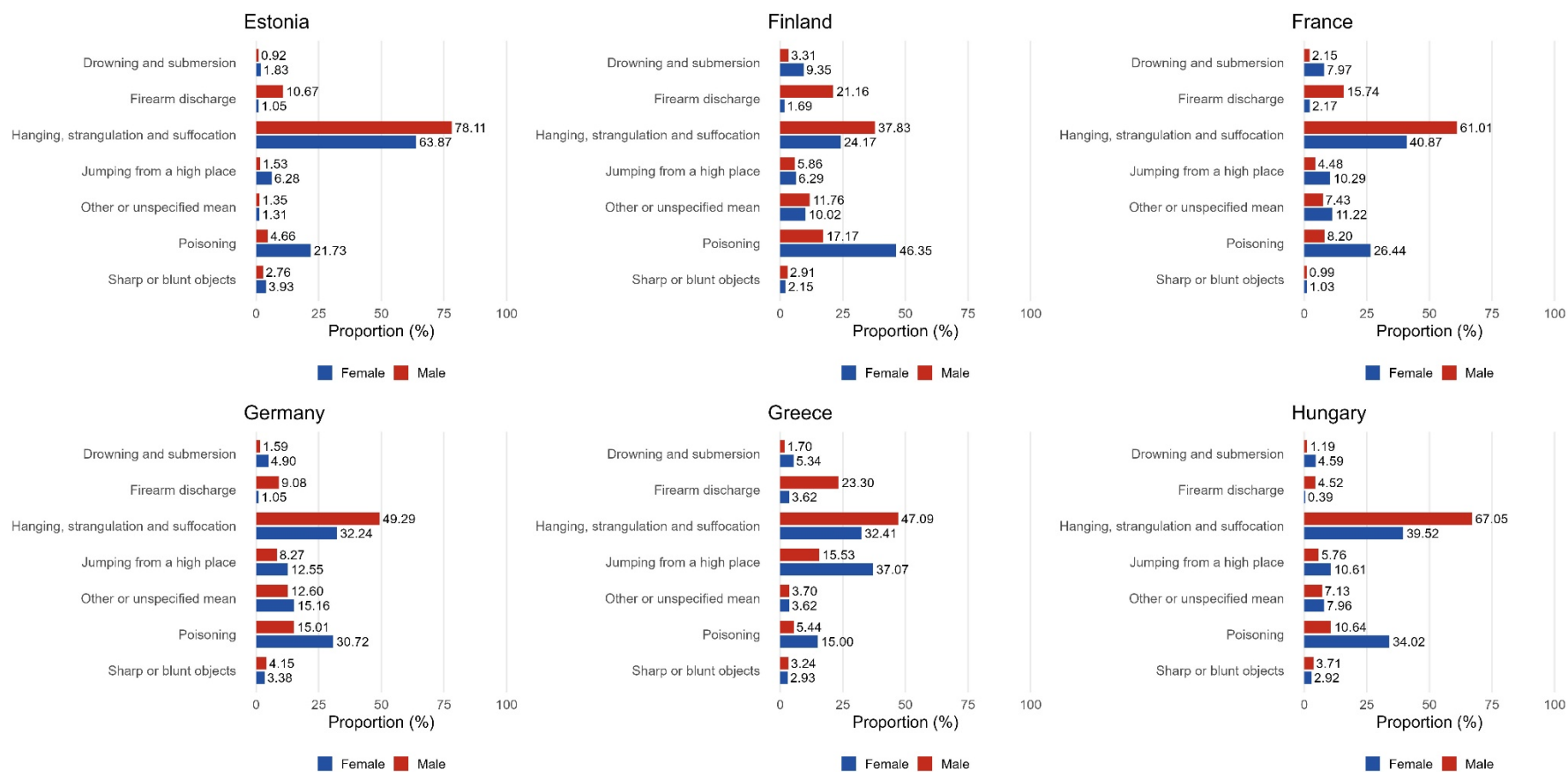


Figure S31. Proportional Distribution of Suicide Methods by Sex (Estonia, Finland, France, Germany, Germany, Greece)

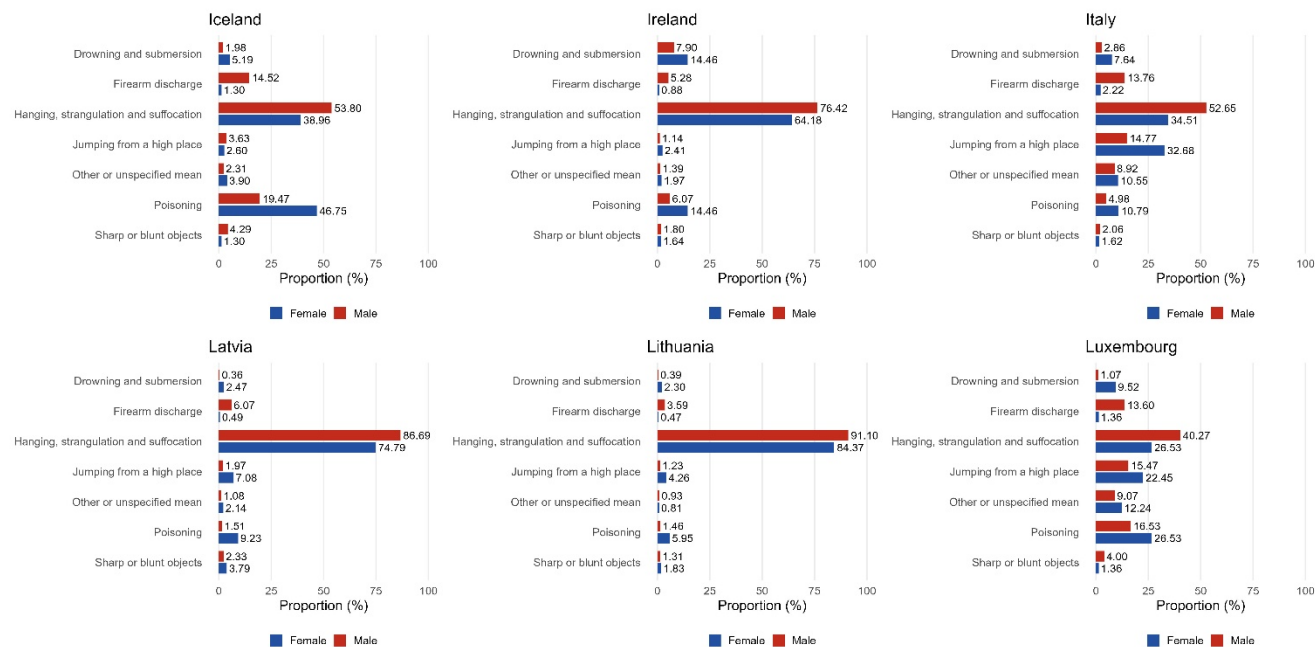


Figure S32. Proportional Distribution of Suicide Methods by Sex (Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg)

