



**СЪСТОЯНИЕ И ТЕНДЕНЦИИ В БРОЯ И СТРУКТУРАТА НА НАСЕЛЕНИЕТО
В ОБЩИНА ПЛОВДИВ ЗА ПЕРИОДА 2004-2013
STATUS AND TRENDS IN THE NUMBER AND STRUCTURE OF THE
POPULATION OF THE MUNICIPALITY OF PLOVDIV FOR THE TIME PERIOD
2004–2013**

**Емилия Ранчева
Emiliya Rancheva**

E-mail: rancheva@au-plovdiv.bg

Abstract

The aim of this study is to analyze the main trends in the composition and structure of the population of the municipality of Plovdiv for the period 2004 – 2013 on the basis of the statistical information related to the current demographic situation.

The problem of the continual decline of the total population, its demographic aging and distorted age structure is extremely serious and significant. The reason for such an assessment is due to the fact that the current structure will determine the current population and work force in the future.

Key words: age and sex structure of the population, sex-age pyramid, age dependency rate, demographic replacement rate.

INTRODUCTION

The demographic factor is one of the main factors used to analyze the socio-economic and infrastructural development of settlements and territorial communities. The population (actual and perspective-projected) defines the different needs of the population for housing, social and technical infrastructure, the green system and others. Basic demographic indicators apply to analysis and evaluation of the demographic characteristics of human resource population, sex and age structure, educational structure, ethnic and religious structure, etc..

In demographic terms the emerging steady trend of population aging and progressive increase each year in the proportion of the adult population is a process with utmost importance and impact on the sustainable development of society. Increasing proportion of older people reflects in the higher costs in the field of public finance - to the rising cost of pensions, long-term care, health, education. The demographic situation in the municipality of Plovdiv is a result of various factors and influences specific to the municipality and conditioned by its historical-cultural, socio-economic and demographic development.

The aim of this study is based on statistical information about the current demographic situation to analyze the main trends in the composition and structure of the population of the municipality of Plovdiv for the period 2004-2013.

MATERIALS AND METHODS

The data regarding the number and structure of the population is a result of the periodic censuses and current vital statistics for the years between the censuses. The Demographic study is in accordance to the total population. Total population is defined as momentary sets and is settled at a critical point. For the current demographic statistics this juncture is 31.12. of the year. The units of the current total population are individual and are uniform definitional characteristics.

The main category used in calculating the population data of current demographic statistics and census is the "resident population". This category includes persons living permanently in the country on 31.12. of the year.

When calculating the demographics of the population the average annual population is used. The average population is the average value of the estimated population in the end of the previous and the end of the current year. To conduct a situation analysis of demographics in this study a system of absolute and relative descriptive characteristics is being used: absolute growth, growth rate, rate of growth, dynamic indices.

RESULTS AND DISCUSSION

Plovdiv Municipality is a constituent of municipalities and Plovdiv is the administrative center. In the territory of the municipality of Plovdiv the only administrative city is the only city of Plovdiv. According to the NSI data as a result of demographic and migration processes on 31.12. 2013 the permanent population of the municipality of Plovdiv is 341 041 people. Compared to previous year's population it has increased by 1964 people, or 0.58%. The municipality of Plovdiv is the third most populated municipality in the country after Sofia Municipality (1 309 634 people) and the municipality of Varna (344 663 people).

The best picture of the demographic situation of the municipality of Plovdiv gives the census.

According to the latest census of population and housing, the population of the municipality of Plovdiv relative to 01.02.2011 was 338,153 people, out of which 161,376 are men, and 176 777 - women. The population of Sofia Municipality is 1 291 591 (615,493 men and 676,098 women), while the population of the municipality of Varna consists of 343 704 people (167 135 men and 176 569 women)¹.

Third in terms of total population after Sofia and Plovdiv is the city of Varna, which consists of 330 486 inhabitants (only 1310 people less than Plovdiv). In the previous census the difference was twice as big, also in favor of the city of Plovdiv. Plovdiv has decreased by 6428 people - nearly 2% compared to the previous census in 2001. The demographic status of Plovdiv follows the trends in demography of Plovdiv and the country as a whole.

