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Population Prospects of Georgia

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- Future trends in population size, age structure, births, and other demographic variables are of interest to a wide range of analysts, including policymakers, scientists, and planners in industry and government.
- Population projections are calculations which show the future development of a population when certain assumptions are made about the future course of fertility, mortality and migration.

- The present work is the revision of demographic projections for Georgia published in 2003 (Tsuladze et al. 2003).
- The purpose of our paper is to make projection of population quantity, structure by sex and age and other demographic indicators of Georgia until 2050 on the basis of new data , by application of the cohort-component method (Preston et al. 2001)

Tsuladze, G., Maglaperidze N., Vadachkoria A. 2003. Population prospects of Georgia. The 2003 Revision. UNFPA.

- Population of Georgia including population of Abkhazia and Tskhinvali region is used in perspective computations. All the projections will be based on data estimated by G. Tsuladze and N. Maglaperidze (Tsuladze et al. 2011).
- Tsuladze, G., Maglaperidze N., Vadachkoria A. 2012. Demographic Yearbook of Georgia 2011 , UNFPA.

METHODOLOGICAL EXPLANATION

- The cohort-component method is the most widely used method for producing national-level population projections.
- The cohort-component method divides the launch-year population into age-sex groups (i.e. birth cohorts) and accounts separately for the fertility, mortality and migration behavior of each cohort as it passes through the projection horizon.

METHODOLOGICAL EXPLANATION

- The method requires that its users make assumptions about future trends in vital rates and migration .
- Computer software packages are used for projecting population. Many of these packages claim to be user-friendly but still require basic knowledge of population dynamics and demographic techniques. The majority of packages use the cohort-component approach. The main idea of this approach is to begin with a properly defined population and move it forward in time using birth, death, and migration rates.

- We used PROJCT.
- PROJCT is a module included in MORTPAK-LITE 3.0, a U.N. software package for mortality measurement.

FERTILITY

- The declining tendency of the total fertility rate is taken into consideration in the case of low variant projections throughout the whole period under review. In the case of medium variant projections the value of total fertility rate is invariable and in the case of high variant projections the total fertility rate rises.

LIFE EXPECTANCY

- The intensity of mortality declines and accordingly life expectancy rises in all variant projections.
- In the case of low variant projections the intensity of mortality declines more slowly in the case of medium variant projections and especially in comparison with the high variant projections.

EXTERNAL MIGRATION

- Georgia has not a long migration history, but have experienced significant net migration in recent times. The similar value of net external migration is taken in the case of all variants of projections(low,medium,high). In addition, net external migration is negative until 2030. It will reach zero after 2030.

Table 1. LOW-VARIANT PROJECTIONS: Demographic Indicators

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Population (thousands)	4000	3945	3877	3811	3788	3779	3753	3708	3644
Births per year (thousands)	63	62	56	51	51	52	50	46	42
Deaths per year (thousands)	53	57	56	55	55	55	56	57	57
Natural increase per year (thousands)	10	5	0	-4	-4	-3	-6	-11	-15
Crude birth rate (per 1000 population)	16.8	15.7	14.4	13.4	13.5	13.8	13.3	12.4	11.5
Crude death rate (per 1000 population)	14.0	14.4	14.4	14.4	14.5	14.6	14.9	15.4	15.6
Natural increase rate (per 1000 population)	2.8	1.3	0.0	-1	-1	-0.8	-1.6	-3	-4.1
Total fertility rate (per woman)	2.32	2.25	2.17	2.08	2.01	1.92	1.84	1.75	1.67
Net migration per year (thousands)	-23	-20	-15	-10	0	0	0	0	0
Net migration rate (per 1000 population)	-5.7	-5.0	-3.8	-2.6	0	0	0	0	0
Life expectancy at birth (years):									
Males	65.7	65.9	66.1	66.3	66.4	66.6	66.7	66.9	67
Females	75.2	75.3	75.4	75.5	75.6	75.7	75.8	75.9	76.0
Mean age of male	35.9	34.9	34.4	36.0	34.7	35.0	35.3	35.7	36.3
Mean age of female	40.3	39.0	38.5	38.3	38.7	39.0	39.1	39.3	39.6

