Wittgenstein Centre FOR DEMOGRAPHY AND GLOBAL HUMAN CAPITAL
A COLLABORATION OF IIASA, VID/ÖAW, WU

Vienna Institute of Demography

ÖAW AUSTRIAN ACADEMY OF SCIENCES

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European Demographic **Data Sheet** 2016

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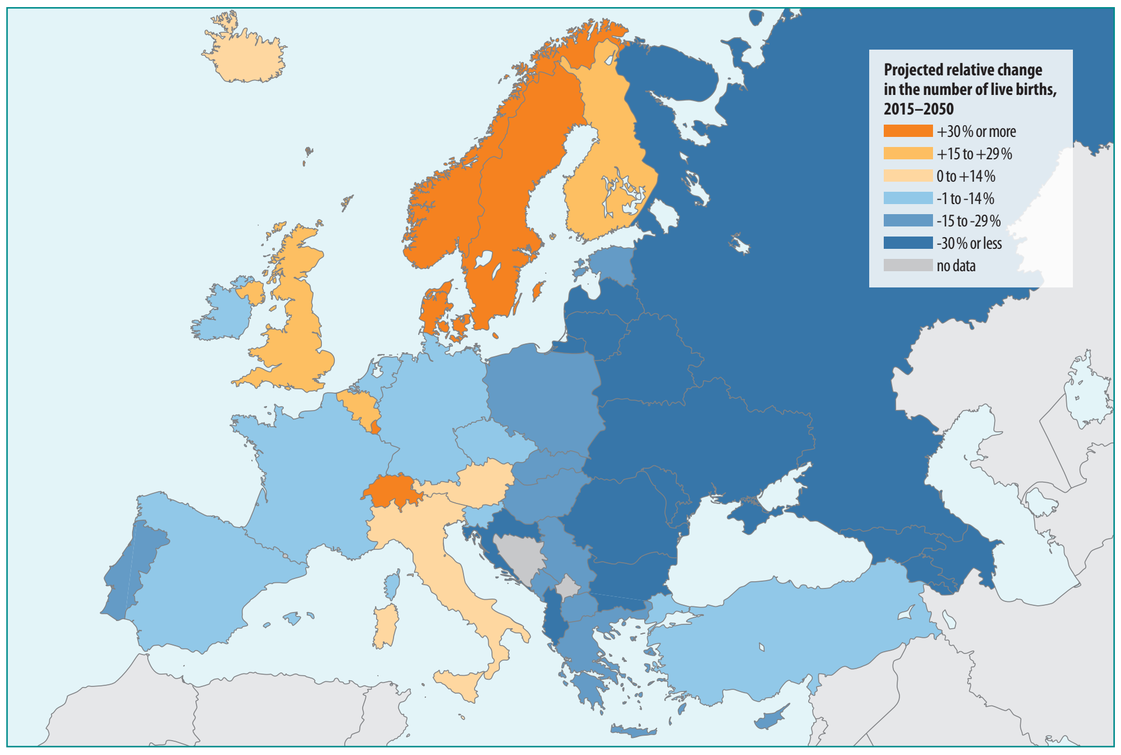

