# Hungary

Detailed Human Capital projections to 2060

Comparison of CEPAM projections with other sources
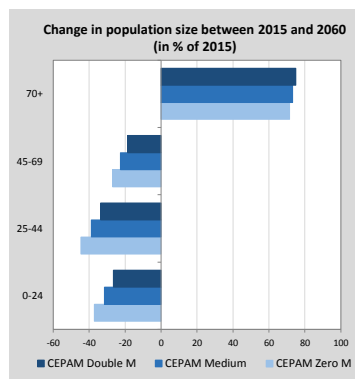
Demographic indicators - CEPAM Medium Scenario (SSP2), Eurostat and national projections		2015	2020	2030	2040	2050	2060
Population (in millions)	CEPAM	9.78	9.61	9.22	8.78	8.37	8.00
	Eurostat	9.86	9.79	9.67	9.47	9.29	9.12
	National	9.74	9.47	8.94	8.42	7.96	7.58
Proportion age 65+	CEPAM	17.5%	20.2%	21.9%	22.4%	23.6%	25.9%
	Eurostat	17.9%	20.1%	22.1%	24.9%	28.1%	29.5%
	National	17.5%	20.0%	22.7%	25.8%	28.9%	30.1%
Proportion below age 20	CEPAM	19.7%	19.3%	18.4%	17.6%	17.2%	17.2%
	Eurostat	19.8%	19.6%	19.7%	19.7%	19.4%	19.8%
	National	19.9%	19.7%	19.4%	18.6%	18.1%	18.3%
Median age	CEPAM	41.7	43.4	46.3	48.2	49.5	50.3
	Eurostat	41.7	43.2	45.6	47.0	47.3	47.2
	National	41.6	43.4	46.6	48.0	48.1	48.5
Old-age dependency ratio (65+/15-64)	CEPAM	0.26	0.31	0.35	0.42	0.51	0.58
	Eurostat	0.26	0.31	0.35	0.41	0.49	0.53
	National	0.26	0.31	0.36	0.42	0.50	0.53
Young-age dependency ratio (0-14/15-64)	CEPAM	0.21	0.22	0.21	0.21	0.22	0.23
	Eurostat	0.21	0.22	0.24	0.24	0.25	0.27
	National	0.21	0.22	0.23	0.22	0.23	0.24
Parent support ratio (85+/50-64)	CEPAM	0.08	0.10	0.13	0.22	0.27	0.42
	Eurostat	0.09	0.11	0.13	0.20	0.24	0.36
	National	0.06	0.08	0.09	0.15	0.16	0.26