Table 2. MEDIUM-VARIANT PROJECTIONS: Demographic Indicators

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Population (thousands)	4000	3949	3910	3878	3903	3951	4021	4089	4151
Births per year (thousands)	63	64	60	57	59	64	66	66	66
Deaths per year (thousands)	53	56	55	53	52.0	52.0	52	53	53
Natural increase per year (thousands)	10	8	5	4	7	12	14	13	13
Crude birth rate (per 1000 population)	16.8	16.2	15.3	14.7	15.1	16.2	16.4	16.1	15.9
Crude death rate (per 1000 population)	14.0	14.2	14.1	13.7	13.3	13.2	12.9	13	12.8
Natural increase rate (per 1000 population)	2.8	2	1.2	1	1.8	3	3.5	3.1	3.1
Total fertility rate (per woman)	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32
Net migration per year (thousands)	-23	-20	-15	-10	0	0	0	0	0
Net migration rate (per 1000 population)	-5.7	-5.0	-3.8	-2.6	0	0	0	0	0
Life expectancy at birth (years):									
Males	65.7	66.1	66.5	66.9	67.3	67.7	68.2	68.6	69.0
Females	75.2	75.8	76.5	77.3	78.0	78.7	79.5	80.3	81.0
Mean age of male	35.9	34.9	34.3	35.7	34.2	34.3	34.2	34.2	34.2
Mean age of female	40.3	39.0	38.5	38.1	38.4	38.5	38.5	38.4	38.4

Table 3. HIGH-VARIANT PROJECTIONS: Demographic Indicators

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Population (thousands)	4000	3954	3922	3908	3953	4028	4133	4242	4350
Births per year (thousands)	63	65	61	59	61	67	71	72	73
Deaths per year (thousands)	53	55	53	51	50.0	49.0	50	50	50
Natural increase per year (thousands)	10	10	8	8	11	18	21	22	23
Crude birth rate (per 1000 population)	16.8	16.4	15.6	15.1	15.4	16.6	17.2	17.0	16.8
Crude death rate (per 1000 population)	14.0	13.9	13.5	13.1	12.6	12.2	12.1	11.8	11.5
Natural increase rate (per 1000 population)	2.8	2.5	2.1	2	2.8	4.4	5.1	5.2	5.3
Total fertility rate (per woman)	2.32	2.34	2.37	2.39	2.42	2.44	2.47	2.49	2.52
Net migration per year (thousands)	-23	-20	-15	-10	0	0	0	0	0
Net migration rate (per 1000 population)	-5.7	-5.0	-3.8	-2.6	0	0	0	0	0
Life expectancy at birth (years):									
Males	66.0	66.0	67.0	68.0	69.0	70.0	70.0	71.0	72.0
Females	75.0	76.0	77.0	78.0	80.0	80.0	81.0	82.0	83.0
Mean age of male	35.9	34.9	34.2	35.7	34.2	34.3	34.2	34.1	34.1
Mean age of female	40.3	39.0	38.4	38.1	38.4	38.5	38.4	38.2	38.1

Figure 1. Population (thousands)