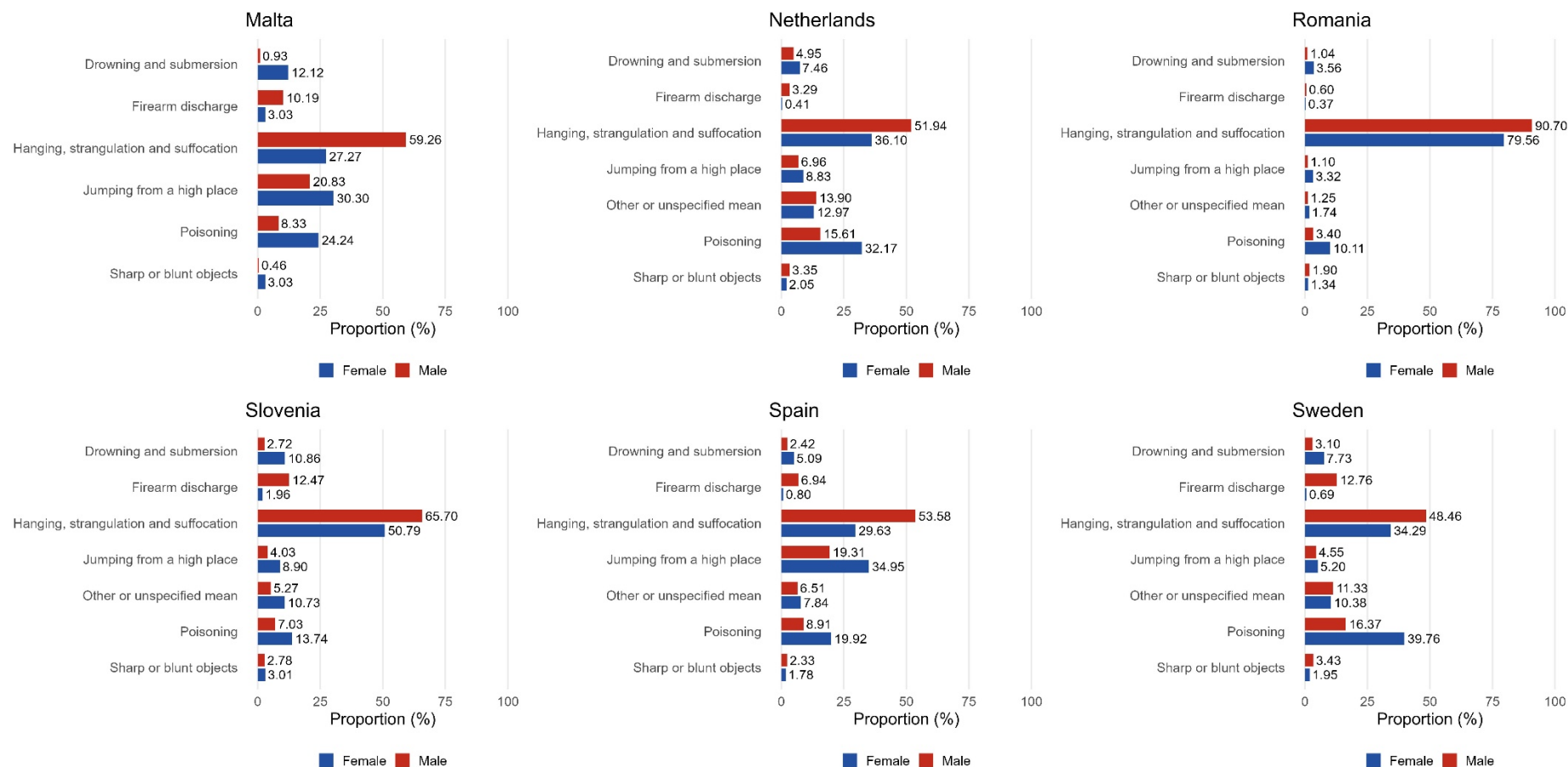


Figure S33. Proportional Distribution of Suicide Methods by Sex (Malta, Netherlands, Romania, Slovenia, Spain, Sweden)

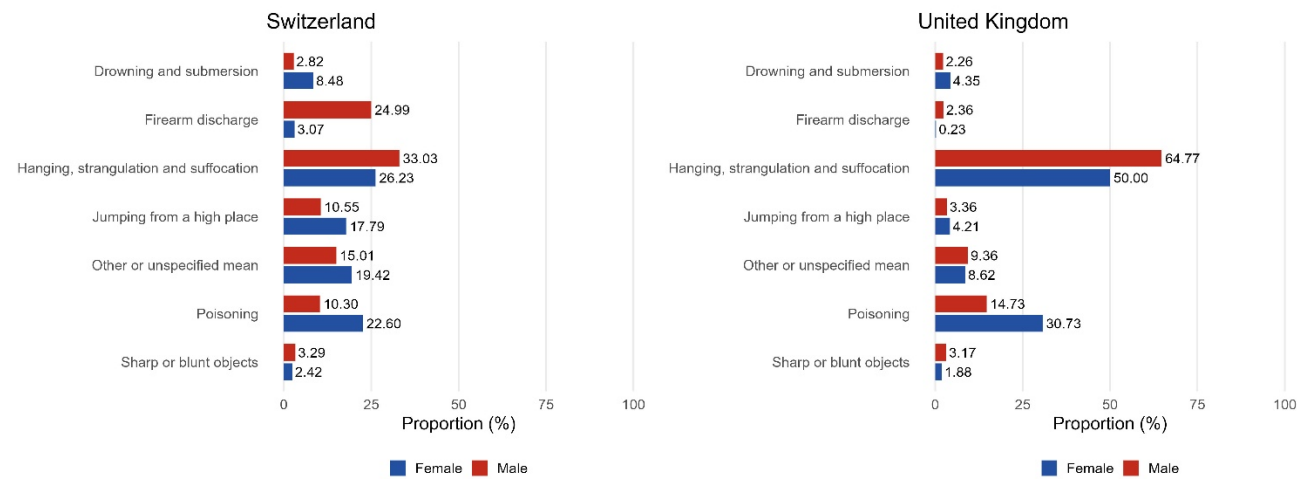


Figure S34. Proportional Distribution of Suicide Methods by Sex (Switzerland, United Kingdom)