Migration **makes the difference**

More information: www.populationeurope.org

Country	Population size on January 1st, 2015 (millions)	Projected population size, 2050 (millions)	Projected population size (zero migration), 2050 (millions)	Relative population change, 2015–2050 (%)	Relative population change due to migration, 2015–2050 (%)	Relative population change, zero migration scenario, 2015–2050 (%)	Number of deaths, 2014 (thousands)	Number of live births, 2014 (thousands)	Projected number of live births, 2050 (thousands)	Total fertility rate, 2014	Tempo and parity adjusted total fertility, 2012	Completed cohort fertility, women born 1974 (children per woman)	Mean age at first birth, 2014 (years)	Male life expectancy at birth, 2014 (years)	Female life expectancy at birth, 2014 (years)	Male life expectancy at age 65, 2014 (years)	Female life expectancy at age 65, 2014 (years)	Population median age, 2015 (years)	Projected population median age, 2050 (years)	Old-age dependency ratio 65+/20–64, 2015 (%)	Prospective old-age dependency ratio, 2015 (%)	Projected old-age dependency ratio 65+/20–64, 2050 (%)	Projected prospective old-age dependency ratio, 2050 (%)	Intergenerationally equitable normal pension age (see box), 2050	Proportion of population 25–39 born abroad, 2015 (%)	Proportion of live births to foreign-born mothers, 2014 (%)	Country
Albania	2.9	2.7	3.0	-6.1	-9.0	2.9	20.7	35.8	22	1.78	1.62*	2.2	25.3	76.4	80.3	16.7	18.6	35.6	49.2	20.7	15.1	46.7	25.8	68.9	*1.1*	-	Albania
Andorra	0.1	-	-	-	-	-	0.3	0.6	-	1.25	1.55*	-	-	*79.4*	*85.8*	*18.8*	*23.3*	41.1	-	20.2	-	-	-	-	57.0	64.5	Andorra
Armenia	3.0	2.9	3.1	-4.9	-7.9	3.1	27.7	43.0	27	1.65	1.91*	-	24.3	71.8	78.1	14.3	16.9	34.0	45.3	16.9	15.6	42.3	24.2	69.1	*4.0*	-	Armenia
Austria	8.6	10.5	7.9	22.0	29.9	-7.9	78.3	81.7	90	1.47	1.71	1.67	28.9	79.2	84.0	18.5	21.8	43.0	49.1	30.0	17.3	53.3	23.6	69.3	26.8	31.1	Austria
Azerbaijan	9.6	11.4	11.2	19.3	2.4	16.9	55.6	170.5	107	*1.98*	*1.90**	1.91	*24.1*	71.6	76.8	*14.7*	*16.5*	30.5	42.8	9.3	8.6	34.8	20.7	69.1	-	-	Azerbaijan
Belarus	9.5	8.1	8.1	-14.0	0.1	-14.1	121.5	118.5	71	1.70	1.70	1.57	25.2	*67.3*	*78.0*	*12.6*	*17.6*	39.5	46.9	21.9	21.9	47.2	30.9	69.2	*8.4*	-	Belarus
Belgium	11.3	14.4	11.3	28.3	27.9	0.4	104.8	125.0	153	1.74	1.84*	1.84	28.6	78.8	83.9	18.4	21.9	41.4	43.5	30.4	17.3	46.6	20.9	69.2	24.5	29.8	Belgium
Bosnia & Herzegovina	*3.8*	-	-	-	-	-	36.0	30.3	-	1.26	1.51*	-	27.0	*74.7*	*79.7*	*16.0*	*18.2*	-	-	-	-	-	-	-	-	-	Bosnia & Herzegovina
Bulgaria	7.2	5.4	5.6	-24.8	-3.0	-21.8	109.0	67.6	44	1.53	1.57*	1.63	25.8	71.1	78.0	*14.1*	*17.6*	43.4	48.6	32.4	29.1	55.2	34.6	69.2	1.6	1.5	Bulgaria
Croatia	4.2	3.3	3.6	-21.6	-6.7	-14.9	50.8	39.6	26	1.46	1.73*	1.69	28.1	74.7	81.0	15.5	19.1	42.8	51.8	31.0	23.9	66.6	33.9	69.3	12.9	15.1	Croatia
Cyprus	0.8	0.9	0.9	9.9	4.5	5.3	5.3	9.3	7	1.31	1.62*	2.04	29.2	80.9	84.7	18.9	21.4	37.0	50.4	23.3	13.1	51.6	20.9	69.4	35.1	26.9	Cyprus
Czech Republic	10.5	11.1	9.5	5.1	14.7	-9.6	105.7	109.9	106	1.53	1.66	1.81	28.1	75.8	82.0	16.1	19.8	41.1	45.8	28.5	18.8	54.9	25.5	69.4	7.3	6.3	Czech Republic
Denmark	5.7	6.9	5.8	21.1	18.5	2.6	51.3	56.9	75	1.69	1.84*	1.94	29.2	78.7	82.8	18.1	20.8	41.5	43.9	31.9	17.5	46.2	22.2	69.3	20.2	19.6	Denmark
Estonia	1.3	1.1	1.2	-15.2	-4.1	-11.1	15.5	13.6	10	1.54	1.82	1.82	26.6	72.4	81.9	15.2	20.4	41.5	47.8	30.9	22.4	57.4	28.8	69.2	6.2	5.1	Estonia
Finland	5.5	6.4	5.5	17.3	17.3	0.0	52.2	57.2	71	1.71	1.94	1.89	28.6	78.4	84.1	18.2	21.7	42.4	44.5	34.4	18.0	49.9	22.0	69.2	12.0	12.0	Finland
France	64.3	73.3	68.5	14.1	7.5	6.6	547.0	781.2	772	1.98	2.17*	2.02	28.4	79.3	85.4	*18.9*	*22.9*	41.2	44.6	32.7	16.4	54.4	22.9	69.1	14.8	21.3	France
Georgia	3.7	3.1	3.6	-17.1	-12.9	-4.3	49.1	60.6	29	1.98	2.00*	-	*24.6*	68.6	77.2	-	-	37.4	46.0	22.2	22.2	45.8	29.7	69.0	*1.4*	-	Georgia
Germany	81.2	83.6	70.0	3.0	16.7	-13.8	868.4	714.9	689	1.47	1.57*	1.57	29.4	78.7	83.6	18.2	21.4	45.9	50.9	34.6	22.2	60.2	28.7	69.3	*20.2*	25.8	Germany
Greece	10.9	9.3	9.7	-14.5	-3.5	-11.0	113.7	92.1	69	1.30	1.67*	1.56	30.0	78.9	84.1	18.8	21.6	43.4	52.8	35.1	21.1	77.1	31.7	69.2	17.9	19.6	Greece
Hungary	9.9	8.6	8.1	-12.4	5.2	-17.7	126.3	93.3	69	1.44	1.49	1.69	27.7	72.3	79.4	14.6	18.6	41.6	50.0	28.7	23.5	56.1	31.4	69.4	6.5	4.1	Hungary
Iceland	0.3	0.4	0.4	27.6	8.3	19.4	2.0	4.4	5	1.93	2.23*	2.27	27.5	81.3	84.5	19.5	22.2	35.8	43.0	22.8	12.0	47.1	19.5	69.2	21.8	18.0	Iceland