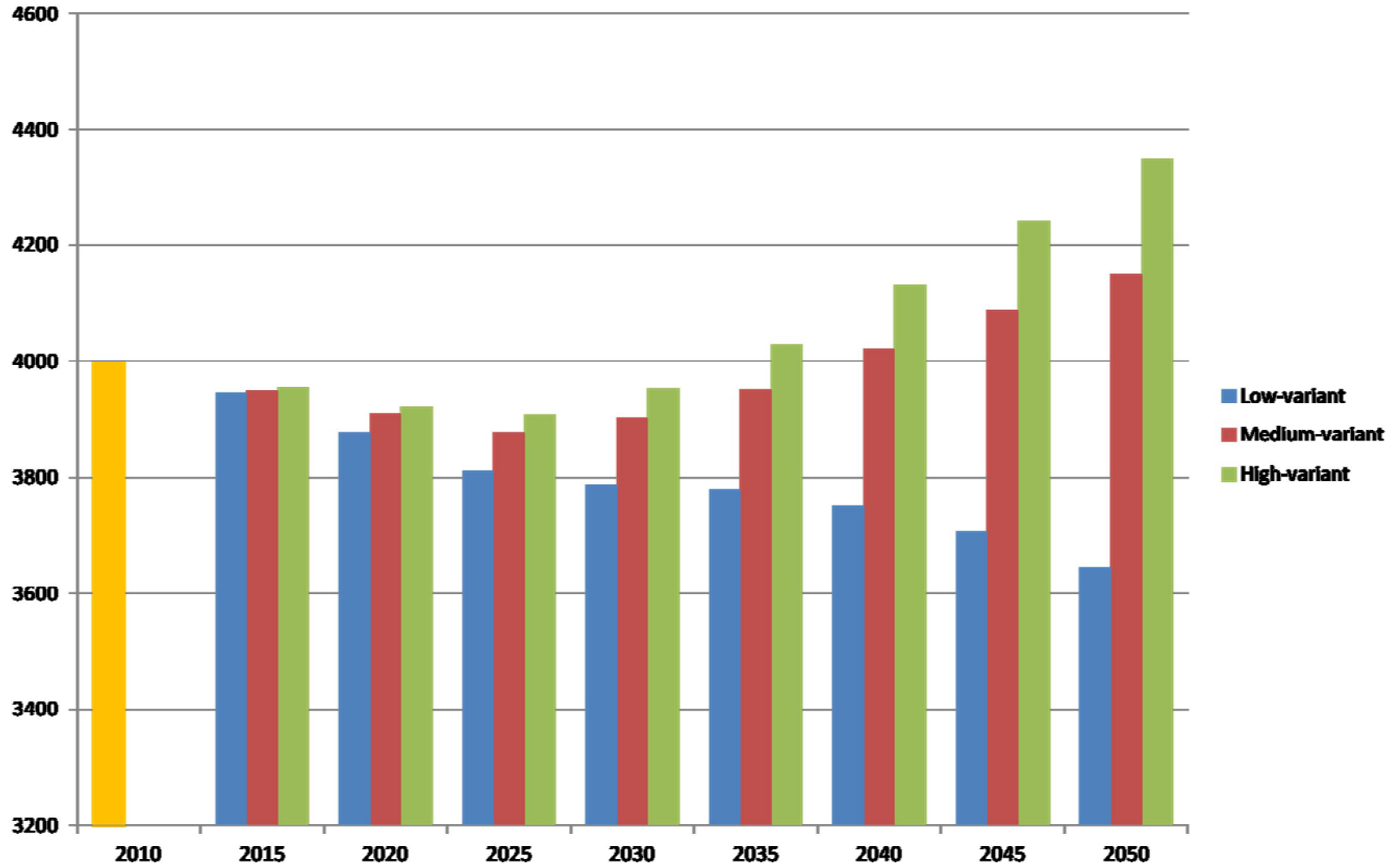


Figure 2. Births per year (thousands)