### APC Model Sensitivity Analysis: East Europe Females

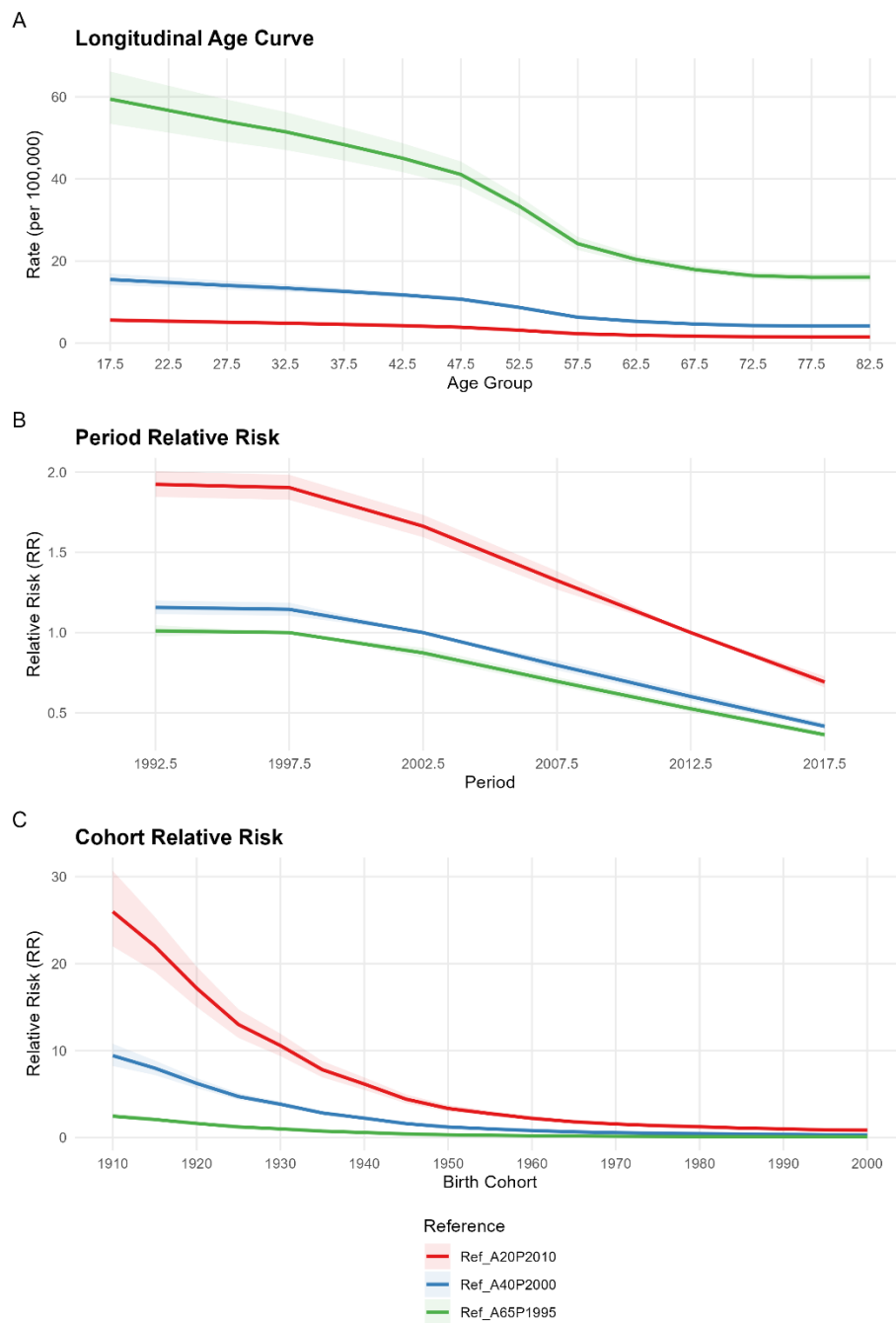


Figure S36 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among females in Eastern Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).

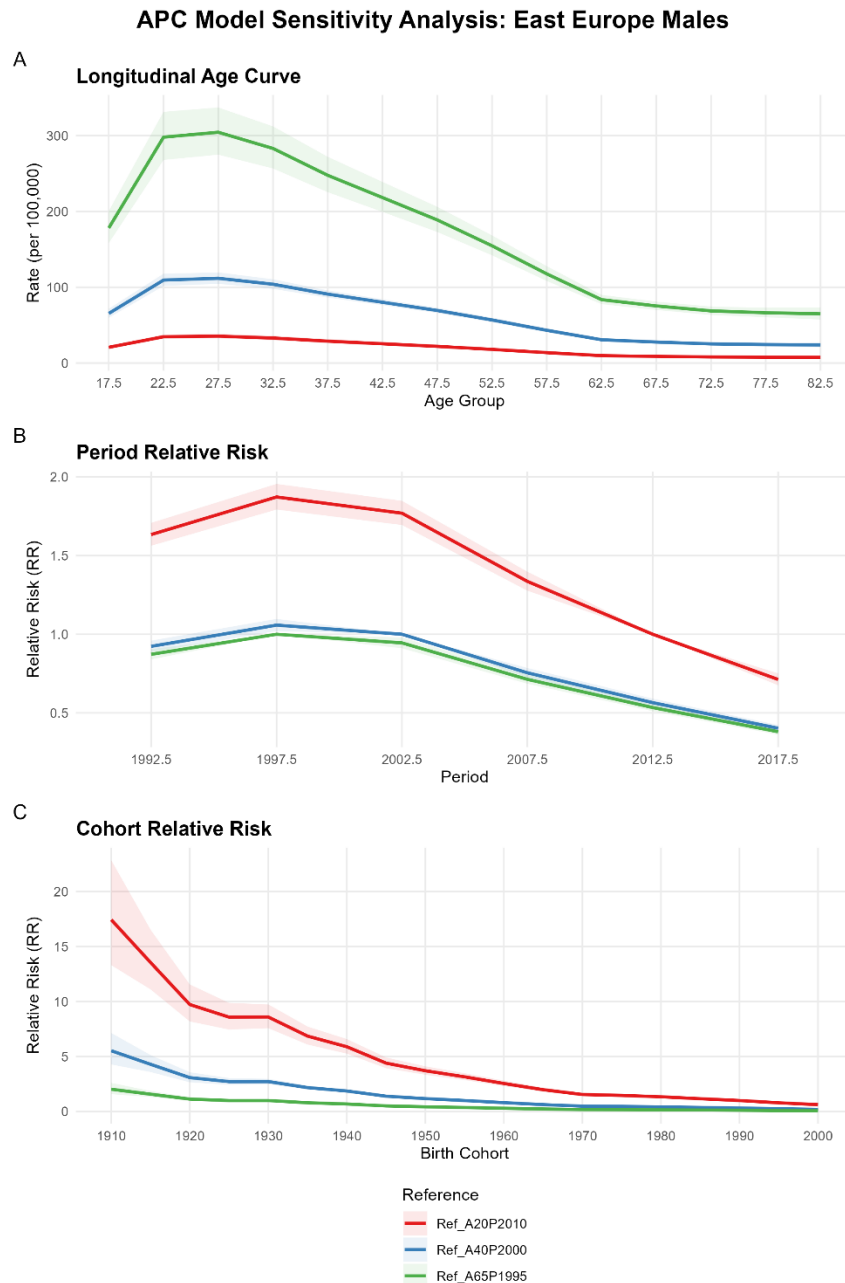


Figure S37 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among males in Eastern Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).