The results of the last census showed that the Plovdiv region, along with the districts of Bourgas and Blagoevgrad have reduced less than all other areas in the country. In the previous census the residents of Plovdiv region were 715,904.

¹ Source: www.censusresults.nsi.bg/Census

During 2011 they are 671 918 people. The decrease is 43 986 people, which is 6.1%. For comparison, the overall reduction in population in the country is 7.3%, which means that the population of the area decreased at a slower rate compared to the country as a whole. In front of Plovdiv in that comparison chart are the regions of Burgas and Blagoevgrad where the reduced population is 3.4% - 5% accordingly. For the period between the two censuses the only two regions where the population has increased are those of Sofia (capital) and Varna, respectively at 120 749 (10.3%) and 13061 (2.8%).

The population of the municipality of Plovdiv and its change and development are directly connected and related to the demographic development of the regions and municipalities in territorial proximity to the city.

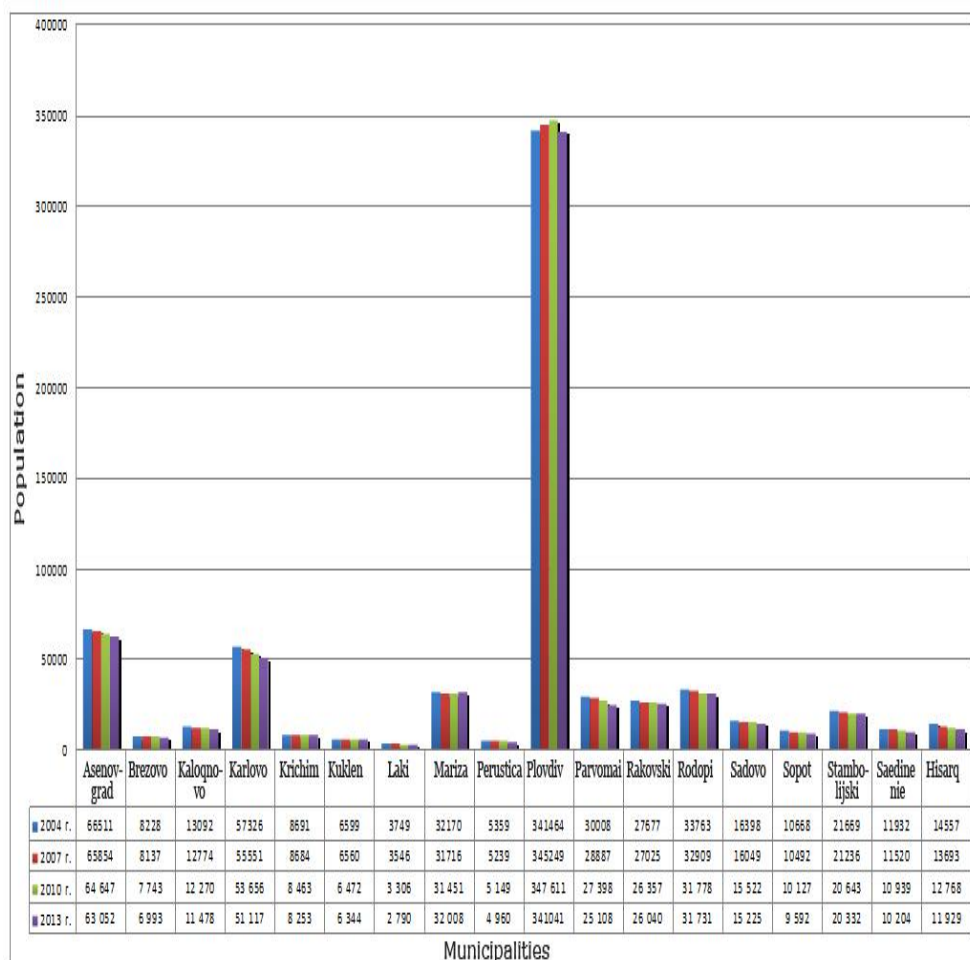


Fig. 1. Dynamics in population of Plovdiv municipalities

The data analysis of the dynamics of the population of Plovdiv municipalities reveals unfavorable trends in the demographic development. The only municipality in which the population increases during the period 2004-2010, is in Plovdiv. In all other municipalities in the area there is a reduction in the number of the population which is one of the disadvantages for their future development. In the last years of the study period in the municipality of Plovdiv there is a decrease in the population (Fig. 1.).