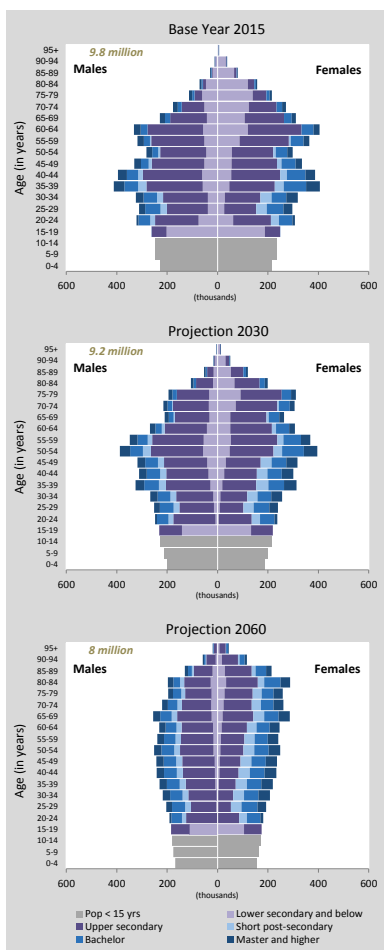| Demographic assumptions underlying projections		2010-2015	2015-2020	2025-2030	2035-2040	2045-2050	2055-2060
Total fertility rate	CEPAM	1.37	1.42	1.44	1.49	1.53	1.56
	Eurostat	1.55	1.63	1.67	1.71	1.74	1.77
	National	1.41	1.49	1.56	1.60	1.60	1.60
Life expectancy at birth (in years)							
Male	CEPAM	72.5	73.5	74.5	76.6	78.6	80.6
	Eurostat	73.1	74.3	75.5	77.7	79.8	81.7
	National	73.2	74.6	76.0	78.7	81.4	84.1
Female	CEPAM	79.5	80.5	81.5	83.6	85.6	87.6
	Eurostat	79.9	80.9	81.8	83.6	85.3	86.8
	National	79.7	80.8	81.9	84.0	86.1	88.2
Five-year net migration flow (in thousands)	CEPAM	19.0	25.2	31.1	42.3	52.0	59.5
	Eurostat	91.8	88.6	81.7	97.4	80.0	73.6
	National	-35.1	-33.0	-31.0	-2.9	8.3	30.8
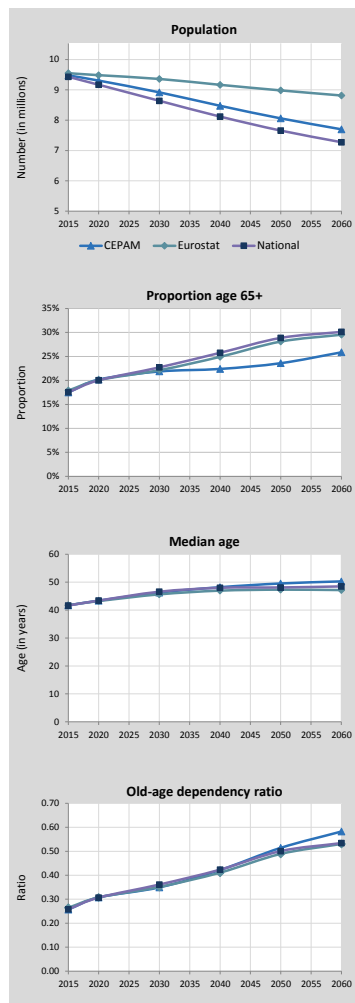
Changes in population size and structure according to CEPAM scenarios (impact of migration)

Population size according to CEPAM projections to 2060		2015	2020	2030	2040	2050	2060
Population (in millions)	Zero M	9.78	9.59	9.14	8.59	8.05	7.53
	Medium	9.78	9.61	9.22	8.78	8.37	8.00
	Double M	9.78	9.63	9.31	8.96	8.66	8.43
Population 0-24 (in millions)	Zero M	2.56	2.36	2.16	1.93	1.75	1.61
	Medium	2.56	2.37	2.18	1.99	1.84	1.75
	Double M	2.56	2.37	2.21	2.05	1.94	1.88
Population 25-44 (in millions)	Zero M	2.85	2.69	2.22	1.91	1.76	1.58
	Medium	2.85	2.70	2.26	1.99	1.88	1.75
	Double M	2.85	2.71	2.31	2.07	1.99	1.89
Population 45-69 (in millions)	Zero M	3.20	3.27	3.17	3.11	2.60	2.34
	Medium	3.20	3.27	3.18	3.15	2.69	2.48
	Double M	3.20	3.28	3.20	3.19	2.77	2.61
Population 70+ (in millions)	Zero M	1.17	1.27	1.59	1.64	1.94	2.01
	Medium	1.17	1.27	1.59	1.65	1.95	2.03
	Double M	1.17	1.27	1.59	1.65	1.96	2.05

Population

Proportion age 65+

Median age

Old-age dependency ratio

Change in population size between 2015 and 2060 (in % of 2015)

Hungary (Continued)

Pyramids by education, CEPAM Medium

Detailed Human Capital projections to 2060

Base Year 2015

9.8 million

Males | Females

(thousands)

Projection 2030

9.2 million

Males | Females

(thousands)

Projection 2060

8 million

Males | Females

(thousands)

Legend:
- Pop < 15 yrs
- Lower secondary and below
- Upper secondary
- Short post-secondary
- Bachelor
- Master and higher

Human Capital indicators, CEPAM Medium (SSP2)