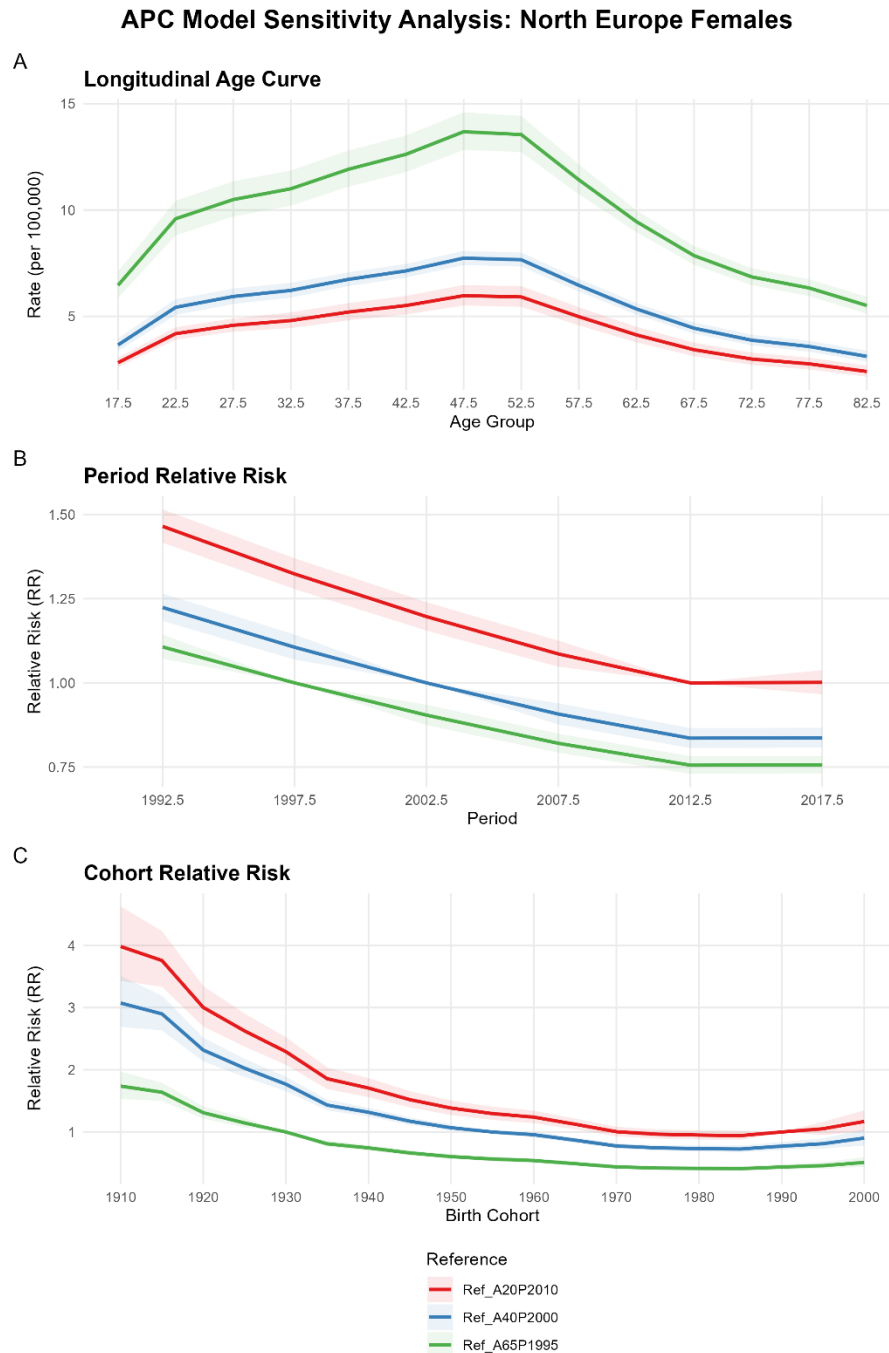


Figure S38 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among females in North Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).

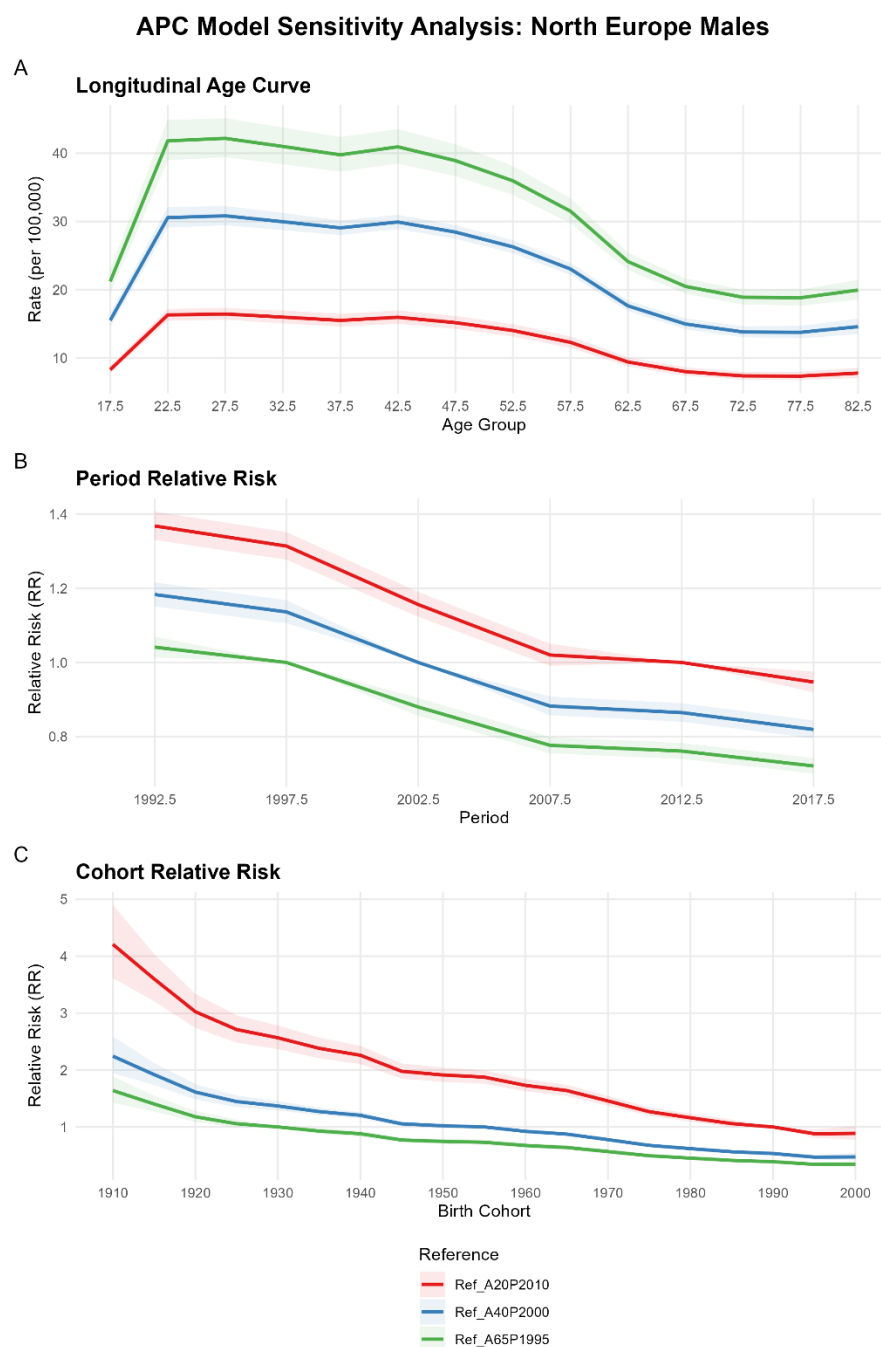


Figure S39 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among males in North Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).