Ireland	4.6	5.8	5.4	25.2	7.9	17.3	29.2	67.3	64	1.94	2.08*	2.08	29.6	79.3	83.5	18.4	21.1	36.4	43.5	22.1	12.4	54.0	21.4	69.2	27.8	25.3	Ireland
Italy	60.8	66.9	53.9	10.1	21.4	-11.4	598.4	502.6	551	1.37	1.54*	1.44	30.7	80.7	85.6	19.2	22.8	45.1	49.9	36.4	20.0	67.2	27.8	69.3	18.4	22.1	Italy
Kosovo	*1.8*	-	-	-	-	-	8.2	32.1	-	*1.87*	-	2.6	26.7	*74.1*	*79.4*	-	-	-	-	-	-	-	-	-	*2.7*	-	Kosovo
Latvia	2.0	1.4	1.6	-30.1	-11.1	-18.9	28.5	21.7	12	1.65	1.67	1.64	26.3	69.1	79.4	13.8	19.0	42.7	46.8	31.7	27.0	53.9	32.3	69.1	4.3	4.1	Latvia
Liechtenstein	0.04	-	-	-	-	-	0.3	0.4	-	1.59	-	-	-	81.0	83.2	19.1	20.7	42.9	-	25.3	-	-	-	-	*45.5*	88.7	Liechtenstein
Lithuania	2.9	1.9	2.5	-35.6	-21.7	-13.9	40.3	30.4	19	1.63	1.85	1.72	27.0	69.2	80.1	14.3	19.5	42.7	46.8	30.8	24.8	57.2	35.3	69.0	2.2	2.6	Lithuania
Luxembourg	0.6	1.1	0.6	90.7	85.4	5.3	3.8	6.1	12	1.50	1.95*	1.86	30.2	79.4	85.2	18.4	22.7	39.3	41.4	22.4	12.2	37.9	14.9	69.3	60.1	63.9	Luxembourg
Macedonia, FYR	2.1	1.9	2.0	-7.1	-2.3	-4.8	19.7	23.6	17	1.52	1.70*	2.07	26.6	73.5	77.5	14.5	16.2	37.4	48.0	19.7	18.5	47.5	29.2	69.3	-	3.6	Macedonia, FYR
Malta	0.4	0.5	0.4	14.2	20.3	-6.0	3.3	4.2	4	1.42	1.74*	1.61	28.6	79.8	84.2	18.6	21.7	41.0	48.2	30.1	14.3	51.7	20.2	69.2	15.5	15.0	Malta
Moldova	3.0	1.7	2.6	-42.7	-31.4	-11.3	39.5	38.6	13	1.63	1.62	1.88	24.2	64.9	73.7	11.9	14.9	35.2	46.6	17.6	23.9	40.9	34.0	69.1	-	-	Moldova
Monaco	0.04	-	-	-	-	-	0.2	0.3	-	2.3	-	-	31.2	*82.1*	*88.2*	*20.9*	*25.4*	-	-	-	-	-	-	-	-	74.0	Monaco
Montenegro	0.6	0.6	0.6	1.1	3.8	-2.8	6.0	7.5	6	1.75	2.07*	1.94	-	74.1	78.9	15.1	17.5	37.7	45.4	22.4	18.8	44.1	24.8	69.3	*15.6*	11.4	Montenegro
Netherlands	16.9	17.7	16.5	4.8	7.4	-2.6	139.2	175.2	151	1.71	1.77	1.77	29.5	80.0	83.5	18.6	21.4	42.2	48.3	29.9	15.8	55.7	26.6	69.3	19.1	19.2	Netherlands
Norway	5.2	7.9	5.7	53.6	43.6	10.0	40.4	59.0	92	1.75	2.08	2.02	28.7	80.1	84.2	18.8	21.6	39.1	42.6	27.1	14.3	40.6	17.4	69.3	27.8	27.3	Norway
Poland	38.0	33.9	34.6	-10.7	-1.8	-8.9	376.5	375.2	292	1.32	1.44*	1.64	26.9	73.7	81.7	15.9	20.4	39.6	49.8	24.0	16.1	56.8	25.3	69.2	0.7	0.7	Poland
Portugal	10.4	9.1	9.1	-12.0	0.4	-12.4	104.8	82.4	69	1.23	1.52	1.58	29.2	78.0	84.4	18.1	21.9	43.5	53.2	33.8	20.0	77.2	32.4	69.2	12.9	15.9	Portugal
Romania	19.9	16.2	16.6	-18.3	-1.9	-16.4	254.2	193.1	123	1.52	1.68*	1.57	26.1	71.4	78.7	14.7	18.1	41.0	48.9	27.4	23.2	53.4	31.9	69.1	1.5	1.4	Romania
Russia	146.3	135.9	125.5	-7.1	7.1	-14.2	1912.3	1942.7	1332	1.75	1.72	1.59	25.3	65.3	76.5	13.2	17.5	38.6	44.3	20.8	20.0	42.8	28.3	68.8	*8.8*	-	Russia
San Marino	0.02	-	-	-	-	-	0.3	0.3	-	1.53	-	-	-	81.9	86.4	19.7	23.2	-	-	-	-	-	-	-	-	-	San Marino
Serbia	7.1	6.1	5.8	-13.8	4.9	-18.7	101.2	66.5	53	1.46	1.65*	1.77	27.5	72.8	78.0	14.4	16.9	43.0	47.5	29.8	27.4	50.0	30.8	69.3	*10.6*	0.9	Serbia
Slovakia	5.4	4.7	5.0	-12.8	-5.1	-7.7	51.3	55.0	40	1.50	1.71	1.77	27.8	73.3	80.5	15.1	19.1	39.0	50.8	21.4	16.5	61.9	31.1	69.3	2.5	1.8	Slovakia
Slovenia	2.1	2.0	1.9	-0.9	7.5	-8.4	18.9	21.2	19	1.58	1.62	1.66	28.6	78.2	84.1	17.7	21.6	42.8	48.9	28.5	17.4	67.5	28.9	69.3	12.0	11.8	Slovenia
Spain	46.4	48.9	43.5	5.3	11.7	-6.4	393.7	426.1	390	1.32	1.45	1.37	30.6	80.4	86.2	19.3	23.5	42.3	52.8	30.0	15.9	75.9	26.8	69.2	20.6	22.3	Spain
Sweden	9.7	13.7	10.3	40.4	34.5	5.9	89.0	114.9	160	1.88	1.95	1.96	29.2	80.4	84.2	18.9	21.6	40.9	42.4	34.0	17.7	43.6	18.7	69.3	25.7	26.7	Sweden
Switzerland	8.2	11.4	8.2	38.5	39.3	-0.8	63.9	85.3	111	1.54	1.70*	1.63	30.6	81.1	85.4	19.6	22.7	42.2	47.3	28.7	14.5	52.9	21.1	69.2	40.2	39.0	Switzerland
Turkey	77.7	97.6	97.6	25.6	0.0	25.6	390.1	1337.5	953	2.17	1.70*	2.5	-	75.4	80.9	16.2	19.6	30.7	42.9	13.4	9.5	39.0	18.6	69.0	*1.6*	-	Turkey
Ukraine	42.8	34.5	34.4	-19.3	0.3	-19.6	632.7	465.9	290	1.50	1.61	1.54	*24.6*	66.2	76.4	-	-	40.0	47.2	24.2	25.2	47.8	33.2	68.9	-	-	Ukraine
United Kingdom	64.9	81.0	69.2	24.8	18.1	6.7	568.8	775.9	910	1.81	*2.01**	1.89	28.6	79.5	83.2	18.8	21.3	40.0	42.6	30.3	16.7	46.1	20.8	69.2	24.2	25.7	United Kingdom
EU-28	**506.3**	**539.8**	**478.7**	**6.6**	**12.1**	**-5.4**	**4928.0**	**5093.3**	**4999**	**1.57**	**1.72**	**1.69**	**28.9**	**78.1**	**83.6**	**18.2**	**21.6**	**42.5**	**47.8**	**31.4**	**18.7**	**57.8**	**25.6**	**-**	**16.1**	**19.4**	**EU-28**
United States	320.1	388.9	340.9	21.5	15.0	6.5	*2626.4*	3988.1	4529	1.86	2.19	2.21	*26.6*	76.4	81.2	18.0	20.5	37.8	41.7	24.7	13.2	40.9	20.6	-	*20.0*	23.0	United States
Japan	127.0	107.4	105.1	-15.4	1.8	-17.3	1268.0	1030.0	864	1.42	1.58	1.42	29.9	80.5	86.8	19.3	24.2	46.5	53.3	46.4	21.1	77.4	30.7	-	*2.4*	2.2	Japan