	2015	2020	2030	2040	2050	2060
Population age 25+: highest educational attainment (columns sum to 100%)						
E1-E4 - lower secondary and below	23.6%	20.2%	15.1%	11.7%	9.1%	7.2%
E5 - upper secondary	50.7%	51.6%	51.9%	50.5%	48.2%	45.7%
E6 - short post-secondary	4.3%	5.3%	7.0%	8.9%	10.7%	12.2%
E7 - bachelor	12.9%	13.9%	15.8%	17.6%	19.3%	20.9%
E8 - master and higher	8.5%	9.1%	10.2%	11.4%	12.7%	13.9%
Mean years of schooling (in years)	11.85	12.09	12.46	12.75	13.01	13.24
Age gap: highest educational attainment (ratio 35-44/50-64)						
E1-E4 - lower secondary and below	0.66	0.68	0.59	0.50	0.48	0.51
E5 - upper secondary	0.88	0.83	0.91	0.98	0.94	0.92
E6 - short post-secondary	5.04	3.02	1.75	1.25	1.17	1.14
E7 - bachelor	1.47	1.42	1.18	1.14	1.17	1.14
E8 - master and higher	1.50	1.59	1.29	1.16	1.17	1.14
Mean years of schooling (35-44 minus 50-64)	0.87	0.82	0.65	0.59	0.57	0.49
Gender gap (population age 25+): highest educational attainment (ratio male/female)						
E1-E4 - lower secondary and below	0.69	0.72	0.80	0.90	1.00	1.07
E5 - upper secondary	1.26	1.25	1.23	1.24	1.29	1.36
E6 - short post-secondary	0.80	0.76	0.71	0.66	0.62	0.59
E7 - bachelor	0.77	0.78	0.79	0.81	0.83	0.85
E8 - master and higher	1.10	1.00	0.87	0.79	0.73	0.69
Mean years of schooling (male minus female)	0.34	0.17	-0.09	-0.28	-0.42	-0.52
Women age 20-39: highest educational attainment (columns sum to 100%)						
E1-E4 - lower secondary and below	12%	9%	4%	3%	2%	1%
E5 - upper secondary	45%	45%	45%	41%	37%	33%
E6 - short post-secondary	12%	14%	15%	17%	19%	20%
E7 - bachelor	20%	20%	23%	25%	27%	29%
E8 - master and higher	11%	12%	13%	15%	16%	17%
Mean years of schooling (in years)	12.88	13.10	13.47	13.72	13.93	14.10
Age gap among women: highest educational attainment (ratio 35-44/50-64)						
E1-E4 - lower secondary and below	0.52	0.55	0.52	0.47	0.45	0.49
E5 - upper secondary	0.88	0.81	0.88	0.92	0.85	0.82
E6 - short post-secondary	4.72	3.06	2.07	1.36	1.21	1.18
E7 - bachelor	1.51	1.32	1.01	1.09	1.21	1.18
E8 - master and higher	1.83	1.97	1.46	1.21	1.21	1.18
Mean years of schooling (35-44 minus 50-64)	1.55	1.33	1.08	0.83	0.83	0.76

Population size by educational attainment according to three scenarios: SSP2/GET, SSP3/CER and SSP1/SDG

2015-2060 (SSP2/GET)

2015-2060 (SSP3/CER)

2015-2060 (SSP1/SDG)

Population (in millions)
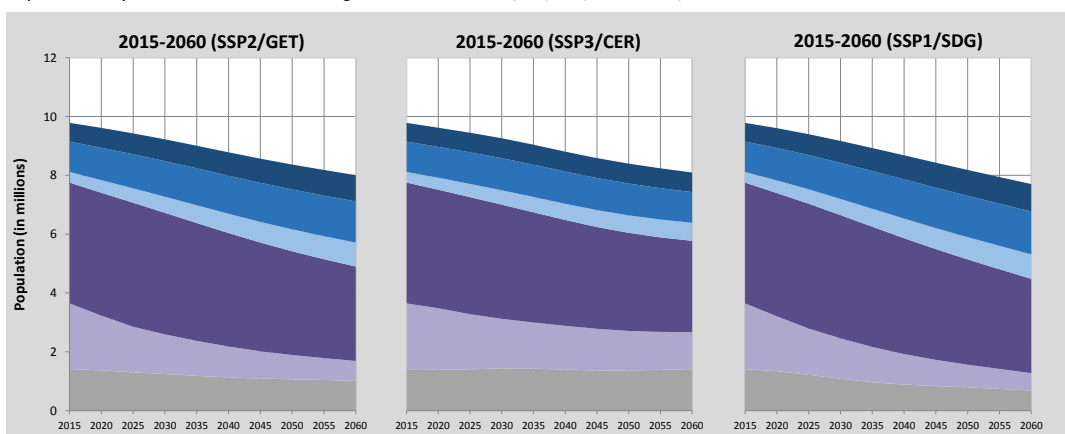
Colour legend as in pyramids above