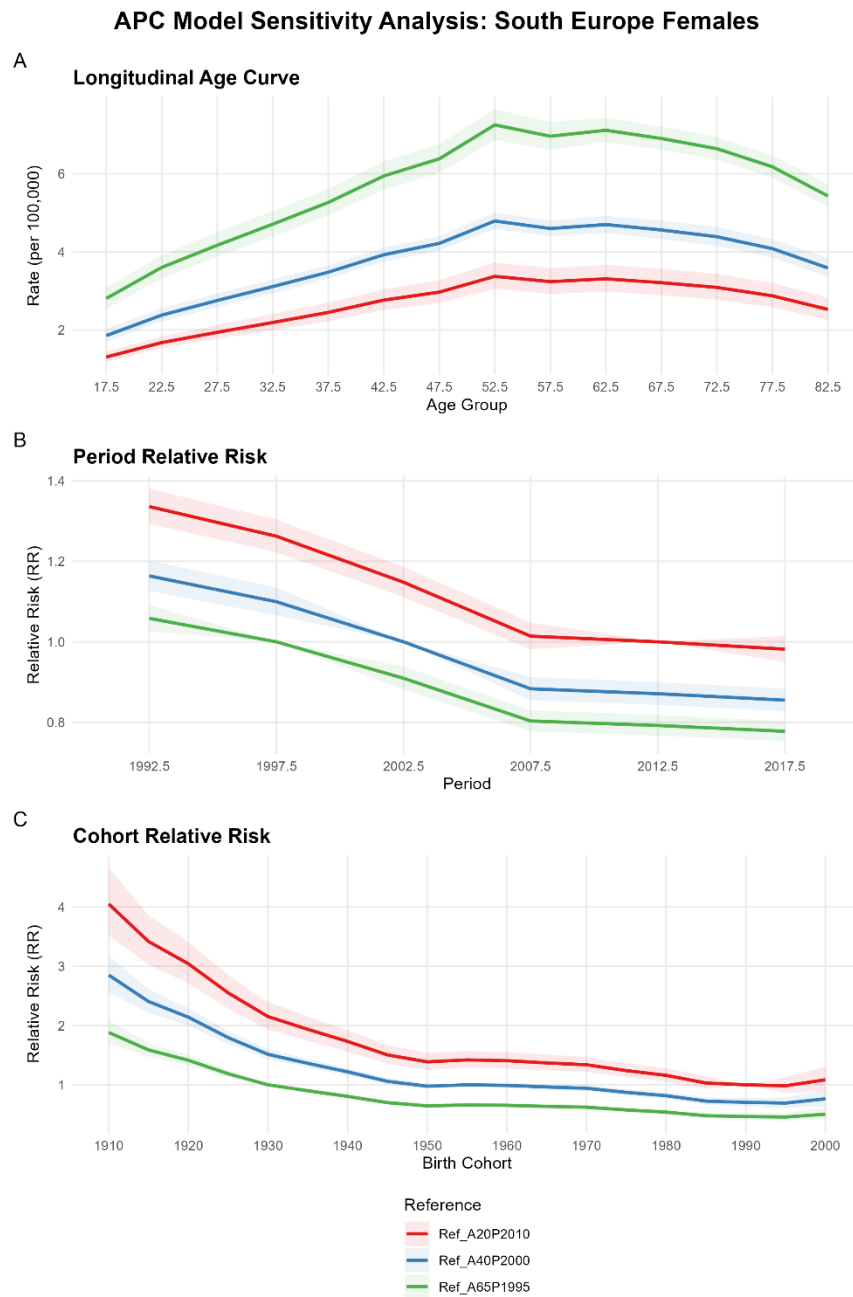


Figure S40 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among females in South Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).

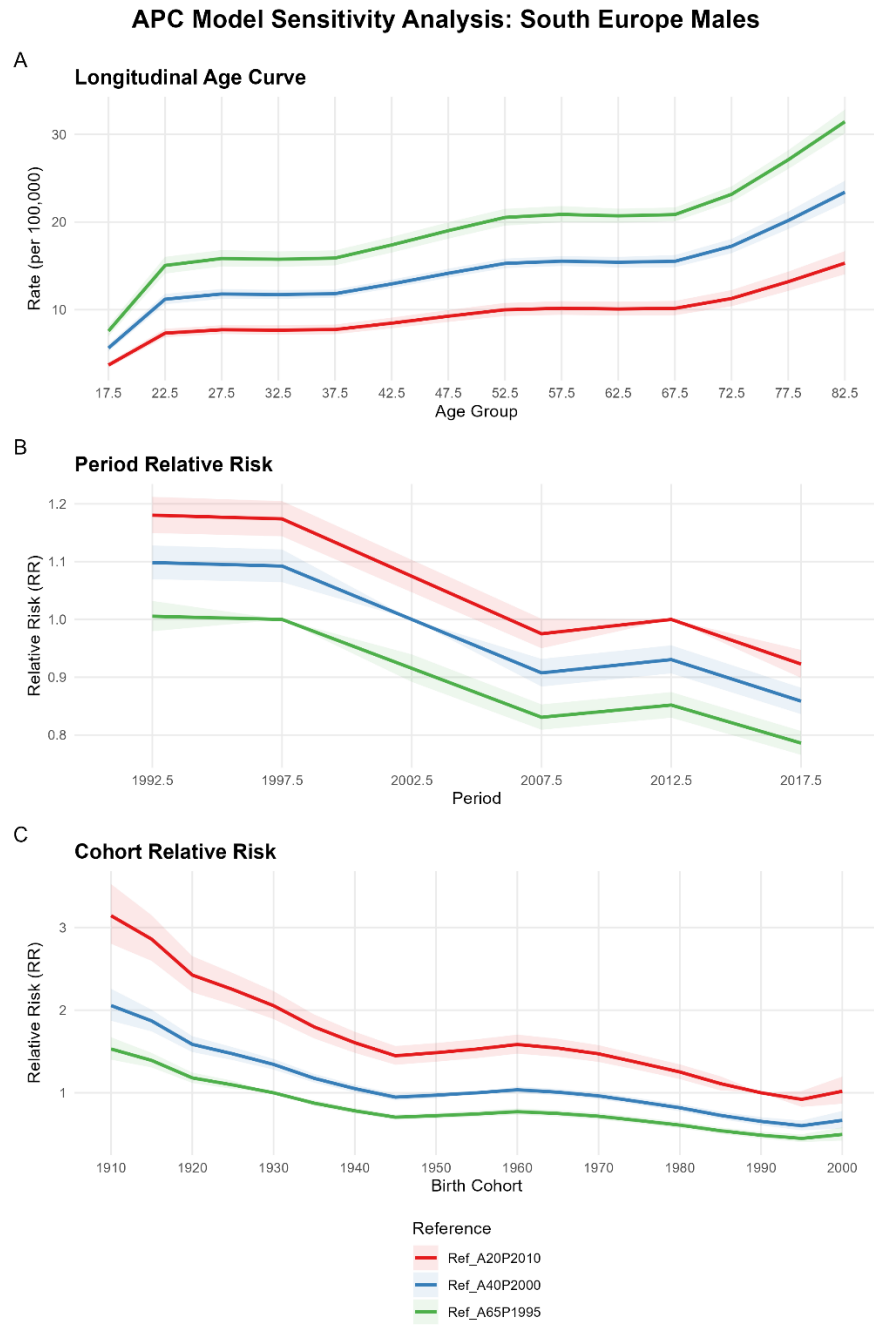


Figure S41 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among males in South Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).

