

THE DEMOGRAPHIC PROFILE OF CENTENNIAL IASI

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Abstract

In the centennial year of the Great Union, we propose a retrospective analysis of population dynamics in the county and the city of Iasi, as well as the implications of this dynamics on the social and economic dimension. The main objective of this article is the comparative analysis between the county and the city of Iași, Romania, at two key moments, the year of the Great Union (1918) and the Centenary of the Great Union (2018). The secondary analysis is based on data extracted from the Statistical Yearbooks from 1904, 1914, 1922, 1930, 1939-1940, 2016 and data for 2017, 2018 from the database of the National Institute of Statistics. In more than 100 years that have been analysed, Iași has seen a spectacular demographic growth.

Keywords: Iași city, demography, demographic development, centenary

Résumé

Dans l'année centenaire de la Grand Union on se propose de faire une analyse rétrospective en ce qui concerne la dynamique de la population du comté et de la ville Iași, Romania, ainsi que les implications de cette dynamique sur la dimension sociale et économique.

L'objectif principal de cet article c'est l'analyse comparative du comté et de la ville de Iasi, dans les 2 moments clés, l'année de la Grand Union (1918) et l'année centenaire de la Grand Union (2018).

L'analyse secondaire est basée sur des données extraites des Annuaire Statistiques des années 1904, 1914, 1922, 1930, 1939-1940, 2016 et les données pour les années 2017, 2018 de la base des données de l'Institut National de Statistique.

Pendant plus de 100 ans de recherche, la ville de Iasi a connu une croissance démographique spectaculaire.

Mots-clés: la ville de Iași, démographique, évolution démographique, centenaire

Rezumat

În anul centenarului Marii Uniri, ne propunem o analiză retrospectivă privind dinamica populației din județul și municipiul Iași, Romania, precum și implicațiile acestei dinamici asupra dimensiunii sociale și economice. Principalul obiectiv al acestui articol este analiza comparativă a județului și a municipiului Iași la două momente cheie, anul Marii Uniri (1918) și anul Centenarului Marii Uniri (2018). Analiza secundară se bazează pe date extrase din Anuarele Statistice din anii 1904, 1914, 1922, 1930, 1939-1940, 2016 și datele pentru anii 2017, 2018 din baza de date a Institutului Național de Statistică. În cei mai bine de 100 de ani analizați, Municipiul Iași a cunoscut o creștere demografică spectaculoasă.

Cuvinte cheie: Municipiul Iași, demografie, evoluții demografice, centenar

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1. Political and administrative division of Iași county

The year of 2018 is the year when Romania celebrates 100 years since the Great Unification. These 100 years brought considerable changes in administrative, political, economic and social life.

From administrative point of view, in 1918, after Great Unification, worked four distinct administrative regimes that have maintained some local and regional specificities:

- a. The Administrative Regime of the Old Kingdom of Romania was regulated by the Law of the County Councils, 2nd of April 1894;
- b. The Administrative Regime of Transylvania was regulated by the Decree on the establishment of the management of public services in Transylvania no. 3632, 11th of December 1918;
- c. The Administrative Regime of Bessarabia was regulated by the Decree on establishment of the management of public services in Bessarabia no. 852, 9th of April 1918;
- d. The Administrative Regime of Bucovina was regulated by the Decree for the Administration of Bucovina no. 3715, 18th of December 1918 (Săgeată 2006, 46).

Based on data research from Statistical Year Book of Romania, from 1915-1916 and 1922, published by the Ministry of Industry and Commerce, General Statistical Department, in 1915 Iasi county was composed of five Districts (second-order administrative units that are called *plăși* and is an intermediate unit between the county, city and commune) and keep this number in 1922. The villages number increased from 236 villages in 1915 to 247 villages in 1922. The hamlets called *catune* (rural settlement formed by five to ten households, that is not an administrative unit) decreased from 30 to 23.

As a response to large differences between regions and counties, in 1925, based on Constitution of 1923 the Administrative Unification Law of 14th of June 1925, created a uniform administrative system in order to ensure administrative and political unity of the Romanian state. After this, in 1926, Iasi county was composed from five Districts, and 302 villages.

From political point of view, in 1915 to 1922, Iasi county was composed from one urban commune that was the urban residence, one urban commune that wasn't an urban residence and 47 rural communes. This composition has been maintained after Administrative Unification Law.