Education scenarios

SSP2/GET : Global Education Trend Scenario (Medium assumption)

SSP3/CER : Constant Enrollment Rates Scenario (assumption of no future improvements)

SSP1/SDG : Sustainable Development Goal Scenario (universal primary and secondary education by 2030)

Hungary (Continued)

Alternative scenarios to 2100

Projection results by scenario (SSP1-SSP3)

	2015	2020	2030	2050	2060	2075	2100
Population (in millions)							
SSP1 - Rapid Development	9.78	9.60	9.17	8.18	7.70	6.95	5.83
SSP2 - CEPAM Zero Migration	9.78	9.59	9.14	8.05	7.53	6.74	5.73
SSP2 - CEPAM Medium	9.78	9.61	9.22	8.37	8.00	7.49	6.99
SSP2 - CEPAM Double Migration	9.78	9.63	9.31	8.66	8.43	8.14	8.04
SSP3 - Stalled Development	9.78	9.62	9.26	8.40	8.10	7.77	7.90
Proportion age 65+							
SSP1 - Rapid Development	17.5%	20.4%	23.5%	34.1%	39.0%	44.2%	50.7%
SSP2 - CEPAM Zero Migration	17.5%	20.2%	22.6%	30.6%	33.6%	35.1%	38.1%
SSP2 - CEPAM Medium	17.5%	20.2%	22.4%	29.6%	32.1%	33.0%	35.2%
SSP2 - CEPAM Double Migration	17.5%	20.1%	22.2%	28.8%	30.9%	31.5%	33.5%
SSP3 - Stalled Development	17.5%	20.0%	21.3%	25.7%	26.1%	23.4%	22.5%
Proportion below age 20							
SSP1 - Rapid Development	19.7%	19.0%	16.8%	13.3%	12.4%	11.1%	10.1%
SSP2 - CEPAM Zero Migration	19.7%	19.3%	18.3%	16.9%	16.8%	16.4%	15.9%
SSP2 - CEPAM Medium	19.7%	19.3%	18.4%	17.2%	17.2%	17.0%	16.8%
SSP2 - CEPAM Double Migration	19.7%	19.3%	18.5%	17.5%	17.6%	17.5%	17.3%
SSP3 - Stalled Development	19.7%	19.6%	20.4%	21.8%	23.0%	24.5%	25.4%
Proportion of women age 20-39 with post-secondary education							
SSP1 - Rapid Development	36.7%	39.2%	43.9%	55.8%	60.9%	67.4%	75.2%
SSP2 - CEPAM Zero Migration	36.7%	39.8%	44.2%	52.2%	55.5%	60.3%	66.8%
SSP2 - CEPAM Medium	36.7%	39.4%	43.6%	51.3%	54.6%	59.2%	65.9%
SSP2 - CEPAM Double Migration	36.7%	39.0%	43.0%	50.5%	53.8%	58.6%	65.4%
SSP3 - Stalled Development	36.7%	35.4%	34.6%	34.3%	34.5%	34.3%	34.3%
Mean years of schooling, age 25+							
SSP1 - Rapid Development	11.9	12.1	12.5	13.1	13.3	13.7	14.2
SSP2 - CEPAM Zero Migration	11.9	12.1	12.5	13.2	13.4	13.8	14.1
SSP2 - CEPAM Medium	11.9	12.1	12.5	13.0	13.2	13.5	13.9
SSP2 - CEPAM Double Migration	11.9	12.1	12.4	12.9	13.1	13.4	13.8
SSP3 - Stalled Development	11.9	12.0	12.3	12.7	12.7	12.8	12.8