Note: Numbers in italics refer to years different from the one in the column heading. Asterisks indicate different calculation methods applied by the Wittgenstein Centre. Apart from US and Japan, population projections were calculated by the Wittgenstein Centre. EU-28 total population excludes French overseas departments. Some indicators for the EU-28 are computed as weighted averages. For further information about projection assumptions, data sources, country-specific definitions and notes see www.populationeurope.org.

An intergenerationally equitable **normal pension age**

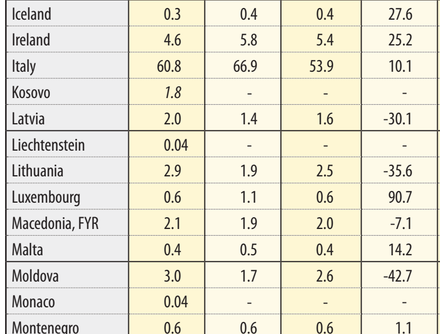

Figure 1: Legislated pension age and intergenerationally equitable normal pension age for men, Germany, 2015-2050

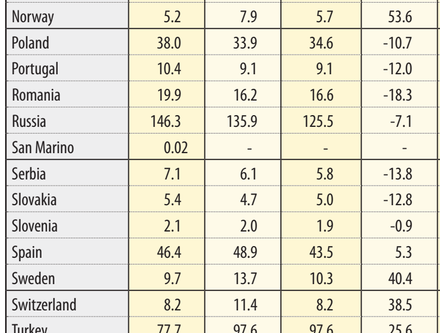

Figure 2: Legislated pension age and intergenerationally equitable normal pension age for men, United Kingdom, 2015-2050

As life expectancy rises, how should normal pension ages change in a way that is fair for each generation? Fairness is a core democratic value, but intergenerational fairness is rarely mentioned in policy discussions of pension ages. Up to now there has been no clear, analytical definition of what an intergenerationally equitable normal pension age (IENPA) would be.

A recently developed approach to measuring population ageing (Sanderson and Scherbov 2013) provides the methodological background necessary to conceptualise and calculate IENPAs. The basic idea is that many characteristics relevant to the study of population ageing, such as health, life expectancy, and disability, differ over space and time. The new approach takes these differences into account while measures based solely on chronological age do not.

The IENPA is based on three criteria: (1) members of each cohort receive as much in pension payouts as they pay into the pension plan; (2) the generosity of the pension system, measured as the ratio of average pension receipt to the incomes of people who pay into the pension system is the same for all cohorts; and (3) the pension tax is the same for all cohorts (Sanderson and Scherbov 2015a, 2015b).

The figures show the IENPA for Germany and the UK and plans for the normal pension age of men that have already been legislated. Over the entire period from 2015 to the late 2020s, the IENPA rises close to the same amount as the legislated changes. Using the IENPA has two important advantages. First, although the IENPA and the planned changes reach nearly the same age by the late 2020s, the IENPA rises more continuously, eliminating the irregularities seen in the planned changes. These irregularities are inequitable and can breed discontent. Second, the IENPA provides normal pension ages for the period after the late 2020s that are consistent with the previous legislated changes. The use of IENPA eliminates the need for periodic renegotiations of pension ages.

National pension plans are complex and difficult to compare across countries. Up to now, most of the comparisons of national pension plans have been in terms of static features, such as the replacement rate and the number of years of contribution required for a full pension. There has been virtually no attention paid to the dynamic equity of the plans because there was no way to assess this. With IENPAs, we have an analytic way of determining how fast an intergenerationally fair normal pension age would rise and we can compare this to potential policies that countries might wish to enact.

Life expectancy at older ages can rise, but it can also fall. The IENPA reflects this and can rise or fall along with life expectancy. The use of the IENPA would result in pension systems that are more sustainable and more resilient to demographic shocks.

Sources:

German legislated pension ages for men:
www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/germany.html

UK legislated pension ages for men:
www.gov.uk/government/uploads/system/uploads/attachment_data/file/310231/spa-timetable.pdf

References:

Sanderson, W.C. and S. Scherbov 2013. The characteristics approach to the measurement of population aging. Population and Development Review 39(4): 673-685.

Sanderson, W.C. and S. Scherbov 2015a. Are we overly dependent on conventional dependency ratios? Population and Development Review 41(4): 687-708.

Sanderson, W.C. and S. Scherbov 2015b. An easily understood and intergenerationally equitable normal pension age. In B. Marin (Ed.), The Future of Welfare in a Global Europe (pp. 193-220). Farnham, UK: Ashgate Publishing, Ltd.

New measures of population aging can be found at:
www.reaging.org/indicators

Tempo effect and **adjusted indicators of total fertility**

The period level of fertility is commonly measured by the Total Fertility Rate (TFR). However, the TFR is sensitive to the changes in the age at childbearing, which has been rising in most European countries for several decades. In Italy, Luxembourg, Spain and Switzerland women now have their first child on average after age 30. As births are shifted to later ages, they are both postponed into the future and spread over a longer period of time. This "stretching" of reproduction in turn depresses the period TFR even if the number of children women ultimately have over their life course does not change.