In contrast with the past, these days, the Iași county is composed of two municipalities, three towns, 93 communes and 418 villages in accordance with the data presented by National Institute of Statistics.

2. Population evolution, Iasi County and Iasi City

The population is one of the most complex statistical indicator that is analysed due to the diversity of the characteristics, the frequent changes in its structure and size, the many interrelationships and interdependence between demographic and socio-economic phenomena (INS 2014). According to data that have been analysed, we highlighted a spectacular population evolution in the past 100 years. This statement is valid for population evolution at Iași county level and at Iași city level.

First, we should mention that National Institute of Statistics counts population by resident¹ and by permanent resident². Population by resident is an important indicator at macroeconomic level and it usually used to produce national statistics that reflects capacity of socio-economic development of the country (INS 2013, 3), in other words this indicator represents “de facto” inhabitants. Population by resident is counted at national level, macroregional level, region and county and it doesn’t cover localities. Measuring the population by permanent residence is necessary to cover the need for information on the total number of “de jure” inhabitants. Knowing the number and structure of the permanent resident population are useful for “substantiating governmental decisions”, “informing the public opinion”, “establishing the long series of official statistical data that are part of the national statistical data fund” (INS 2014, 3). Following these clarifications,

¹ As per definition used by National Institute of Statistics, usual resident population represents all persons of Romanian nationality, foreign or stateless who have their usual residence in Romania. Usual residence is the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage. The usual residence may be the same as the domicile or may differ from it, for the persons who choose to establish their usual residence in a locality other than the locality of domicile in the country or abroad. It is considered having their usual residence in a specific geographic area just people who have lived in that usual residence for a continuous period of at least 12 months prior to reference moment. The resident population includes the persons who immigrated to Romania but excludes the persons who emigrated from Romania.

² National Institute of Statistics define permanent resident population that represents the number of persons with Romanian citizenship and permanent residence in territory of Romania, delimited by territorial administrative criteria. The person's permanent residence is the address where he/she declares to have the main dwelling, printed as such on its identity card and registered by the administrative bodies of the State. To set up the value of this indicator, the usual residence is not considered as well as the period and/or reason of absence from domicile.

for analysis at county level has been used resident population and for city has been used permanent residence population.

At county level the population increased 3,6 times from 221.920 in 1915 to 790.023 at 1st of July 2017. In 1930, has been used two datasets. Romanian Statistical yearbook from 1939-1940 published that county population by residence were 275.796, meanwhile Census Data from 1930 were 420.488. The maximum level of population has been reached in 2002. According to the last data, Iași county is the first county in Romania by population. A brief history of population evolution is presented in **Figure 1** and **Figure 2**.

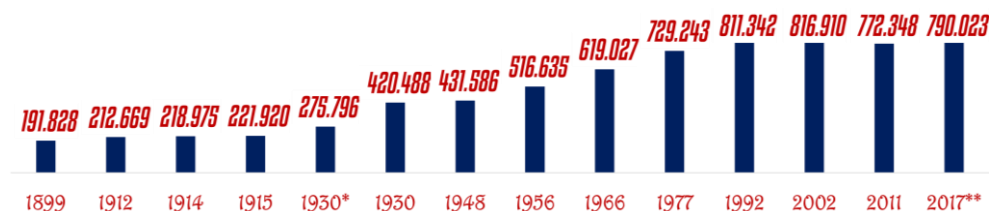


Fig. 1. Iași County Population Evolution, midyear data (resident population), number

** Population by resident at 1st of July 2017

Source: data compilation from Statistical Year Book of Romania 1904, 1914, 1922, 1930, 1937-1938, 2016, Census 1889, 1930, 1948, 1956, 1966, 1977, 1992, 2002, 2011 and TEMPO-online database of National Institute of Statistics

At city level population increased 4,9 times from 76.593 to 371.889 at 1st of July 2017. The highest number of population has been counted in 2017. Iași city is the second city by population after Bucharest.