This unfavorable trend will lead to a limitation of the workforce and of childbearing potential in the area.

The population distribution in the Plovdiv region by municipalities is uneven. Almost half of the population lives in the municipality of Plovdiv. During the period 2004-2013 the relative share of the total population to the total population in the Plovdiv region increased marginally (from 48.10% in 2004 to 50.29% in 2013). The share of the population grew primarily under the influence of migration from neighboring municipalities, which in turn leads to accumulation of a relatively young population.

Population structure of all Plovdiv municipalities 31.12. is presented in Table 1.

Table 1

Population structure of all Plovdiv municipalities 31.12.

Municipalities	Years									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Asenovgrad	9.37	9.38	9.35	9.34	9.31	9.30	9.28	9.36	9.32	9.30
Bresovo	1.16	1.17	1.16	1.15	1.14	1.13	1.11	1.06	1.04	1.03
Kaloianovo	1.84	1.83	1.79	1.81	1.79	1.77	1.76	1.73	1.71	1.69
Karlovo	8.08	8.02	7.96	7.89	7.82	7.76	7.71	7.62	7.59	7.54
Krichim	1.22	1.23	1.23	1.23	1.23	1.22	1.22	1.23	1.23	1.22
Kuklen	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94	0.94
Luky	0.53	0.51	0.51	0.50	0.49	0.48	0.47	0.42	0.42	0.41
Maritza	4.53	4.53	4.52	4.50	4.48	4.48	4.52	4.77	4.76	4.72
Perushtica	0.75	0.75	0.76	0.74	0.74	0.74	0.74	0.74	0.73	0.73
Plovdiv	48.10	48.32	48.65	48.96	49.37	49.66	49.92	49.67	49.96	50.29
Parvomai	4.23	4.18	4.14	4.10	4.02	3.96	3.93	3.76	3.73	3.70
Rakovsky	3.90	3.88	3.86	3.83	3.82	3.80	3.79	3.85	3.85	3.84
Rodopi	4.76	4.74	4.70	4.67	4.62	4.60	4.57	4.75	4.71	4.68
Sadovo	2.31	2.32	2.31	2.28	2.26	2.24	2.23	2.29	2.26	2.24
Sopot	1.50	1.50	1.49	1.49	1.47	1.48	1.45	1.43	1.43	1.41
Stambolijski	3.05	3.03	3.02	3.01	2.99	2.98	2.96	3.03	3.01	3.00
Saidinenie	1.68	1.67	1.64	1.63	1.61	1.60	1.57	1.53	1.52	1.50
Hisar	2.06	2.01	1.98	1.94	1.91	1.87	1.83	1.82	1.79	1.76

Asenovgrad Municipality and the Municipality of Karlovo are standing right after Plovdiv municipality in terms of total population, in 2013 respectively at 9.30% and 7.54% of the total population of the area.

Significant influence on the development of demographic processes in Plovdiv Municipality has the sex structure of the population. It influences the formation of human resources in the municipality, both in quantitative and qualitative terms. From a demographic perspective, the most favorable position is the balanced gender structure in which there is preservation of slight advantage of men before the age of retirement.

For Plovdiv District as a whole the number of women prevails over that of men and this trend has not changed since more than 70 years. It is characteristic not only for the region but also for the country.

Population structure by sex of Plovdiv municipality shows that the majority of the population is women (especially in the age groups over 40 years) at the number of 52.30% of the total population, or for every 1,000 men the number of women is 1097 (Table 2).

This is a result of higher life expectancy for women and the increased mortality in men and aging of the total population.