Alternative indicators were proposed to obtain a more accurate measure of the mean number of children per woman in a calendar year. Here we compare two such indicators, the Tempo-adjusted TFR (TFR*), proposed by Bongaarts and Feeney (1998) which is based on birth order-specific total fertility rates and mean ages at birth, and Tempo and Parity-adjusted Total Fertility (TFRp*), elaborated by Bongaarts and Sobotka (2012). The TFRp* offers several improvements over the TFR*. It takes into account the parity composition of women of reproductive age, and thus controls for an additional source of distortion in the conventional TFR. Moreover, it yields considerably more stable results than the TFR*, which is clearly illustrated in the three country graphs shown here. However, the limited availability of detailed data is an obstacle to its use. Wherever possible, we present the results for the TFRp* for 2012, which were computed for 17 European countries, the United States and Japan. For the countries lacking the required data, the data sheet features the TFR* or its estimate, averaged over the 3-year period of 2011–2013 (indicated by asterisk). For the EU countries, the adjusted fertility rate was 1.72 in 2012, by about 10% higher than the conventional TFR of 1.57.

Figures 1–3 illustrate trends in the conventional TFR and its alternatives in 1980–2014 in three countries with different fertility patterns. The graphs illustrate the differences between the two tempo-adjusted indicators, TFR* and TFRp*, and they also show the long-term course of fertility postponement as measured by the rise in the mean age at first birth and, in the Czech Republic and Spain, temporary reversals of TFR trends after the onset of the economic recession in 2008.

In the Czech Republic the intensive shift to later childbearing after 1990 resulted in a dramatic fall of the period TFR to 1.14 in 1999, followed by its subsequent recovery to around 1.5. In contrast, the TFRp* declined gradually to about 1.8 in the late 1990s and further to 1.66 in 2014. The massive gap between the conventional TFR and the adjusted TFRp* in the late 1990s shows how much the TFR can be depressed when women postpone childbearing to later ages.

In Austria, postponement of childbearing started earlier but progressed more gradually. The TFR and the TFRp* have shown relatively stable values since the mid-1980s, hovering around 1.4 and 1.6–1.7, respectively.

Spain shows yet another pattern: conventional and adjusted total fertility both fell in tandem during the 1980s and 1990s. The decline in the period TFR bottomed out at 1.15 in 1998 and modestly recovered until 2008, whereas the TFRp* continued falling until 2007 and briefly converged with the TFR level before rising sharply in the subsequent two years. Recently, fertility was affected by the economic recession, bringing an acceleration of the shift towards later first births and a renewed decline in the period TFR interrupted only in 2014. In contrast, the TFRp* showed a short-term upswing after 2008, which was even more pronounced in the TFR*. This increase was probably caused by a rapid change in the variance of fertility schedule, which can temporarily distort the adjusted measures of fertility, in particular TFR* (Zeng and Land 2001).

References:

Bongaarts, J. and G. Feeney 1998. On the quantum and tempo of fertility. Population and Development Review 24(2): 271-291.

Bongaarts, J. and T. Sobotka 2012. A demographic explanation for the recent rise in European fertility. Population and Development Review 38(1): 83-120.

Zeng, Yi and K. C. Land. 2001. A sensitivity analysis of the Bongaarts-Feeney method for adjusting bias in observed period total fertility rates. Demography 38(1): 17-28.

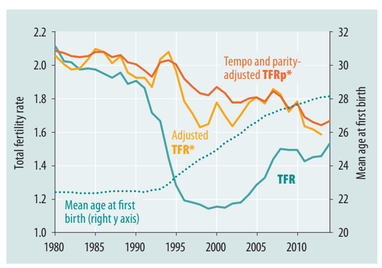

Figure 1: Fertility trends in the Czech Republic, 1980–2014

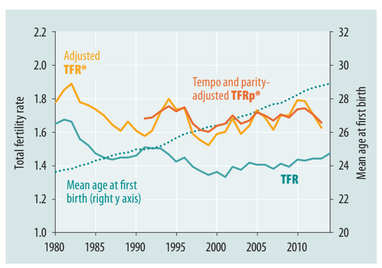

Figure 2: Fertility trends in Austria, 1980–2014

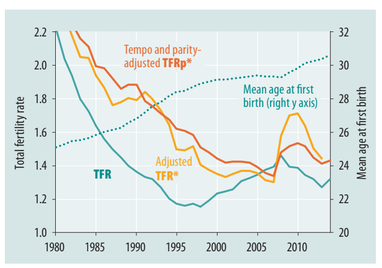

Figure 3: Fertility trends in Spain, 1980–2014

Team at the Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, WU): Marija Mamolo, Michaela Potančoková, Sergei Scherbov, Tomáš Sobotka, Kryštof Zeman. Assistance: Stefanie Andruchowitz, Jakob Eder, Warren Sanderson. Postal address: Vienna Institute of Demography, Austrian Academy of Sciences, Welthandelsplatz 2, Level 2, 1020 Vienna, Austria. Responsible for content: Sergei Scherbov. www.populationeurope.org
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Regional overview

POPULATION CHANGE

Region	Population size on January 1st, 2015 (millions)	Projected population size, 2050 (millions)	Annual rate of population change, 2010-2015 (per 1000)	Projected annual rate of population change, 2015-2050 (per 1000)
Southern Europe	129.8	135.7	1.8	1.3
Western Europe	162.5	193.3	5.9	5.0
German-speaking countries	98.0	105.5	0.1	2.1
Nordic countries	26.4	35.3	7.5	8.3
Central-eastern Europe	76.3	68.1	-1.3	-3.3
South-eastern Europe	39.8	33.1	-4.2	-5.3
Eastern Europe	201.5	180.2	0.7	-3.2
Caucasus	16.3	17.4	-4.2	1.8
EU-28	**506.3**	**539.8**	**2.0**	**1.8**
EU-15	401.6	448.6	3.1	3.2
EU-13 (new members)	104.7	91.2	-2.1	-3.9