Demographic assumptions underlying SSPs

	2015-2020	2020-2025	2030-2035	2050-2055	2060-2065	2075-2080	2095-2100
Total fertility rate							
SSP1 - Rapid Development	1.28	1.24	1.15	1.15	1.17	1.19	1.21
SSP2 - CEPAM Zero Migration	1.37	1.42	1.46	1.54	1.56	1.59	1.61
SSP2 - CEPAM Medium	1.37	1.42	1.46	1.54	1.57	1.59	1.61
SSP2 - CEPAM Double Migration	1.37	1.43	1.47	1.54	1.57	1.59	1.61
SSP3 - Stalled Development	1.49	1.69	1.87	2.06	2.11	2.15	2.20
Life expectancy at birth for females (in years)							
SSP1 - Rapid Development	80.0	81.5	84.5	90.6	93.7	98.2	104.4
SSP2 - CEPAM Zero Migration	79.5	80.5	82.6	86.7	88.7	91.8	95.9
SSP2 - CEPAM Medium	79.5	80.5	82.5	86.6	88.7	91.7	95.8
SSP2 - CEPAM Double Migration	79.5	80.5	82.5	86.6	88.6	91.7	95.7
SSP3 - Stalled Development	79.0	79.5	80.5	82.6	83.6	85.1	87.1
Migration – net flow over five years (in thousands)							
SSP1 - Rapid Development	19.0	24.7	34.2	49.0	53.1	56.3	54.3
SSP2 - CEPAM Zero Migration	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSP2 - CEPAM Medium	19.0	25.2	36.9	56.0	62.5	68.6	69.7
SSP2 - CEPAM Double Migration	38.1	49.6	71.0	104.5	114.7	122.8	120.1
SSP3 - Stalled Development	12.7	8.7	0.1	0.1	0.1	0.1	0.1

Ageing indicators by scenario

	2015	2020	2030	2050	2060	2075	2095
Median age							
SSP1 - Rapid Development	41.7	43.5	47.3	53.7	56.4	60.7	64.8
SSP2 - CEPAM Zero Migration	41.7	43.4	46.5	50.4	51.5	52.7	54.1
SSP2 - CEPAM Medium	41.7	43.4	46.3	49.5	50.3	51.0	51.7
SSP2 - CEPAM Double Migration	41.7	43.3	46.1	48.8	49.3	49.8	50.4
SSP3 - Stalled Development	41.7	43.2	45.3	45.1	43.3	41.6	40.4
Proportion with less than 15 years of remaining life expectancy (RLE)							
SSP1 - Rapid Development	11.4%	11.1%	12.1%	12.2%	14.3%	15.5%	15.5%
SSP2 - CEPAM Zero Migration	11.9%	12.2%	13.6%	13.7%	15.8%	15.7%	14.4%
SSP2 - CEPAM Medium	11.9%	12.1%	13.5%	13.3%	15.0%	14.4%	12.8%
SSP2 - CEPAM Double Migration	11.9%	12.1%	13.4%	12.9%	14.3%	13.5%	11.9%
SSP3 - Stalled Development	12.4%	13.2%	14.9%	15.2%	15.3%	13.3%	10.4%

Population

Mean years of schooling, age 25+

Proportion age 65+

Proportion of women age 20-39 with post-secondary education

Ageing in CEPAM Medium Scenario (SSP2)
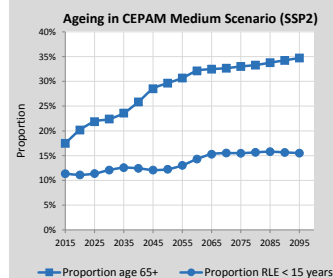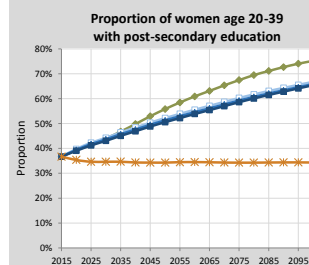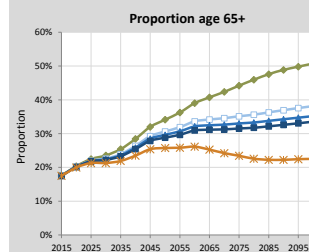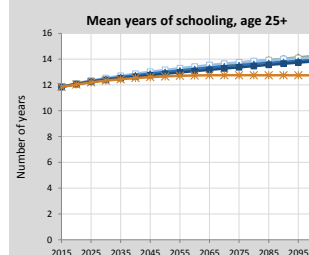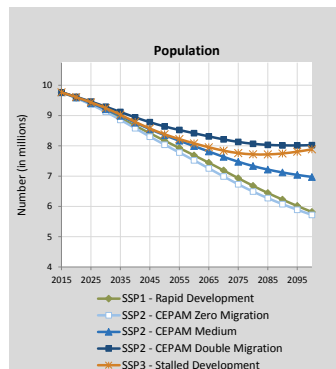
Hungary (Continued)