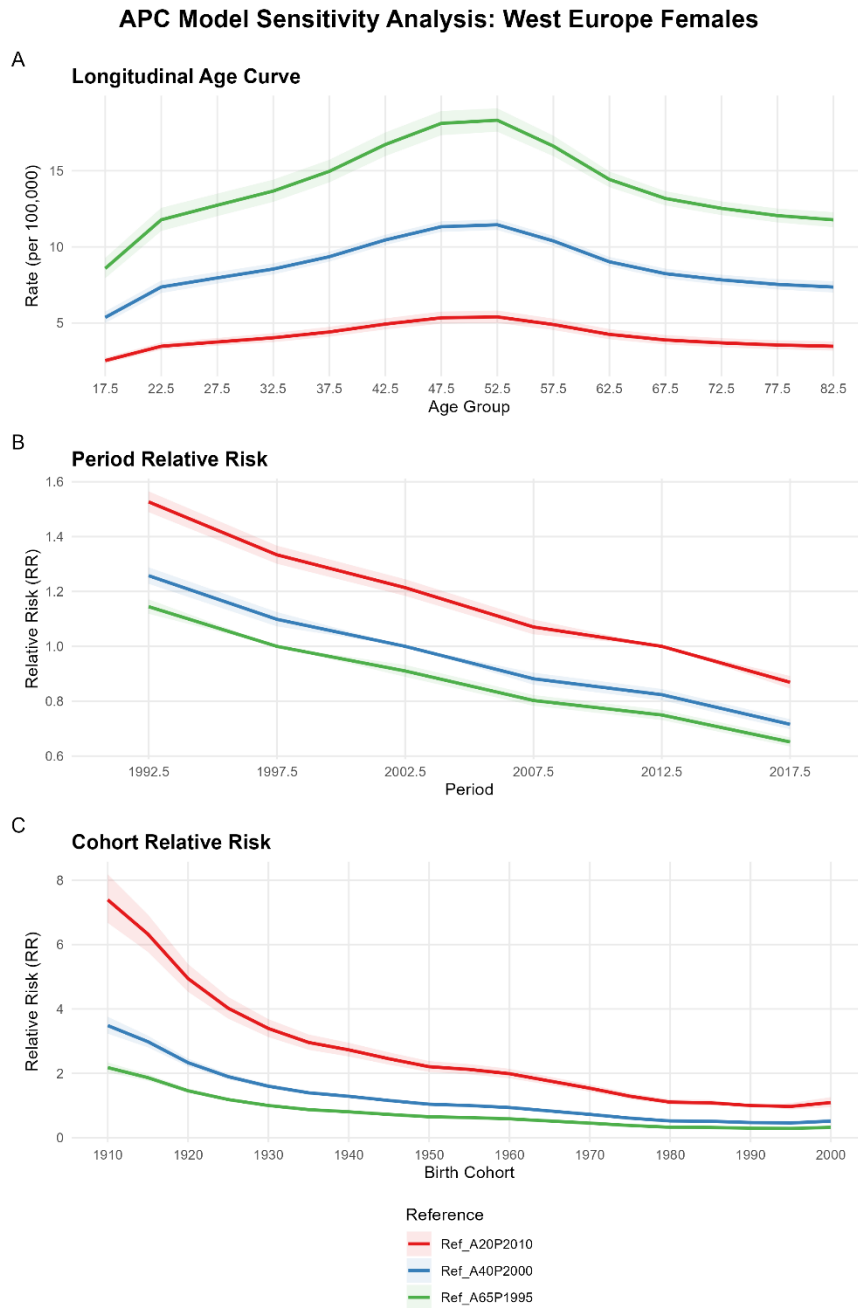


Figure S42 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among females in West Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).

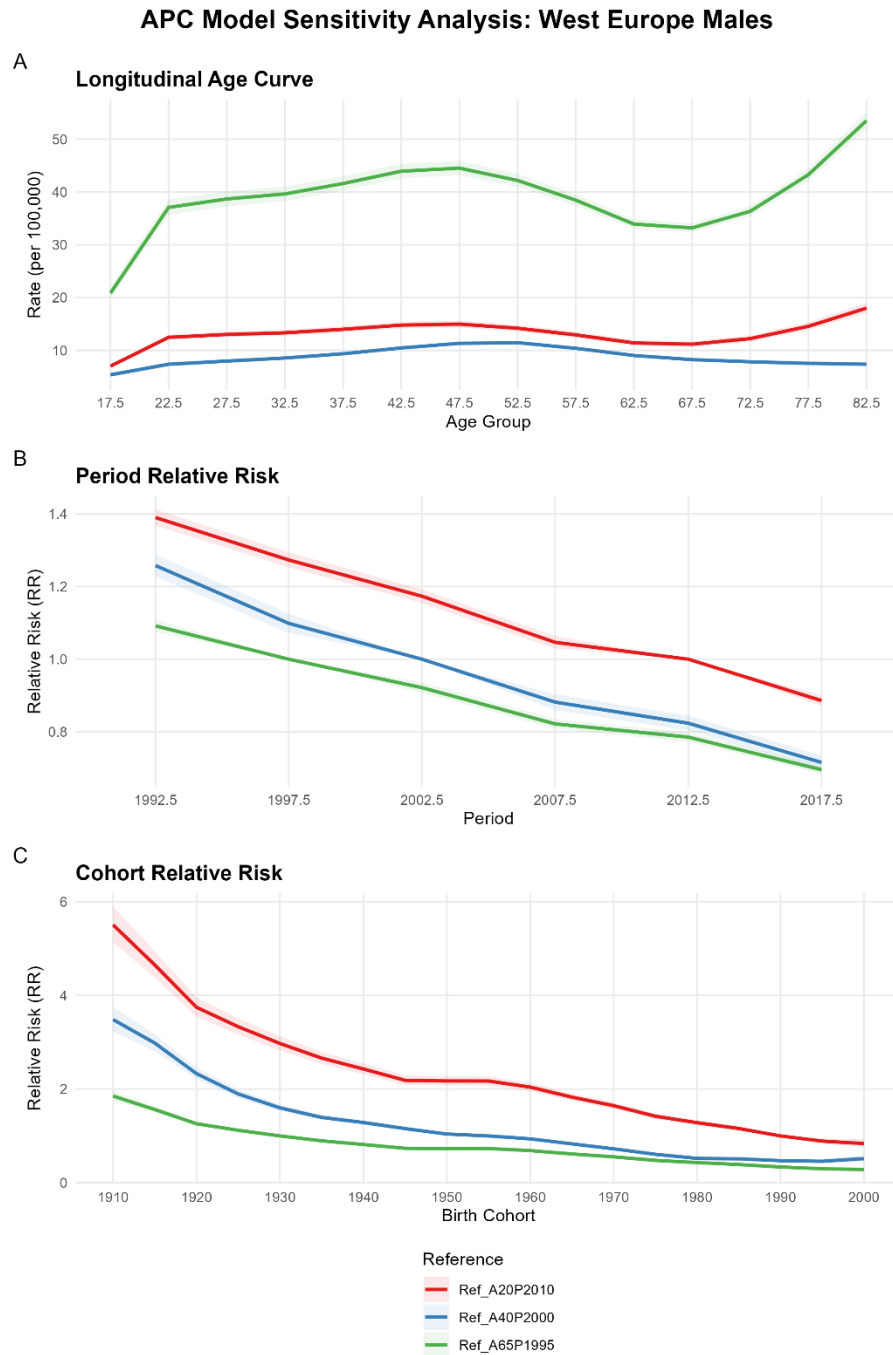


Figure S43 Sensitivity analysis of Age-Period-Cohort model estimates using alternative reference specifications for suicide mortality among males in West Europe.

(A) Longitudinal age curves (age-specific suicide rates adjusted for period effects), (B) Period relative risks (temporal trends relative to reference periods), and (C) Cohort relative risks (birth cohort deviations relative to reference cohorts). Three different reference settings were tested: Ref\_A20P2010 (reference age: 20-24 years, period: 2010-2014), Ref\_A40P2000 (reference age: 40-44 years, period: 2000-2004), and Ref\_A65P1995 (reference age: 65-69 years, period: 1995-1999).