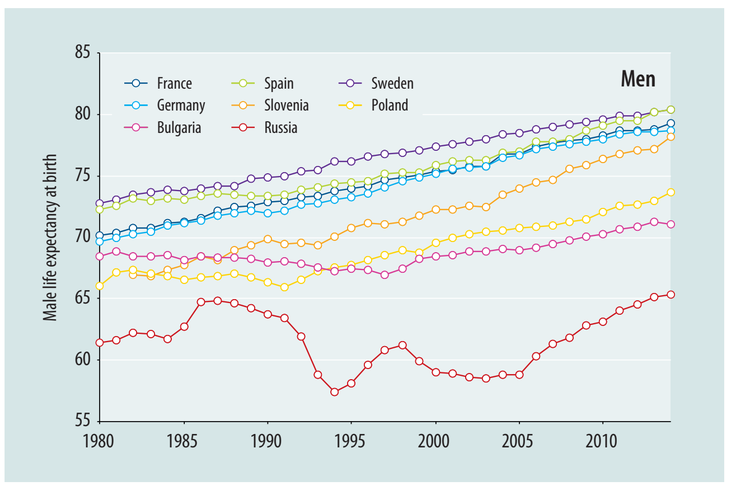
POPULATION AGEING

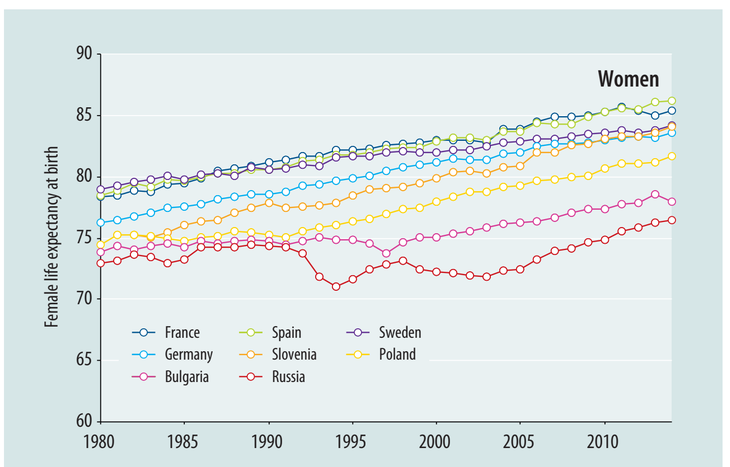
Region	Proportion of the population aged 65+, 2015 (%)	Projected proportion of the population aged 65+, 2050 (%)	Old-age dependency ratio 65+/20-64, 2015 (%)	Projected old-age dependency ratio 65+/20-64, 2050 (%)
Southern Europe	20.3	34.6	33.6	71.4
Western Europe	18.0	26.1	30.9	50.3
German-speaking countries	20.5	30.6	33.7	58.7
Nordic countries	18.7	23.8	32.1	44.5
Central-eastern Europe	16.5	29.9	26.1	57.4
South-eastern Europe	17.2	28.2	27.7	51.9
Eastern Europe	14.0	24.5	21.5	43.9
Caucasus	8.7	21.8	13.6	37.8
EU-28	**18.9**	**29.6**	**31.4**	**57.8**
EU-15	19.4	29.6	32.7	58.0
EU-13 (new members)	16.8	29.6	26.7	56.5

FERTILITY INDICATORS

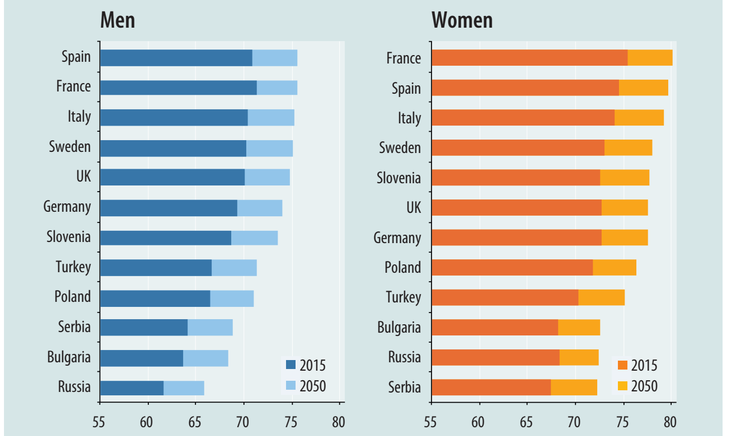
Region	Total fertility rate, 2014	Tempo-parity adjusted TFR, 2012	Completed cohort fertility rate, birth cohort 1974	Mean age at first birth, 2014
Southern Europe	1.33	1.52	1.44	30.5
Western Europe	1.86	2.04	1.93	28.6
German-speaking countries	1.48	1.59	1.58	29.5
Nordic countries	1.78	1.95	1.95	29.0
Central-eastern Europe	1.42	1.55	1.69	27.3
South-eastern Europe	1.53	1.66	1.69	26.3
Eastern Europe	1.69	1.69	1.58	25.1
Caucasus	1.92	1.96	1.91	24.3
EU-28	**1.57**	**1.72**	**1.69**	**28.9**
EU-15	1.60	1.76	1.69	29.4
EU-13 (new members)	1.44	1.57	1.66	27.0

Life expectancy at birth, selected European countries





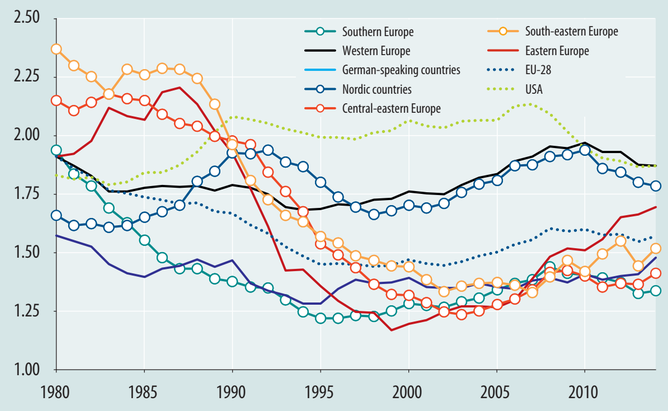
Age when remaining life expectancy is below 15 years, selected European countries