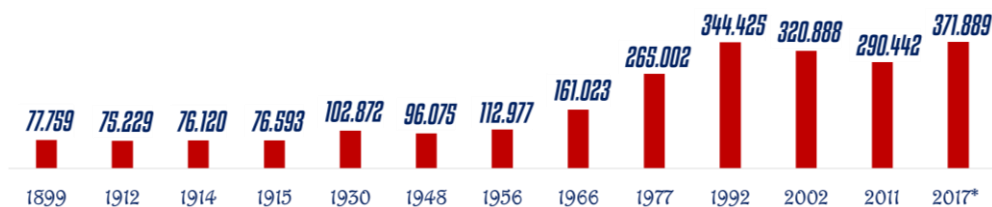


Fig. 2. Iași City Population Evolution, midyear data (permanent residence population), number

*Permanent resident population at 1st of July

Source: data compilation from Statistical Year Book of Romania 1904, 1914, 1922, 1930, 1937-1938, 2016, Census 1889, 1930, 1948, 1956, 1966, 1977, 1992, 2002, 2011 and TEMPO-online database of National Institute of Statistics

3. The Population Pyramid of Iași city 2018

One of the most suggestive summary of the history of the population over a period of almost a century is the population pyramid. Basically, if we will not have any changes in the number of births or number of deaths or the balance of migration, the population pyramid would have the form of a triangle. As it is, we rarely meet the regular forms. The greatest influence in the deterioration of this triangle form is the changes in fertility (Rotariu 2009, 28).

For population pyramid that has been modelled for Iași city we have used the data regarding the permanent residence population of Iași city at 1st January 2018, from Tempo-online database of National Institute of Statistics. Total number of the permanent residence population of Iași City has been counted at 373.507. Comparing it with data from previous year population has grown with 1,3 percent. If this rhythm of growing will be maintained, the doubling time of population will be approximate 55 years.

The population can be divided in subpopulation by sex variable in male subpopulation and female subpopulation, that can be useful for calculation of sex ratio or masculinity / femininity ratio (Rotariu 2009). If we will distribute Iași city population by gender, we will have 52,1 percent of females and 47,9 percent of males and the masculinity ratio will be 0,91 that means that we have 91 males reported to 100 females and femininity ratio is 1,08 that means 108 females reported to 100 males.

Population can be also classified by age structure. Demography uses different types of age classification that can be smaller or larger groups. For next classification we have used large groups that represents children, adult population and old population. As per this classification Iași city is composed of 15,7 percent young population (0-14 years), 70,9 percent adult population (15-65 years) and 13,4 percent old population (65 years and other). This classification let us to calculate dependency ratios, that will be presented in next chapter.

The total fertility rate³ in 2017 for Iași city has been 1,2 children per women, which results in natural decline of Iași City. This is far below the replacement rate of 2,1 that would allow maintenance a stable population.

³ As per Eurostat, total fertility rate: it is computed by adding the age specific fertility rates for women in a given year. It can be interpreted as the mean number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the fertility rates by age of a given year and surviving.

The total fertility rate around the country may vary from county to county and from region to region, higher in rural area and lower in urban area. At county level in 2017 it was at 1,8 children per women and at national level, total fertility rate in 2017 was 1,7 children per woman.

According to figure 3, the population pyramid represent a constrictive type that can indicate a lightly increase of births and longevity growing. The population pyramid shows an increase of birth rate about 30-50 years ago, that can be explained by Decree Nr. 770 of October 1, 1966 to Regulation of pregnancy interruption.