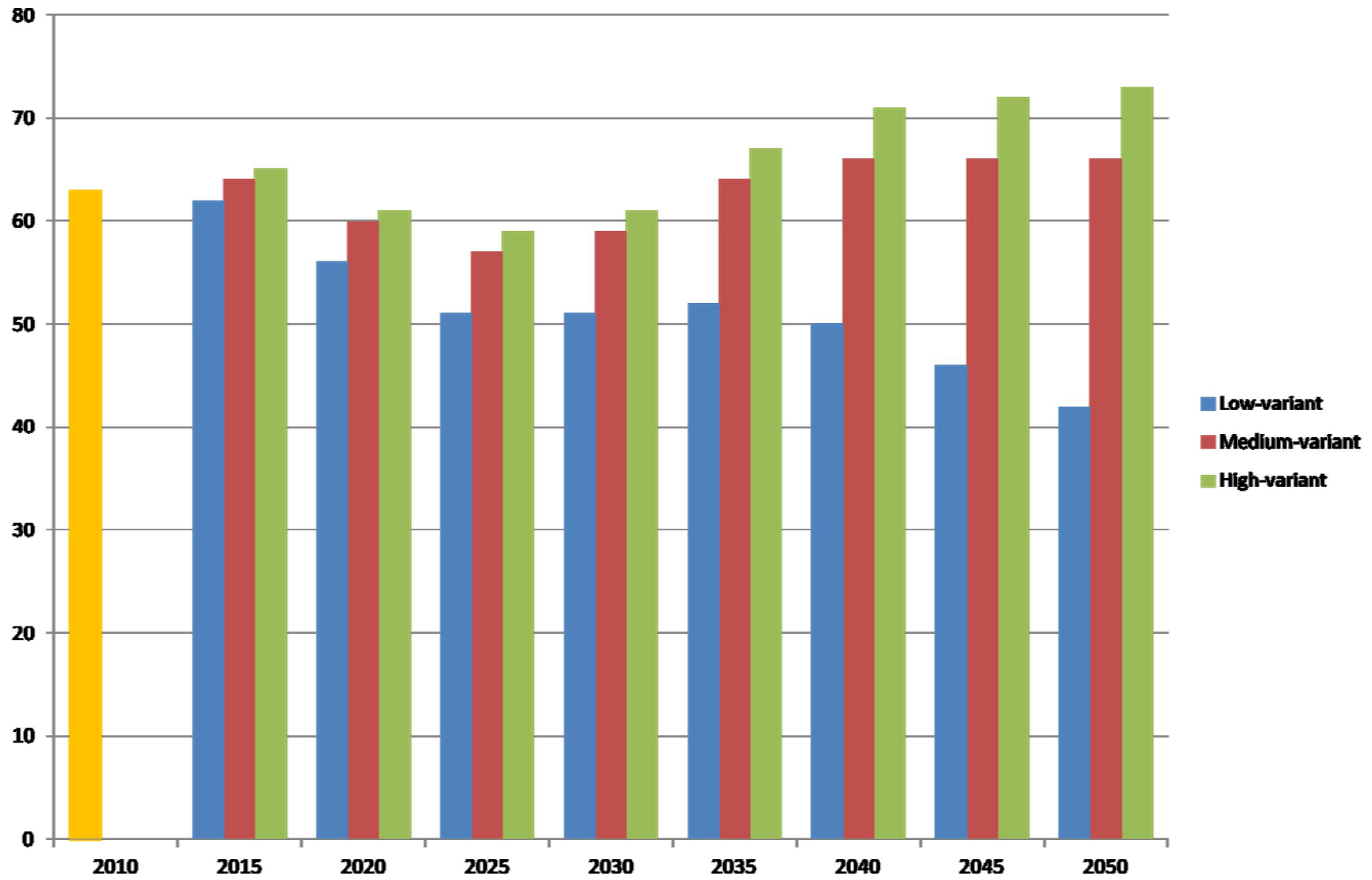


Figure 3. Crude birth rate (per 1000 population)

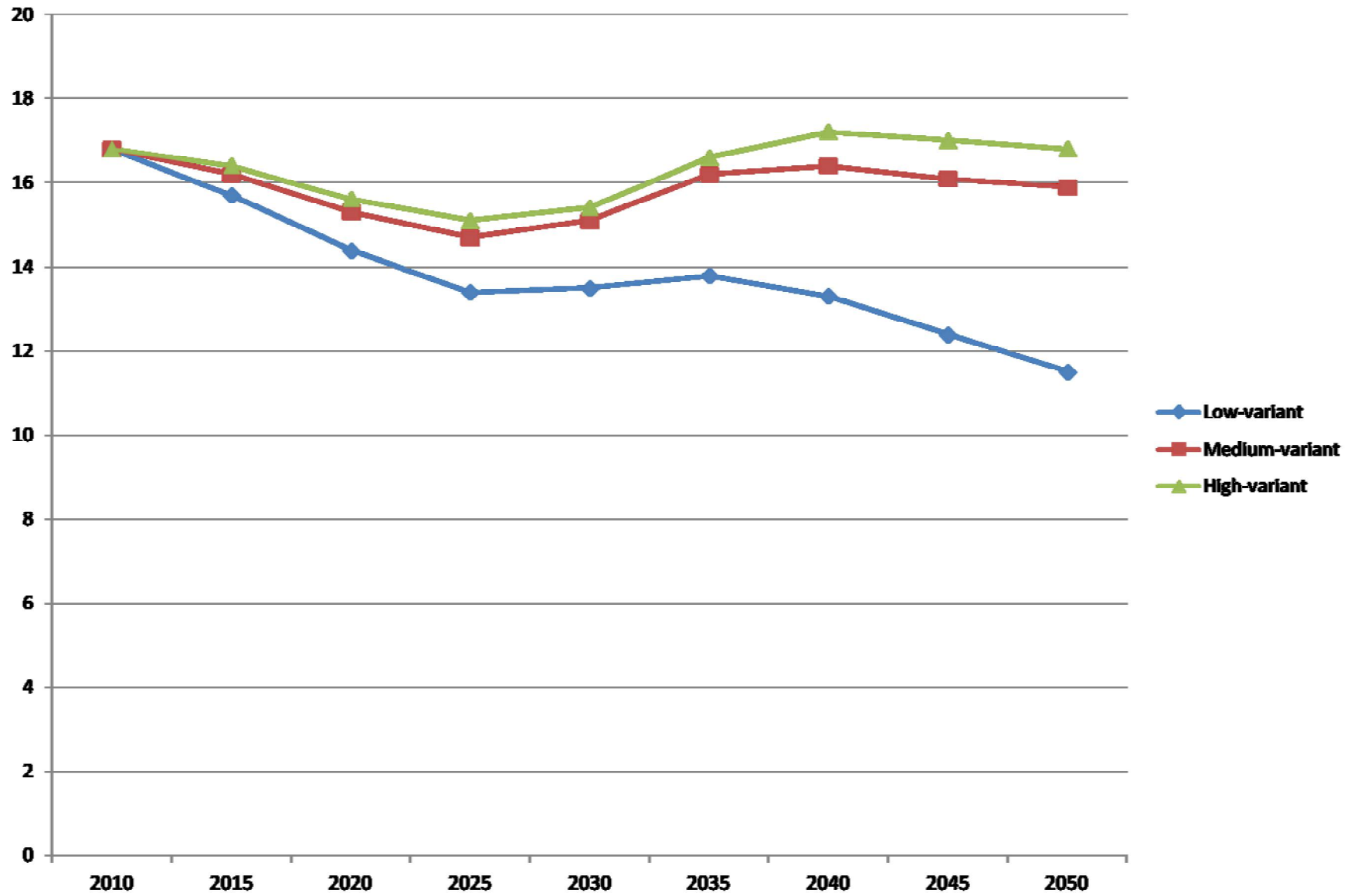


Figure 4. Crude death rate (per 1000 population)