Note: Countries are ranked by 2015 values

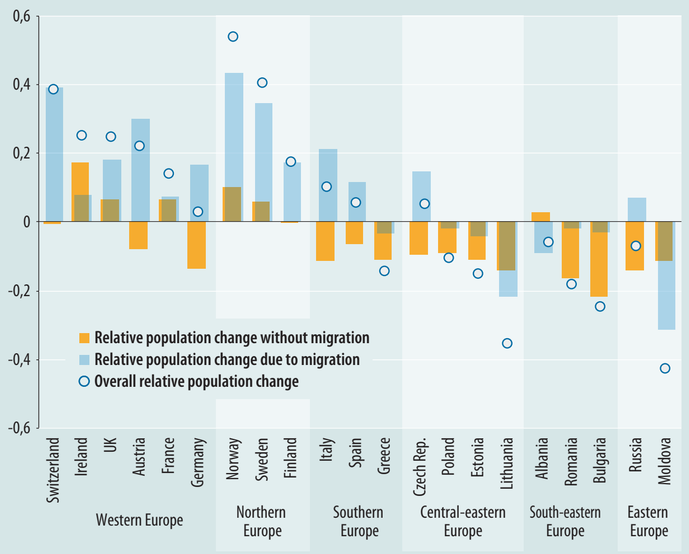
Total fertility rate in selected regions of Europe and in the USA

Total fertility rate, 1980–2014



Population change in selected countries of Europe

Relative population change in selected countries of Europe, 2015–2050



Migration plays a key role for the future population change in many European countries as it can reverse, soften or amplify the population trends driven by the expected changes in fertility and mortality.

In this graphic we show how the projected change in population size between 2015 and 2050 is driven by two distinct forces in the selected countries: natural population change (i.e., the difference between the number of births and deaths) and migration, including future births and deaths attributable to migrants arriving since 2015.

The overall picture depicts a divide between north-western and south-eastern Europe. Population is projected to increase in all countries of western and northern Europe, as well as in most of southern Europe. In many fast-growing countries, including Sweden, the UK and France, this increase is driven by a combination of natural population increase and expected immigration. In other countries, including Germany and Italy, immigration is expected to compensate for population losses that would occur as a result of low fertility and shrinking number of births. In contrast, migration will amplify population losses in many countries of central and south-central Europe, with the extreme case of Moldova that may lose as much as 40% of its population. Throughout the region, as well as in Greece, expected migration trends in combination with low fertility will lead to population losses. The Czech Republic stands out as a rare exception, where continuing positive migration balance is projected to sustain population increase in the coming decades.

Native and foreign-born populations by age and sex in selected European countries, 2015

Country rankings

POPULATION SIZE

Rank	Population size on January 1st, 2015 (millions)		Projected population size, 2050 (millions)		Rank
	EU-28	**506.3**	**EU-28**	**539.8**	
	USA	*320.1*	*USA*	*388.9*	
1	Russia	146.3	Russia	135.9	1
	Japan	*127.0*	*Japan*	*107.4*	
2	Germany	81.2	Turkey	97.6	2
3	Turkey	77.7	Germany	83.6	3
4	United Kingdom	64.9	United Kingdom	81.0	4
5	France	64.3	France	73.3	5
6	Italy	60.8	Italy	66.9	6
7	Spain	46.4	Spain	48.9	7
8	Ukraine	42.8	Ukraine	34.5	8
9	Poland	38.0	Poland	33.9	9
10	Romania	19.9	Netherlands	17.7	10

PERIOD TOTAL FERTILITY RATE

Rank	Total fertility rate, 2014		Adjusted TFRp*, 2012
1	Turkey	2.17	2.44
2	France	1.98	2.17
3	Ireland	1.94	2.08
4	Sweden	1.88	1.95
5	United Kingdom	1.81	2.01
	EU-28	**1.57**	**1.72**
34	Poland	1.32	1.44
35	Spain	1.32	1.45
36	Cyprus	1.31	1.62
37	Greece	1.30	1.67
38	Portugal	1.23	1.52

MEAN AGE OF MOTHER AT FIRST BIRTH

Rank	Mean age of mother at first birth, 2014 (years)	
1	Italy	30.7
2	Spain	30.6
3	Switzerland	30.6
4	Luxembourg	30.2
5	Greece	30.0
	EU-28	**28.9**
32	Albania	25.3
33	Russia	25.3
34	Belarus	25.2
35	Ukraine	24.6
36	Moldova	24.2

POPULATION CHANGE DUE TO MIGRATION

Rank	Projected relative population change due to migration, 2015–2050 (%)	
1	Luxembourg	85.4
2	Norway	43.6
3	Switzerland	39.3
4	Sweden	34.5
5	Austria	29.9
	EU-28	**12.1**
34	Croatia	-6.7
35	Albania	-9.0
36	Latvia	-11.1
37	Lithuania	-21.7
38	Moldova	-31.4

LIFE EXPECTANCY AT BIRTH, MEN

Rank	Male life expectancy at birth, 2014 (years)	
1	Switzerland	81.1
2	Cyprus	80.9
3	Italy	80.7
	Japan	*80.5*
4-5	Spain	80.4
4-5	Sweden	80.4
	EU-28	**78.1**
34	Latvia	69.1
35	Belarus	67.3
36	Ukraine	66.2
37	Russia	65.3
38	Moldova	64.9

LIFE EXPECTANCY AT BIRTH, WOMEN

Rank	Female life expectancy at birth, 2014 (years)	
	Japan	*86.8*
1	Spain	86.2
2	Italy	85.6
3-4	Switzerland	85.4
3-4	France	85.4
5	Luxembourg	85.2
	EU-28	**83.6**
34	Belarus	78.0
35	Macedonia, FYR	77.5
36	Russia	76.5
37	Ukraine	76.4
38	Moldova	73.7