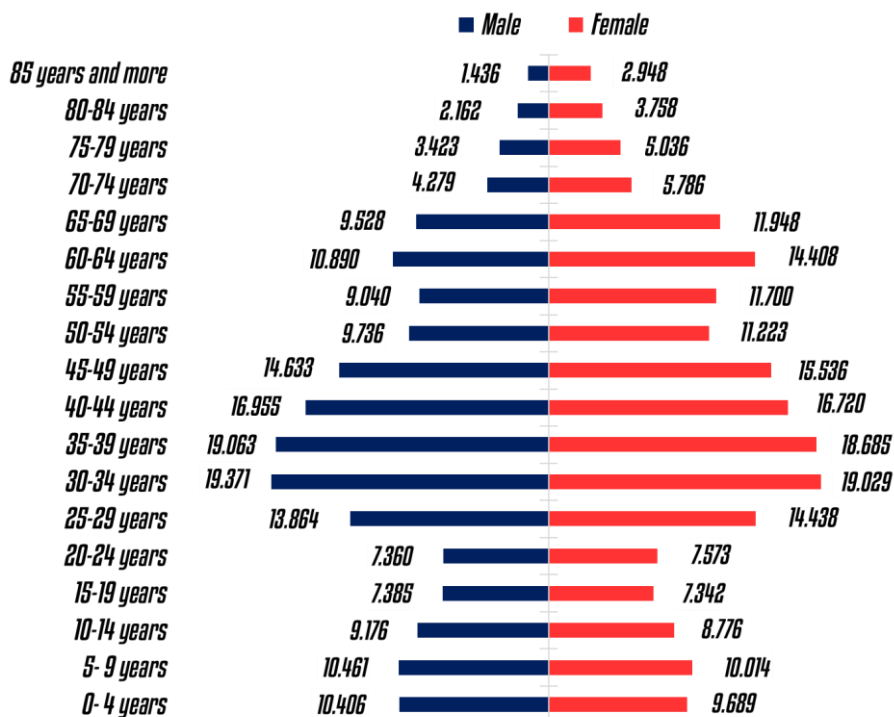


Fig. 3. The population pyramid of Iași City, 1st of January 2018 (permanent residence population), number

Source: TEMPO-online database, National Institute of Statistics

4. Demographic dependency in 2018

As mentioned previously, Iași city population increased from 2017 to 2018 and this tendency of growing is maintained in past nine years. For us to understand what really means the percentages of age structure that has been

presented we have compared old-age dependency ratio⁴, demographic aging ratio⁵ and total dependency ratio⁶ between Iași city, Iași county and Romania for 2018.

Old-age dependency ratio at city and county level is lower than at national level and means that two inactive people aged 65 years and older is sustained by ten active persons conventionally considered of working age (15-64 years). The significant differences appear at demographic aging ratio that is lower at city and county level. At Iași county level it represents eight old people to ten young people, at Iași city level is approximate nine old persons to ten young persons. Demographic aging ratio in Iași city can be explained by positive natural increase. At national level, demographic aging ratio reveals that we have 11 old persons reported to ten young persons, that highlights the intensification of demographic aging.

In conclusion, if the total population of the city will be analysed through demographic dependency ratios the Iași city has six persons who can provide support (economically active) that are sustaining two young and two old people.

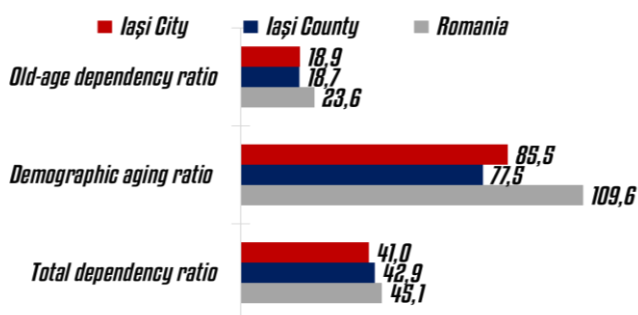


Fig. 4. Demographic dependency in 2018, percentage

Source: own calculation based on TEMPO-online database, National Institute of Statistics

⁴ As per Eurostat definition – old age dependency ratio is the number of persons of an age when they are conventionally considered economically inactive (aged 65 years and over (1st variant) or 60 years and older (2nd variant) to the number of persons conventionally considered of working age (respectively aged 15-64 (1st variant) or 20-59 years old (2nd variant)). We have used 1st variant of analysis.

⁵ Demographic aging ratio – represents number of persons of an age when they are conventionally considered economically inactive (aged 65 years and over) to the number young persons (0-14 years).

⁶ Total dependency ratio relates the number of individuals who are likely to be “dependent” on the support of others for their daily living – the young (0-14 years) and the elderly (65 years and over) – to the number of those individuals who are capable of providing this support (15-64 years).

5. The natural movement of population in Iași county and Iași city

The natural movement of population is an essential part of the characterization of the demographic processes of a certain human community. First of all is about births and deaths. (Mărginean 2016, 118). So, we have been interested what have been change in demographic processes in the past 100 years. Unfortunately, some of the data regarding Iași county and Iași city from 1918 has been lost and we have decided to use the data from Census from 29.12.1930, that had been published in Statistical Yearbook 1939-1940. Comparing the results between Iași county and Iași city, at those moments we found some interesting facts.

Population increased 2,9 times at county level and 3,6 times at city level that can be explained by the power of the city to attract people from county and from other cities.

The past several years Romania and most of European Union countries experiencing a decreasing of birth rate as result of many socio-economic factors. Our analyses highlighted that in 1930 birth rate was much higher at county level then at city level that has been explained by the large size of population that was living in rural area. Birth rate⁷ decreased 3,4 times at county level and 2,9 times at city level.