# Eastern Europe

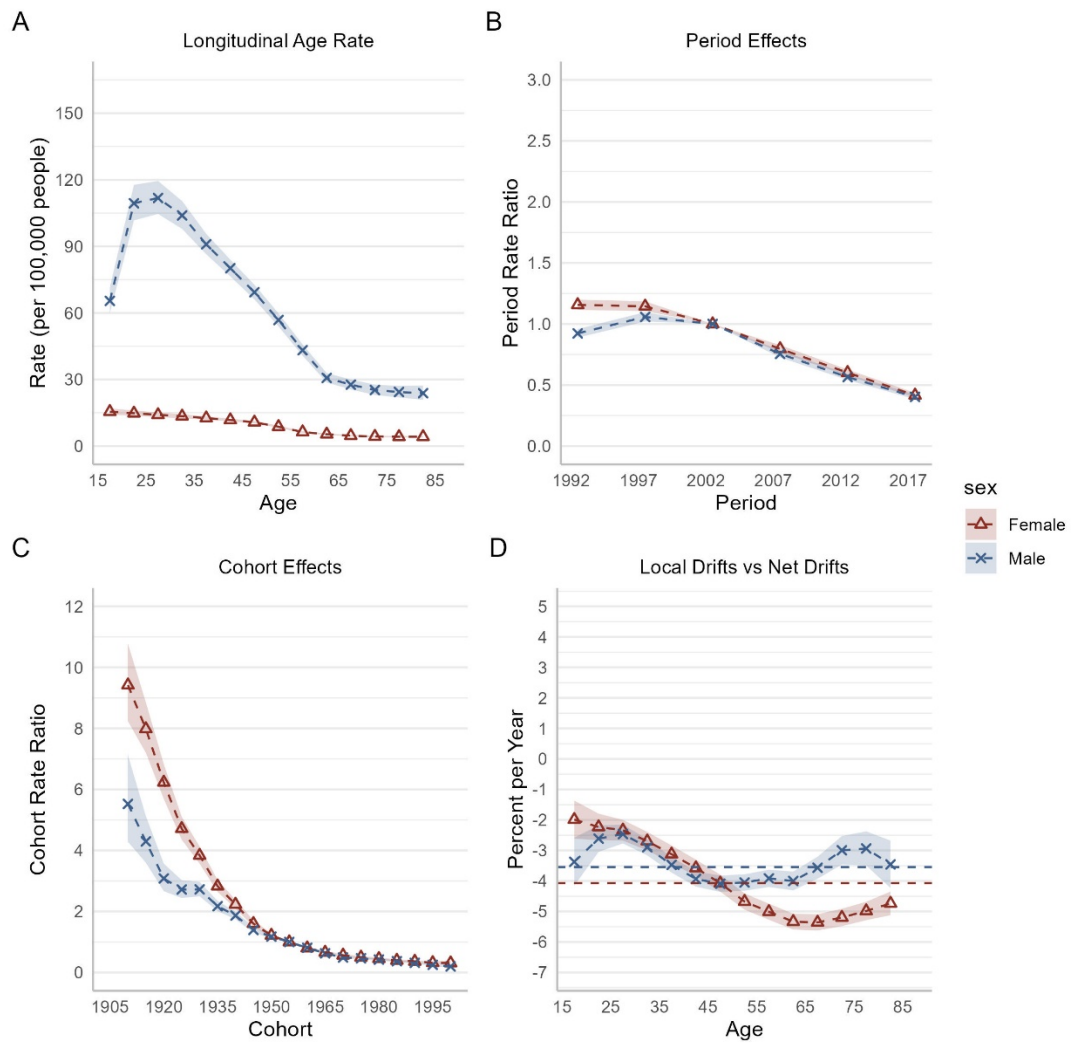


Figure S44. Age period cohort results of Eastern Europe

# Northern Europe

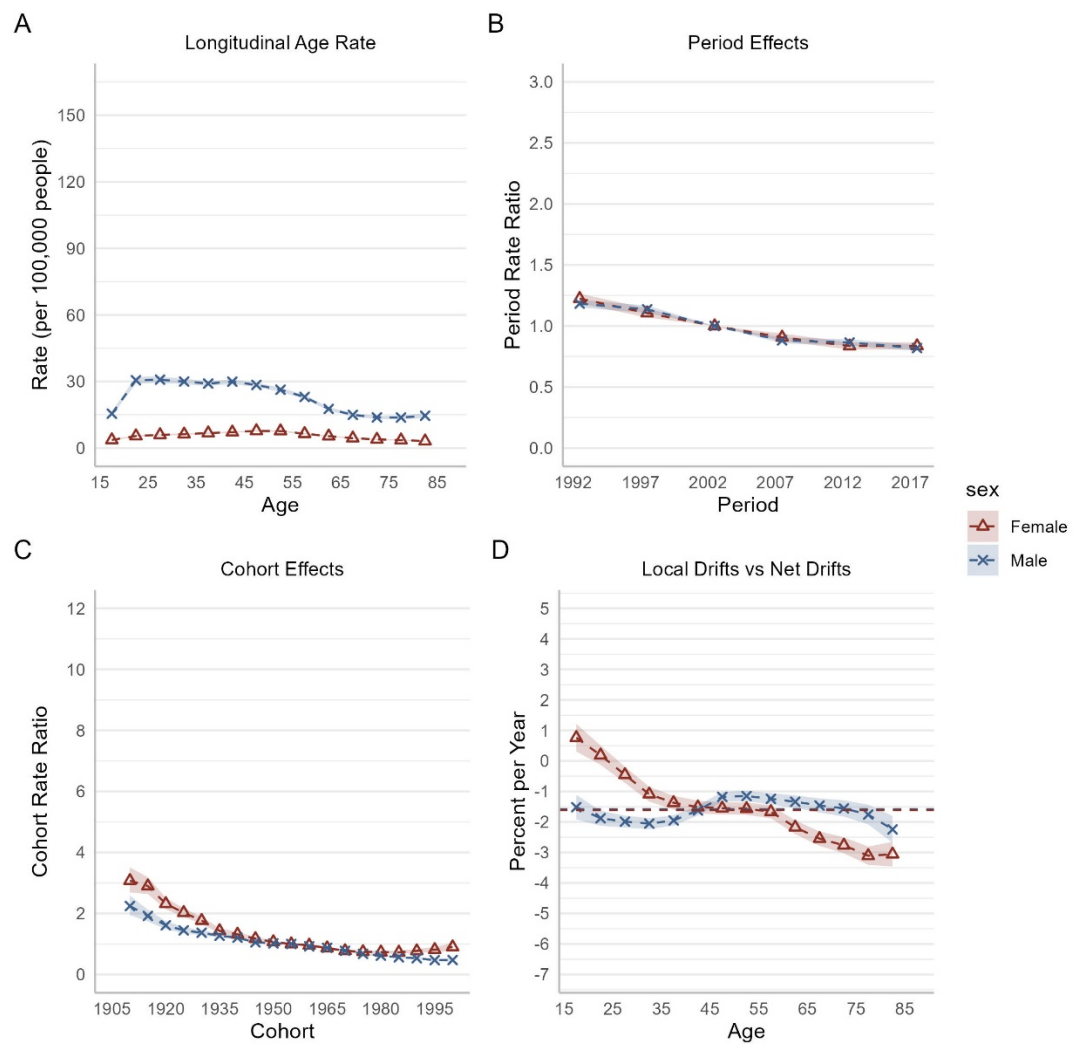


Figure S45. Age period cohort results of Northern Europe