Table 2

Dynamics of the population of the municipality of Plovdiv 31.12. by year
(descriptive characteristics and sex structure)

Years	Total (number)	Absolute growth (base previous year)	Index (base 2004)	Indices (base previous year)	Sex structure (%)	
					Men	Women
2004	341 464	-	100.00	-	47.59	52.41
2005	341 873	409	100.12	100.12	47.59	52.41
2006	343 662	1789	100.64	100.52	47.60	52.40
2007	345 249	1587	101.11	100.46	47.59	52.41
2008	347 600	2351	101.80	100.68	47.58	52.42
2009	348 465	865	102.05	100.25	47.62	52.38
2010	347 611	-854	101.80	99.75	47.60	52.40
2011	338 184	-9427	99.04	97.29	47.71	52.29
2012	339 077	893	99.30	100.26	47.70	52.30
2013	341 041	1964	0.999	100.58	47.70	52.30

The main demographic problem is the aging population which is valid on national level as well is due to the ongoing and sustainable process of population aging which is a serious issue for the municipality of Plovdiv as well.

Disclosure of key demographic trends in the municipality of Plovdiv show steady upward trend in the share of the adult population. The process of population aging is the reduced number in the proportion of children up to 15 years to the increased share of the population aged 65 and over.

As of 31.12.2013, the share of persons aged 60 and over was 23.09% (78 754 people) of the total population (Table 3).

Table 3

Structure of the population of the municipality of Plovdiv by age groups

Groups in age	Years									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
До 4	4.54	4.70	4.76	4.95	5.16	5.40	5.53	5.14	5.25	5.30
5-9	3.84	3.91	4.05	4.25	4.39	4.49	4.68	4.39	4.53	4.70
10-14	4.80	4.42	4.23	4.02	3.91	3.87	3.92	4.09	4.19	4.24
15-19	6.92	6.64	6.25	5.95	5.47	5.06	4.64	4.70	4.41	4.26
20-24	9.03	8.88	8.57	8.29	8.10	7.95	7.66	7.10	6.85	6.55
25-29	9.54	9.62	9.71	9.60	9.39	9.13	8.90	7.69	7.65	7.64
30-34	7.84	8.06	8.48	8.91	9.24	9.32	9.29	8.25	8.00	7.83
35-39	7.03	7.27	7.43	7.57	7.62	7.67	7.84	8.26	8.49	8.59
40-44	7.12	6.91	6.69	6.60	6.64	6.85	7.07	7.35	7.50	7.56
45-49	7.51	7.44	7.34	7.17	7.06	6.86	6.63	6.60	6.51	6.58
50-54	7.17	7.07	7.12	7.09	7.05	7.10	7.03	7.06	6.93	6.85
55-59	6.76	6.99	6.83	6.78	6.79	6.62	6.55	6.84	6.86	6.81
60+	17.90	18.09	18.54	18.82	19.18	19.68	20.26	22.53	22.83	23.09
Total:	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The proportion of people aged 60 and over has increased from 19.18% in the end of 2008 to 23.09% of the total population in 2013. It should be noted as well the high rate of the aging population.

The increase of the total number and proportion of elderly population poses serious problems for the social security system and health care system.

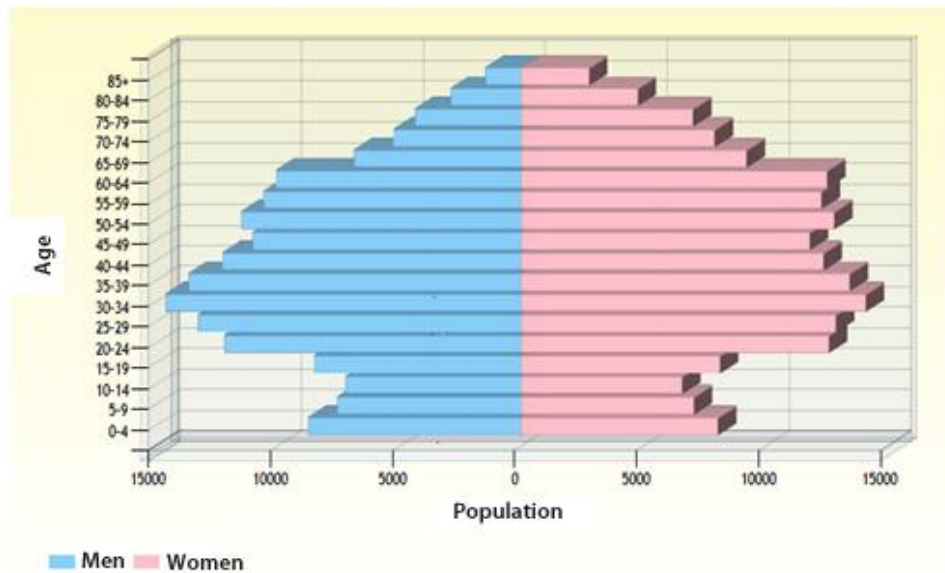


Fig. 2. Gender and age pyramid of the population of the municipality of Plovdiv to 01.02.2011