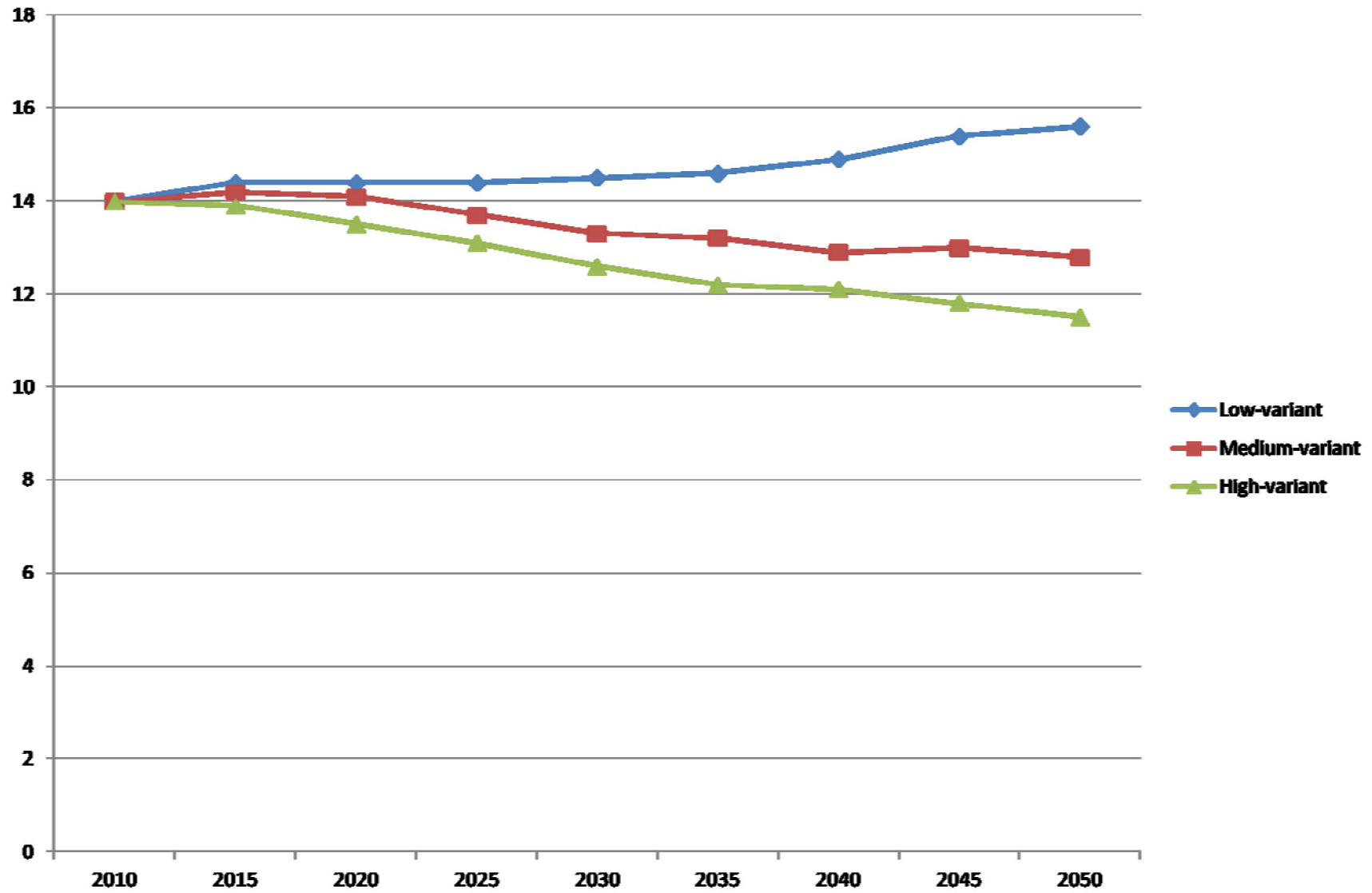
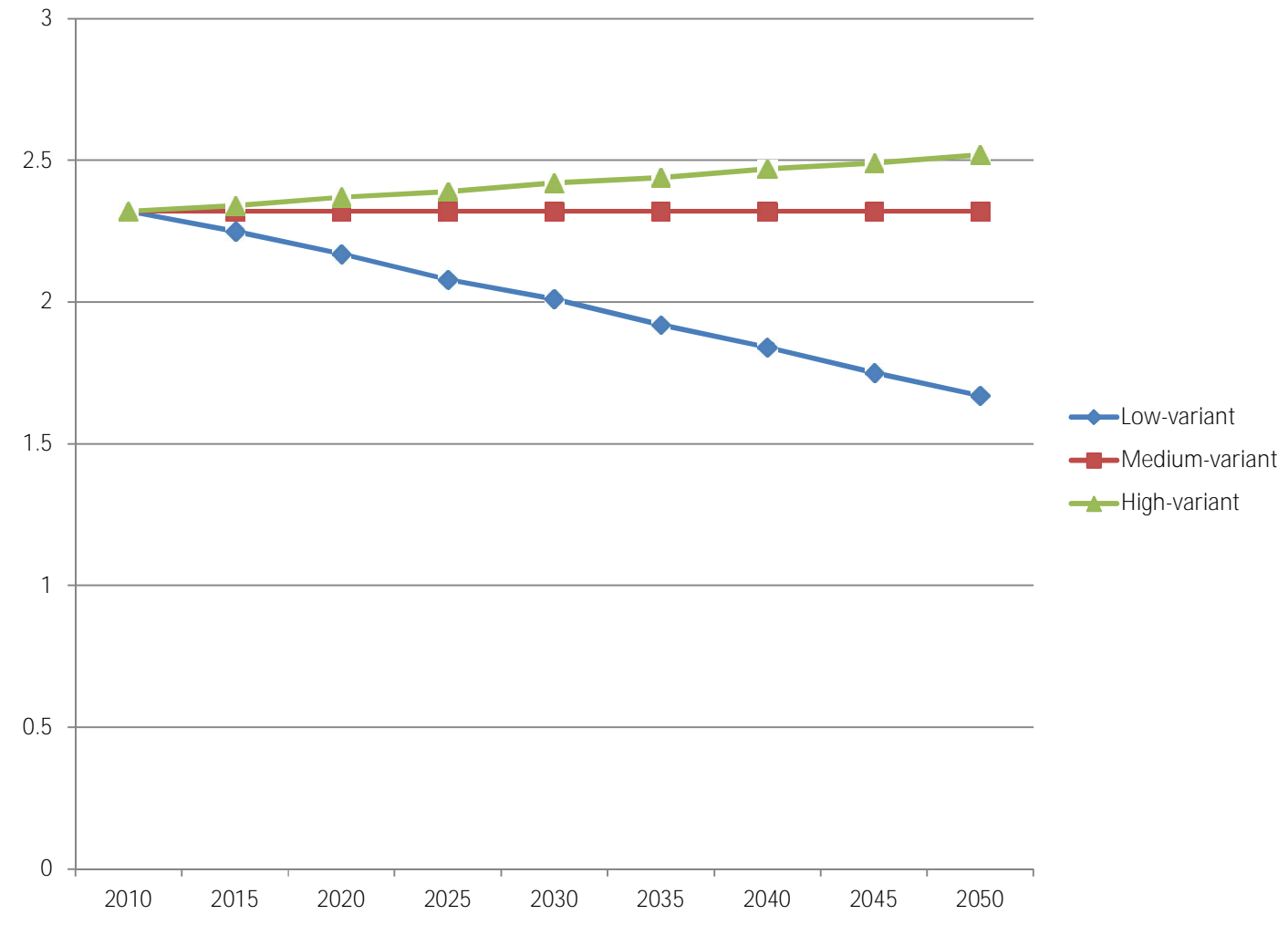