# Southern Europe

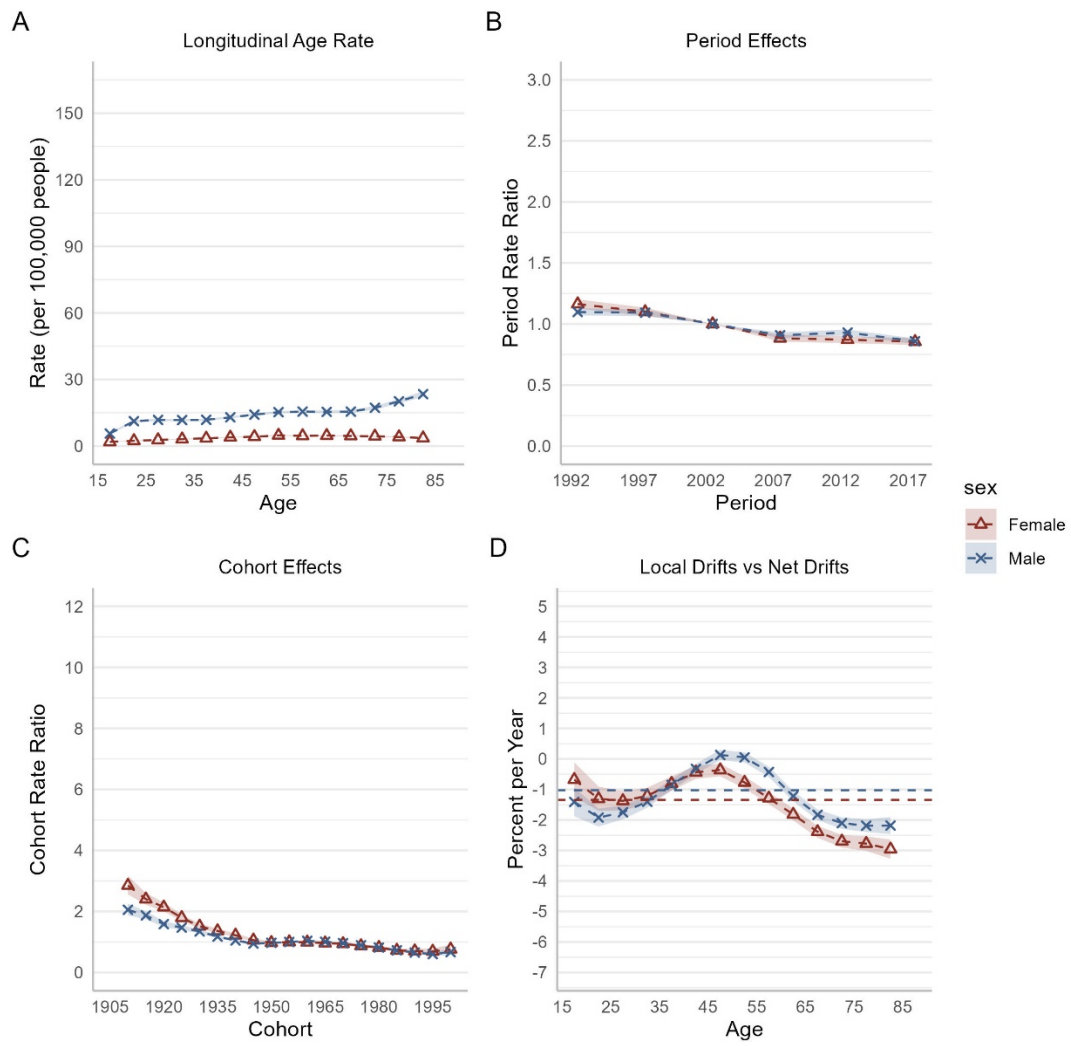


Figure S46. Age period cohort results of Southern Europe

# Western Europe

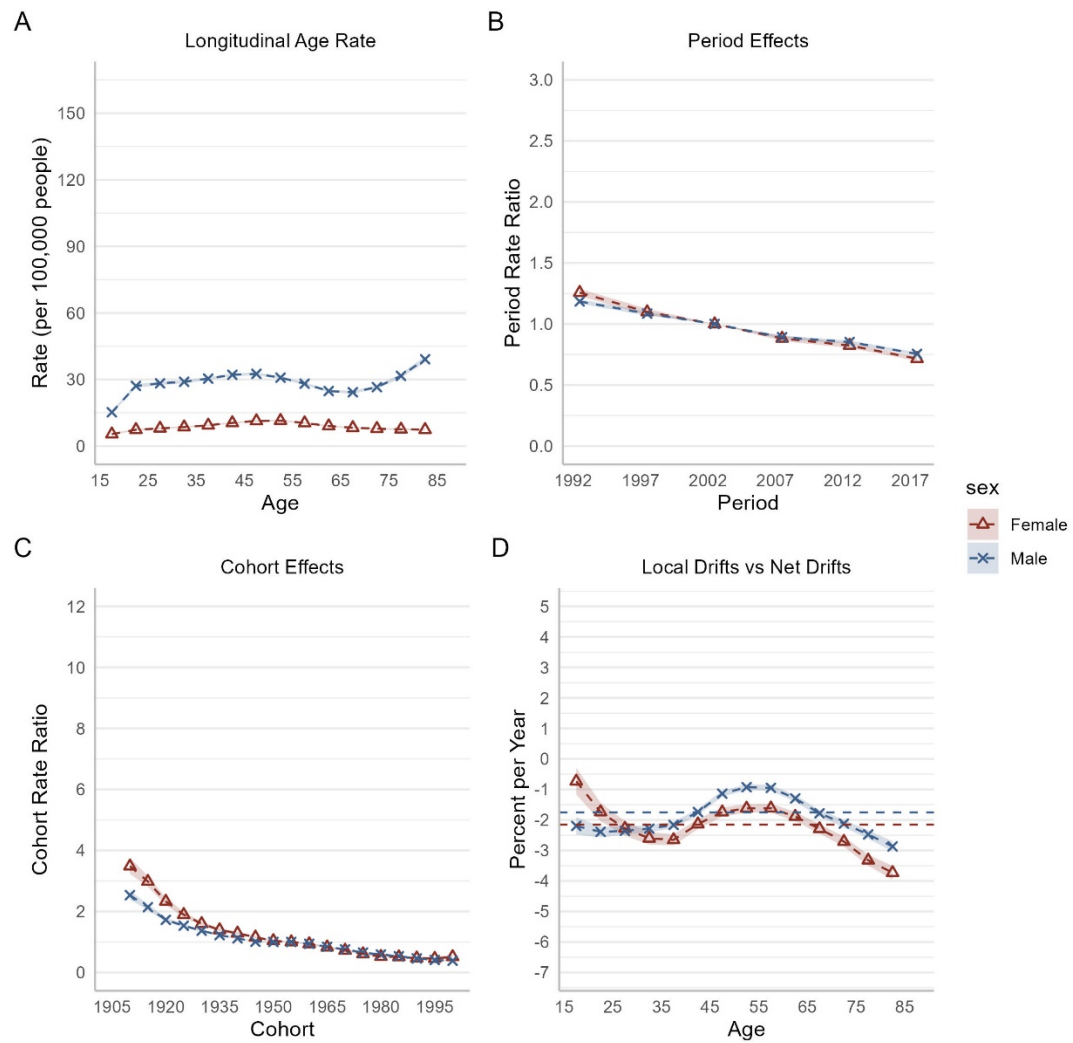


Figure S47. Age period cohort results of Western Europe