Labour force projections to 2060

Labour force indicators						
	2015	2020	2030	2040	2050	2060
Labour force size, by participation and migration scenario (in millions)						
Constant (CEPAM Zero Migration)	4.60	4.47	4.20	3.73	3.34	3.00
Constant (CEPAM Medium)	4.60	4.48	4.24	3.82	3.50	3.24
Constant (CEPAM Double Migration)	4.60	4.49	4.28	3.91	3.65	3.45
Swedish (CEPAM Zero Migration)	4.60	4.58	4.51	4.24	3.96	3.70
Swedish (CEPAM Medium)	4.60	4.59	4.55	4.34	4.15	3.99
Swedish (CEPAM Double Migration)	4.60	4.60	4.60	4.44	4.32	4.25
Equalization (CEPAM Zero Migration)	4.60	4.51	4.30	3.88	3.53	3.21
Equalization (CEPAM Medium)	4.60	4.52	4.35	3.98	3.70	3.47
Equalization (CEPAM Double Migration)	4.60	4.53	4.39	4.07	3.86	3.70
Constant (CEPAM Medium-low fertility)	4.60	4.48	4.24	3.79	3.37	2.95
Swedish (CEPAM Medium-low fertility)	4.60	4.59	4.55	4.30	3.97	3.63
Equalization (CEPAM Medium-low fertility)	4.60	4.52	4.34	3.95	3.56	3.16
Labour force participation rates, age 15+, by participation scenario (CEPAM Medium)						
TOTAL (Constant)	54.9%	54.3%	53.2%	49.9%	47.9%	46.4%
TOTAL (Swedish)	54.9%	55.7%	57.1%	56.8%	56.8%	57.1%
TOTAL (Equalization)	54.9%	54.8%	54.5%	52.0%	50.7%	49.6%
MALE (Constant)	63.3%	62.2%	60.4%	56.7%	54.4%	52.4%
MALE (Swedish)	63.3%	63.4%	63.9%	62.9%	62.5%	62.3%
MALE (Equalization)	63.3%	62.2%	60.4%	56.7%	54.4%	52.4%
FEMALE (Constant)	47.5%	47.4%	46.7%	43.8%	42.1%	40.9%
FEMALE (Swedish)	47.5%	48.9%	51.1%	51.3%	51.7%	52.4%
FEMALE (Equalization)	47.5%	48.3%	49.2%	47.8%	47.4%	47.1%
Labour force (15+) by highest level of educational attainment. Columns sum to 100%. (CEPAM Medium; Constant participation)						
TOTAL E1-E4 - lower secondary and below	12.7%	10.7%	7.8%	5.6%	4.0%	3.0%
TOTAL E5 - upper secondary	54.3%	52.9%	49.9%	47.2%	45.1%	42.6%
TOTAL E6 - short post-secondary	6.7%	8.1%	10.3%	12.2%	13.3%	14.2%
TOTAL E7 - bachelor	16.2%	17.4%	19.4%	20.9%	22.6%	24.1%
TOTAL E8 - master and higher	10.0%	10.8%	12.5%	14.0%	15.1%	16.1%
MALE E1-E4 - lower secondary and below	13.5%	11.7%	8.9%	6.6%	4.8%	3.6%
MALE E5 - upper secondary	58.9%	58.0%	56.1%	54.4%	53.4%	52.1%
MALE E6 - short post-secondary	5.5%	6.5%	7.9%	8.9%	9.5%	10.1%
MALE E7 - bachelor	12.9%	14.2%	16.7%	18.9%	20.4%	21.7%
MALE E8 - master and higher	9.2%	9.6%	10.4%	11.2%	11.9%	12.6%
FEMALE E1-E4 - lower secondary and below	11.9%	9.6%	6.6%	4.5%	3.1%	2.4%
FEMALE E5 - upper secondary	48.8%	46.9%	42.8%	38.9%	35.4%	31.5%
FEMALE E6 - short post-secondary	8.2%	10.0%	13.2%	16.0%	17.7%	19.1%
FEMALE E7 - bachelor	20.2%	21.1%	22.6%	23.3%	25.0%	26.8%
FEMALE E8 - master and higher	11.0%	12.3%	14.9%	17.2%	18.8%	20.2%

Labour force size by educational attainment according to three migration scenarios, 2015-2060
(Labour force participation = Constant scenario)