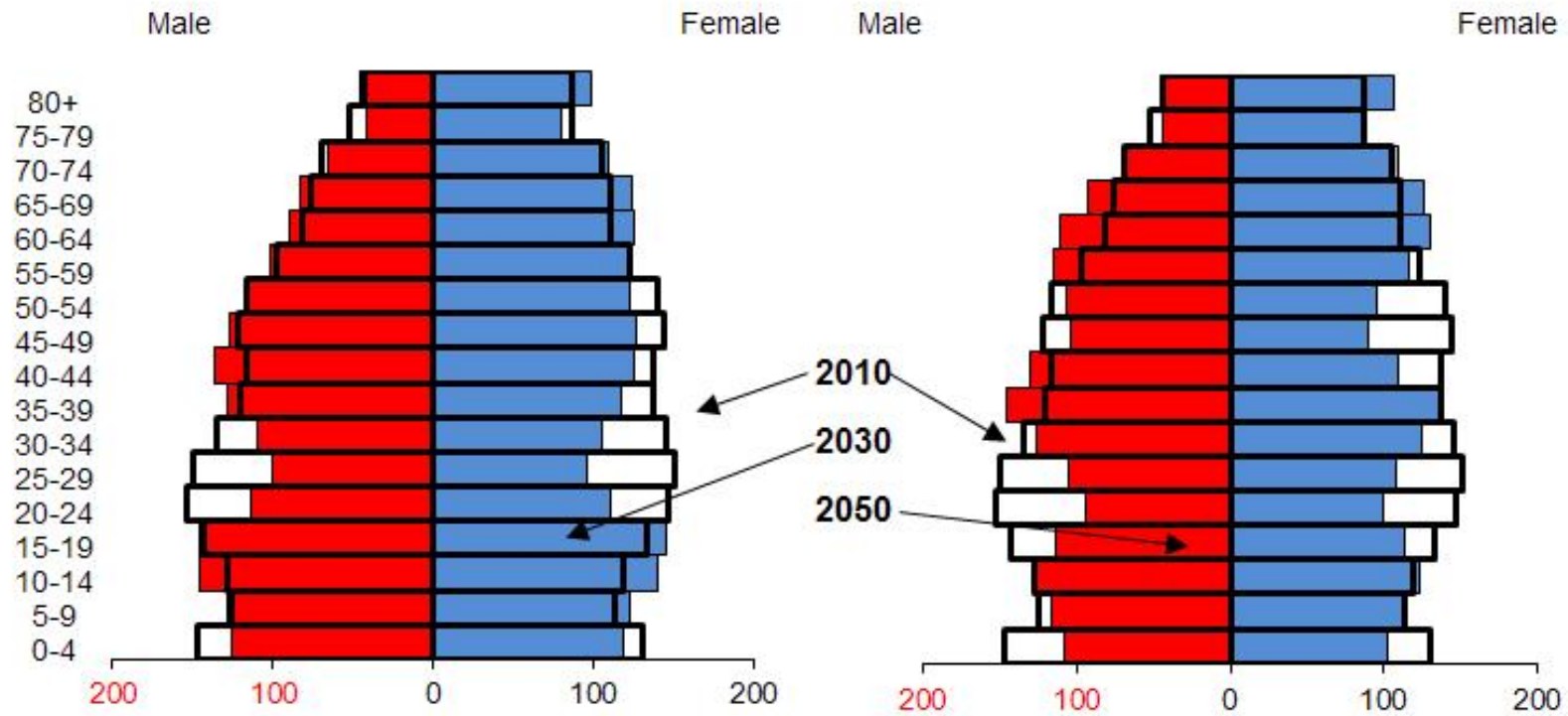