Due to its strong dependence on the age structure (largely the reproductive structure is a direct consequence to the state of the age structure), the two most common structures that are considered together for this purpose is the age-sex pyramid which shows the simultaneous distribution of males and women by age groups.

The narrow basis of gender and age pyramid shows that the overall reduction in population and aging is due to the decline in population in the youngest age groups.

The working age groups are dominated by men, while the population in retirement is significantly dominated by women, which means that the process of aging is more pronounced among women than among men. The proportion of women aged over 60 years on 31.12.2008 is 21.74% and men - 16.35%. 31.12.2011 these rates are respectively 19.31% and 25.46%. The difference is due to the higher mortality among men and as a result of it - the lower life expectancy in them.

Up to 31.12.2013 in Plovdiv municipality to the relative number of 100 people aged in between 15-64 years, are accounted nearly 50.2 persons who are under 15 and over 65 years (total age dependency ratio)². The data illustrates the trend of unfavorable (Table 4). Characteristic in this case is the high share of the population in the age group from 15 to 64, which is formed mainly as a labor potential of the municipality.

The observed age structure determines the reproduction capabilities of the working population, which is characterized by the demographic replacement. It shows the ratio between the number of entering working age (15-19) and the number of the end of the working age (60-64 years). As of 31.12.2013, the ratio is 63 (table 4).

Table 4

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Age dependency rate	39.3	39.2	38.9	39.0	39.1	39.8	41.1	48.2	49.2	50.2
Demographic replacement rate	143	133	116	107	95	83	73	72	68	63

For comparison, in 2004 for every 100 persons coming out of working age they were replaced by 143 young people.

Changes in the age structure of the population are reflected in the continuing process of aging, which naturally leads to an increase of the indicator for the average age of the population.

² Persons from the population in the "dependent" ages (under 15 and 65 years and over 100 members of the public in the "independent" age group 15–64 years.

For the Municipality of Plovdiv the average age in 2011 was 38.76, the average age for men was 37.39, while in women - 40.01.

The trend of population aging leads to changes in the age structure - the distribution of the population below, at and above working age³.

Impact on the scope of the population and over working age have both the aging and legislative changes in fixing the age limit for the population in retirement⁴

Working-age population⁵ by the end of 2013 was 220,145 people, or 64.55% of the total population (Fig. 3). Compared to the previous year age group population increased by 488 people, or 0.22%. Major factors that determine the proportion of the working population are socio-economic status and quality of life in the municipality.

Despite the current unfavorable demographic processes during this period, the municipality maintains productive working number of the human potential. Population above working age⁶ in 2013 is 69 614 people (20.41%) compared to 69 549 people (20.51%) in 2012. In one year it has increased by 65 people. In 2013, among the younger population under working age⁷ there was a decrease compared to 2012 by 383 people. Now the population under the working age is estimated at 49 488 people (15.04%).

Population above working age⁸ in 2013 is 69614 people (20.41%) and in 2012 was 69 549 people (20.51%). In one year it has increased by 65 people. This is due to the higher mortality rate in population and the exclusion of part of the population in this category due to the change in the retirement age for men and women according to legislation and assigning them to the working age population.

In 2013, among the younger population under working age⁹ there was a decrease compared to 2012 by 383 people. Now under the working age the population is estimated at 49 488 people (15.04%).

³ The calculated population in working age in 2012 included men aged 16 to the age of 63 years and 4 months and women at the age of 16 to the age of 60 years and 4 months.

⁴ The age limits for the population distribution in the categories below, at and above working age defined under the Pensions Ordinance and the length of service, adopted by Decree № 30 of MS (SG. 21/17.03.2000 years). According to the latest amendments of the Ordinance the upper limit of the working age population increased by four months each year until it reached 65 years for men and 63 years for women.

