

THE COMPONENTS OF CHANGES IN DE JURE POPULATION NUMBERS FOR INTERVENING YEARS (2002-2010) OF 2001 AND 2011 CENSUSES

The current population estimates are carried out based on the data of de jure population numbers obtained from the last RA population census results (October 10-19, 2001) which are updated on quarterly basis according to data on natural increase of population (difference between registered births and deaths)¹ and net migration (difference between those who are officially registered and those who are taken out from registry)² recorded in the reporting period.

Till 2001, first RA census conduction since independence, the current population estimates were carried out based on 1979 census data (as data on 1989 census results were determined as deficient and couldn't be basis for population estimates), according to which the estimated indicator of de jure population was 3.8 million persons, as of the beginning of 2001.

2001 Population census of the Republic of Armenia was conducted on 10-19 October, by the assistance of international donor society (with the permanent, a four year time period 2000-2003, methodological participation of consulting teams from U.S. Census Bureau Economic and Statistics Administration United States Department of Commerce, UNFPA and World Bank) and according to the determined regulations of Statistical Standards and Studies - No.49 "Recommendations for the 2000 Censuses of Population and Housing in the ECE Region (United Nations Statistical Commission and Economic Commission for Europe Conference of European Statisticians, Economic Commission for Europe Committee on Human Settlements)".

According to the 2001 RA census results the indicator of RA de jure population number formed 3,213,011 persons³ and de facto population number- 3002594 persons⁴.

During the intercensal years, 2002-2010, by means of official administrative registration 351,100 live births and 240,500 cases of death were recorded in the republic, and as a result of it the indicator of population natural increase was 110,600 people. During the same period, based on the data of population migration liable to official administrative registration, the number of emigrants (people extracted from registration - 69.2 thousand) exceeded the number of immigrants (who have got registration -11.7 thousand) by 57,500 persons and as a result of it the indicator of the general change (increase) of population has decreased by 57,500 (/110,600 – 57,500/pers.) and comprised to 53,100 person. Moreover, as a result of statistical adjustment (-3.4)⁵ applied during the calculation of the population numbers the indicator of population general increase comprise to 49,700 person for 2002-2010.

RA Population Natural Increase and Net Migration for 2002-2010

(1000 person)

<i>Intercensal years</i>	<i>Live births³</i>	<i>Death cases³</i>	<i>Natural increase 4= col.23 - col.3</i>	<i>Net migration⁴</i>
1	2	3	4	5
2002	32.2	25.5	6.7	-9.2
2003	35.8	26.0	9.8	-7.6
2004	37.5	25.7	11.8	-7.7
2005	37.5	26.4	11.1	-7.8
2006	37.6	27.2	10.4	-6.7
2007	40.1	26.8	13.3	-6.4
2008	41.2	27.4	13.8	-5.8
2009	44.4	27.6	16.8	-3.9
2010	44.8	27.9	16.9	-2.4
Total, 2002-2010	351.1	240.5	110.6	-57.5

¹ According to data obtained by statistical processing of second copies on birth and death acts provided by territorial divisions of the Civilian Registry office agency, Ministry of Justice of the RA.

² According to data obtained by statistical processing of statistical registry coupons on "arrivals" and "departures" provided by territorial passport divisions of the RA Police.

³ De facto population number minus temporary present and plus temporary absent (less than 12 months, as of census night) population numbers (3,002,594-47,543+257,960=3,213,011).

⁴ The total of permanently present and temporary present (less than 12 months, as of census night) population numbers, as of census night (2,955,051+47,543=3,002,594).

⁵ On the basis to the identification and cross checking of one-way and two-way records of arrivals and departures available in the administrative register.

Taking into consideration the circumstance that the migration data from official administrative registration does not fully include population movements (conditioned by the objective and subjective factors), alternative data on population movements are derived by border crossings on external passenger turnover implemented by RA border points (airway, road and railway).

The Volume of External Passenger Transportation, 2002-2010¹

/1000 transportation/

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total, 2002-2010
Arrivals	590.7	618.3	739.9	845.8	983.7	1293.6	1397.1	1432.0	1745.0	9,646.1
Departures	593.4	628.5	737.8	833.3	962.0	1296.8	1420.2	1457.0	1774.9	9,703.9
Balance (row1-row2)	-2.7	-10.2	2.1	12.5	21.7	-3.2	-23.1	-25.0	-29.9	-57.8

During 2002-2010, within the structure of external passenger turnover implemented by RA Border Crossing Controls, departures to abroad (9,703.9 thousand) exceeded the arrivals (9,646.1 thousand) to the republic by 57.8 thousand. That is, within the intercensal years, the data received from two sources are statistically very close.

As an alternative for the current population estimates, data on the indicators of de jure and de facto population numbers are also received by means of Integrated Household Living Conditions Surveys (ILCS) implemented during intercensal years.

By the support of Millennium Challenge Corporation (USA) and Millennium Challenge Account-Armenia SNCO - consultants Frederick Shureni and Ali Mustaki (USA) examined an innovative analytical tool to improving population estimates through aligning ILCS annual population aggregates with official annual population estimates with regard to 2004-2009 data using Raking Ratio Estimation method. The indicators of de jure and de facto population numbers with raking results (before and after raking) are presented below.

De Facto and De Jure Counts of Population Estimates by ILCS Base Before and After Raking (by raking methodology)

/persons/

	2004	2005	2006	2007	2008	2009
De Facto population						
Survey Estimates						
<i>Original ILCS Totals</i>	3,175,296	2,996,366	3,104,449	3,107,735	3,067,742	3,070,286
<i>Raked ILCS Totals</i>	2,986,267	3,022,236	3,026,123	3,006,021	2,996,225	3,035,166
De jure population						
RA Population Estimates of Current statistics	3,214,030	3,217,534	3,221,094	3,226,520	3,234,031	3,243,729
<i>Original ILCS Totals</i>	3,418,023	3,194,612	3,300,624	3,336,811	3,308,268	3,277,666
<i>Raked ILCS Totals</i>	3,214,030	3,217,534	3,221,094	3,226,519	3,234,031	3,243,729

¹ Balance of arrivals and departures on external passenger transportation implemented by RA Boarder Crossing Controls.