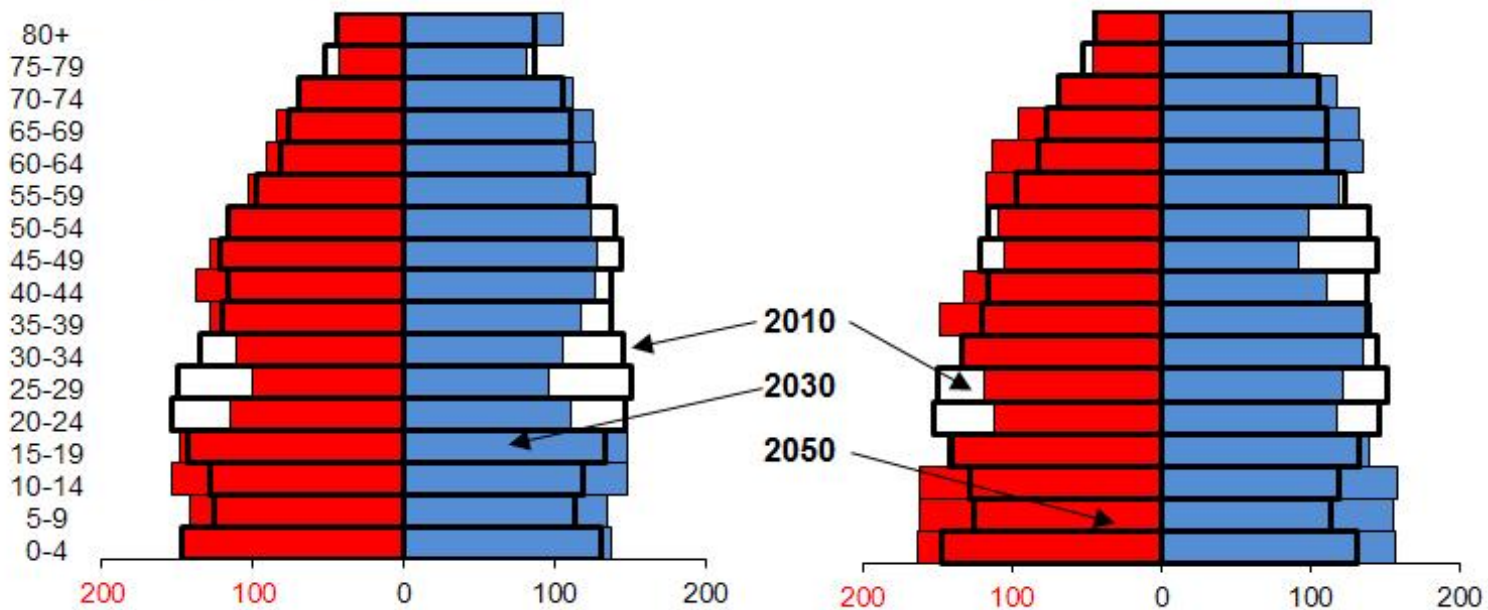
Figure 5. Total fertility rate (per women)