⁵ Working age - women from 16 to 59 and men 16 to 62 years old.

⁶ Over working age - women above 60 and men 63 and older.

⁷ For working age – above 15 years old.

⁸ Over working age - women at 60 years of age and older and men at 63 years and over.

⁹ For working age – above 15 years old.

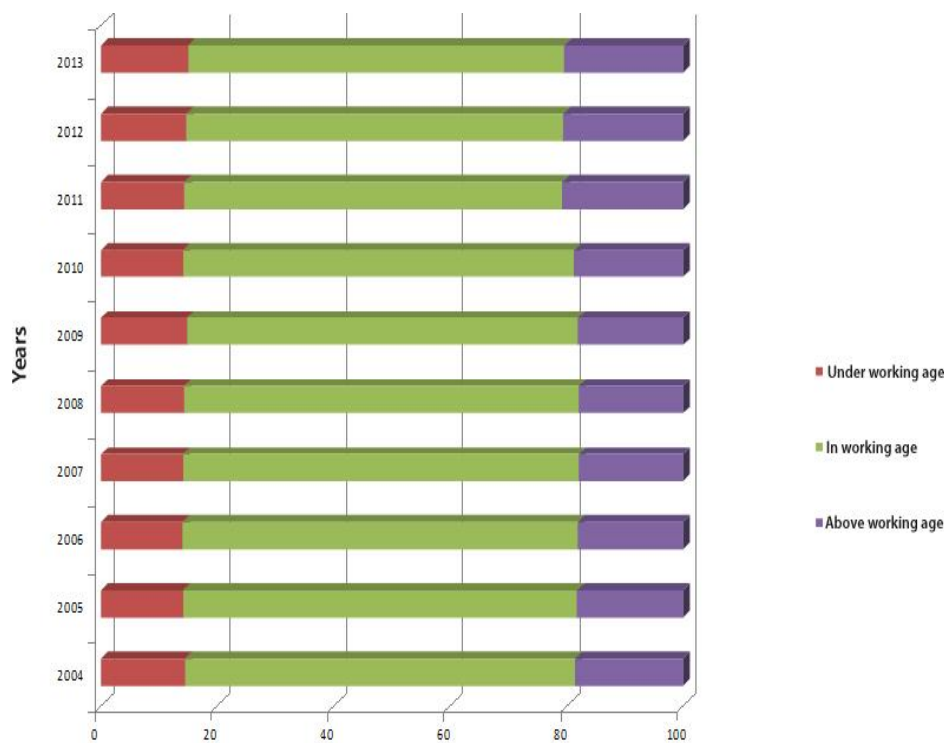


Fig. 3. Population structure below, at and above working age in Plovdiv Municipality during the period 2004-2013

CONCLUSIONS

From the current analysis of the main trends in the composition and structure of the population of the municipality of Plovdiv during 2004-2013 years the following conclusions can be drawn:

1. The demographic situation in Plovdiv Municipality is characterized by a continuing decline in population (6428 people – nearly 2% compared to the previous census in 2001).
2. As a result of higher life expectancy for women and the increased mortality in men the aging population structure of Plovdiv Municipality is dominated by women (especially in the age groups above 40 years), which consists of 52.30% of the population of the municipality, or for every 1,000 men the number of women is 1097.
3. Continued and sustained trend of increase in the proportion of the adult population. The process of demographic aging is more pronounced among women than among men. The observed decline in the number of men is a result of higher mortality and as a result of it – the lower average life expectancy for that gender.

4. The trend of population aging leads to changes in age structure - the distribution of the population below, at and above working age. Impact on the total population and above working age has both aging and legislative changes in fixing the age limit for the population in retirement.

5. As of 31.12.2013, the total age dependency ratio for the municipality of Plovdiv is 50.2%. It has higher age dependency ratio, compared to the previous years, and it indicates a worsening of the age structure of the population which on other hand reflects on the labor market, economic growth, etc.

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Рецензент – проф. д-р Кольо Онков
E-mail: kolonk@au-plovdiv.bg