DIFFERENCE IN MALE AND FEMALE LIFE EXPECTANCY

Rank	Difference in male and female life expectancy at birth, 2014 (years)	
1	Russia	11.2
2	Lithuania	10.9
3	Belarus	10.7
4	Latvia	10.3
5	Ukraine	10.2
	EU-28	**5.5**
34	Albania	3.9
35-36	Cyprus	3.8
35-36	Sweden	3.8
37	United Kingdom	3.7
38	Netherlands	3.5

POPULATION MEDIAN AGE

Rank	Population median age, 2015 (years)		Rank	Projected population median age, 2050 (years)	
	Japan	*46.5*		*Japan*	*53.3*
1	Germany	45.9	*1*	Portugal	53.2
2	Italy	45.1	2-3	Greece	52.8
3	Portugal	43.5	2-3	Spain	52.8
4-5	Bulgaria	43.4	4	Croatia	51.8
4-5	Greece	43.4	5	Germany	50.9
	EU-28	**42.5**		**EU-28**	**47.8**
34	Cyprus	37.0	34	Turkey	42.9
35	Ireland	36.4	35-36	Norway	42.6
36	Albania	35.6	35-36	United Kingdom	42.6
37	Moldova	35.2	37	Sweden	42.4
38	Turkey	30.7		*USA*	*41.7*
			38	Luxembourg	41.4

OLD-AGE DEPENDENCY RATIO (65+/20–64)

Rank	Old-age dependency ratio, 2015 (%)		Rank	Projected old-age dependency ratio, 2050 (%)	
	Japan	*46.4*		*Japan*	*78.4*
1	Italy	36.4	1	Portugal	77.2
2	Greece	35.1	2	Greece	77.1
3	Germany	34.6	3	Spain	75.9
4	Finland	34.4	4	Slovenia	67.5
5	Sweden	34.0	5	Italy	67.2
	EU-28	**31.4**		**EU-28**	**57.8**
34	Russia	20.8	34	Russia	42.8
35	Albania	20.7	35	Moldova	40.9
36	Macedonia, FYR	19.7		*USA*	*40.9*
37	Moldova	17.6	36	Norway	40.6
38	Turkey	13.4	37	Turkey	39.0
			38	Luxembourg	37.9

PROSPECTIVE OLD-AGE DEPENDENCY RATIO

Rank	Prospective old-age dependency ratio, 2015 (%)		Rank	Projected prospective old-age dependency ratio, 2050 (%)	
1	Bulgaria	29.1	1	Lithuania	35.3
2	Serbia	27.4	2	Bulgaria	34.6
3	Latvia	27.0	3	Moldova	34.0
4	Ukraine	25.2	4	Croatia	33.9
5	Lithuania	24.8	5	Ukraine	33.2
	EU-28	**18.7**		**EU-28**	**25.6**
34	Norway	14.3	34	United Kingdom	20.8
	USA	*13.2*		*USA*	*20.6*
35	Cyprus	13.1	35	Sweden	18.7
36	Ireland	12.4	36	Turkey	18.6
37	Luxembourg	12.2	37	Norway	17.4
38	Turkey	9.5	38	Luxembourg	14.9

PROPORTION OF THE POPULATION THAT HAS A REMAINING LIFE EXPECTANCY OF 15 YEARS OR LESS

Rank	Proportion of the population with a remaining life expectancy of 15 years or less, 2015 (%)*		Population 65+, 2015 (%)	Rank	Projected proportion of the population with a remaining life expectancy of 15 years or less, 2050 (%)*		Projected population 65+, 2050 (%)
1	Bulgaria	18.4	20.0	1-3	Bulgaria	21.1	29.2
2	Serbia	17.3	18.5	1-3	Croatia	21.1	33.3
3	Latvia	17.1	19.4	1-3	Lithuania	21.1	29.5
4	Ukraine	16.1	15.6	4	Moldova	20.8	23.8
5	Lithuania	15.8	18.7	5	Portugal	20.4	36.4
34	Norway	9.5	16.1	34	United Kingdom	13.3	24.4
35	Cyprus	8.9	14.6	35	Turkey	12.4	22.1
36	Luxembourg	8.4	14.2	36	Sweden	12.2	23.4
37	Ireland	7.9	13.0	37	Norway	11.4	22.2
38	Turkey	5.8	8.0	38	Luxembourg	10.0	21.2

* Ranked according to the % of the population with remaining life expectancy of 15 years or less

Note: Data for the USA and Japan are shown in italics and displayed only when their values fall between top five or bottom five European countries. Caucasus countries, countries with total population below 500 000 (Andorra, Iceland, Liechtenstein, Malta, Monaco and San Marino), Bosnia and Herzegovina and Kosovo are not ranked. The proportion of the population that has a remaining life expectancy of 15 years or less is calculated as follows: from a period life table we select all single-year age groups that have a remaining life expectancy of 15 or less years and calculate what proportion of the total population has ages that fall into this category.

Notes: EU-15 refers to the EU member states prior to 2004; EU-13 (new members) covers 13 countries accessing the EU in 2004, 2007 and 2013. Countries with total population below 100 000, Bosnia and Herzegovina, Kosovo and Turkey are not included in regional overview tables. Countries with total population below 500 000, Bosnia and Herzegovina, Kosovo and Caucasus countries are not included in the ranking tables. Data for France exclude overseas departments. Data for Cyprus, Georgia, Moldova, and Ukraine refer to the government controlled area only. Definition of regions in the regional overview take into account geo-political criteria as well as similarity in demographic trends in countries they cover. Countries split into regions as follows: Southern Europe (Cyprus, Greece, Italy, Malta, Portugal, Spain); Western Europe (Belgium, France, Ireland, Luxembourg, Netherlands, United Kingdom); German-speaking countries (Austria, Germany, Switzerland); Nordic countries (Denmark, Finland, Iceland, Norway, Sweden); Central-eastern Europe (Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia); South-eastern Europe (Albania, Bulgaria, FYR Macedonia, Montenegro, Romania, Serbia); Eastern Europe (Belarus, Moldova, Russia, Ukraine); Caucasus (Armenia, Azerbaijan, Georgia).

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