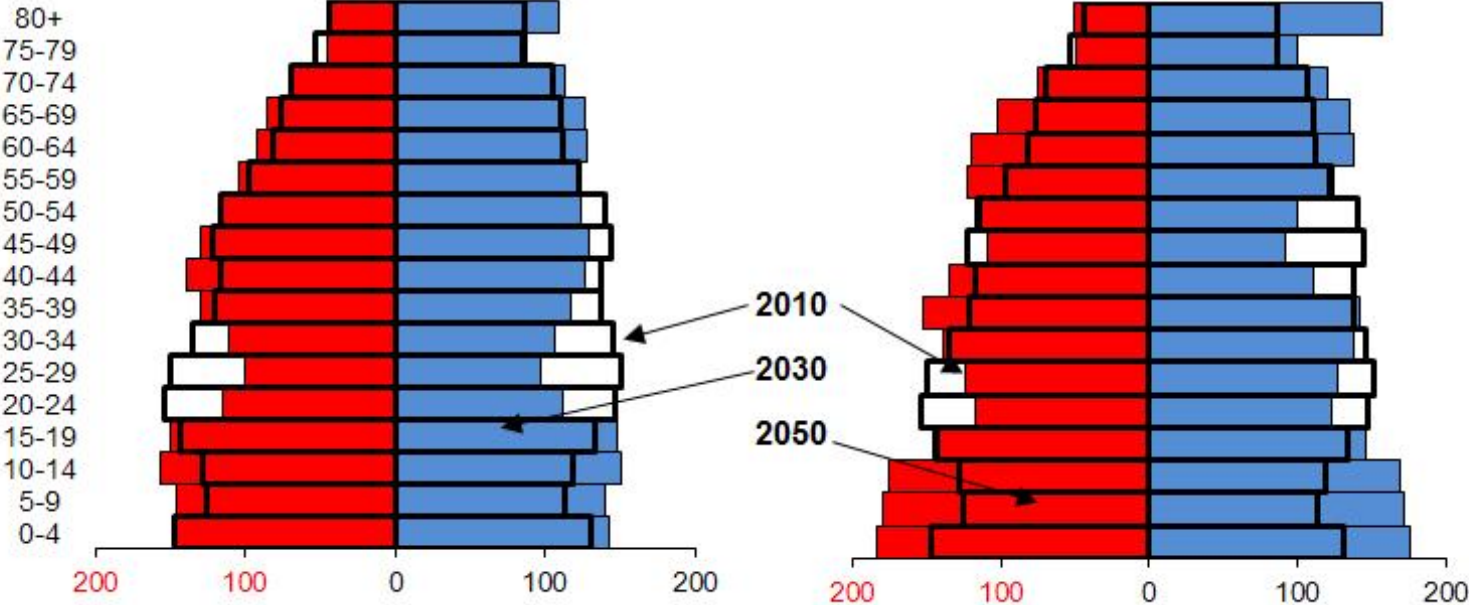
Low-variant projections



Medium-variant projections



High-variant projections



Conclusion.

- Pursuant the low-variant projection population of Georgia is gradually declining. As concerns medium and high projections, population of Georgia will increase. Table 2 and table 3 show that in the medium and high projection the population of Georgia will increase and rich 4.1 and 4.3 million in 2050.
- The future growth expected in the medium and high projections is partly due the continuing declines in mortality and due fertility which stays above the replacement level.
- Population projections also provide information on prospective changes in age distribution:

Conclusion.

- The proportion of the population under age 15 will decline in low-variant projection and will increase in medium and high level projections.
- The number and share of the females of reproductive age will noticeably decline compared with 2010.
- The proportion of the population above age 60 will increase in all projections.
- The mean age of population will decline slightly in medium and high level projections.

- Thank you for your attention!

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