Death rate or mortality rate⁸ decreased 1,7 times at county level and 2,4 times at city level as well. A spectacular decreasing was achieved at infant mortality rate⁹ it decreased 26,2 times at county level and 38,7 times at city level, that is a result of increasing quality of life and medical care. Unfortunately, in comparison with European Union countries (28), where mean was 3,6 deaths under 1 year to 1000 persons in Romania the value is still high 7,0 deaths under 1 year to 1000.

Natural increase rate or natural growth rate¹⁰ is negative at county level but is lower in comparison to national level that is -2,5. At city level has

⁷ According to National Institute of Statistics live-birth rate is the ratio between the number of live-births in a year and the population at the 1st of July from the current statistics of the respective year and is expressed by the number of live-births per 1000 inhabitants.

⁸ Mortality rate is the ratio between the number of deaths in a year and the population at the 1st of July from the current statistics of the respective year and is expressed by the number of deaths per 1000 inhabitants.

⁹ Infant mortality rate is the ratio between the number of deaths under one year in a year and 1000 live births of the same year and its expressed by the number of deaths under one year per 1000 live-births of the same year.

¹⁰ The population natural increase rate calculates the difference between live-birth rate and mortality rate of the population.

been registered a positive natural increase rate that can be artificially maintained by the live births registered in the city of persons that are permanent residents of other cities or counties.

Marriage rate¹¹ decreased at county level approximative 6 times and 5,2 times at city level but has the same level in 2017 at city and county level counted to 1,4 marriages to 1000 persons.

Interesting fact that divorce rate¹² increased 10 times at county level and 6,1 times at city level. If in 1930 divorce rate has been two times higher at city level, nowadays the difference is just 0,6 percent between county and city.

<i>Iași County</i>			<i>Iași City</i>	
<i>1930</i>	<i>2017</i>		<i>1930</i>	<i>2017</i>
<i>275.796*</i>	<i>790.023**</i>	<i>Population</i>	<i>102.872***</i>	<i>371.889****</i>
<i>37,7</i>	<i>11,1</i>	<i>Birth Rate</i>	<i>26,7</i>	<i>9,3</i>
<i>20,1</i>	<i>11,5</i>	<i>Death Rate</i>	<i>18,7</i>	<i>7,9</i>
<i>175,8</i>	<i>6,7</i>	<i>Infant Mortality Rate</i>	<i>189,8</i>	<i>4,9</i>
<i>17,6</i>	<i>-0,4</i>	<i>Natural Growth Rate</i>	<i>8,1</i>	<i>1,3</i>
<i>8,6</i>	<i>1,4</i>	<i>Marriage Rate</i>	<i>7,3</i>	<i>1,4</i>
<i>0,8</i>	<i>8,0</i>	<i>Divorce Rate</i>	<i>1,4</i>	<i>8,6</i>

Fig. 5. Vital statistics of Iași county and Iași city in 1930 and 2018

* Stable population according to the census from 29.12.1930, data from Statistical Yearbook 1939-1940

** Resident population at 01.07.2017

*** Stable population (Urban population of Iași County- includes Iași City and Târgu Frumos City) according to the census from 29.12.1930, data from Statistical Yearbook 1939-1940

**** Permanent residence population at 07.07.2017

Source: own calculation based on Statistical Yearbook 1939-1940, data from TEMPO-online, National Institute of Statistics

¹¹ Marriage rate is the ratio between the number of marriages in a year and the population at 1st July from the current statistics of the respective year and it is expressed by the number of marriages per 1000 inhabitants.

¹² Divorce rate is the ratio between the number of divorces in a year and the population at 1st July from the current statistics of the respective year and is expressed by the number of divorces per 1000 inhabitants.

6. Iași – University Center

Alexandru Ioan Cuza University of Iași is the oldest higher education institution in Romania, founded in 1860. The city of Iași was and still is an important educational pole in Romania, the city that attracts hundreds of students annually. So, we have decided to analyse how changed the number of *student population* and *teaching staff* throughout the years. The main question was to find how changed student-teacher ratio.

Comparing the data that we have found in Statistical Yearbooks and the data that had been provided by the Alexandru Ioan Cuza University we can conclude number of teaching staff has increased 8,5 times, number of students increased 9,1 times and number of faculties increased 3,8 times.

The only number that have been remained rough stabled it is student-teacher ratio. In accordance with our own calculation in 1918-1919, University had 16 students to one professor, in 2017-2018 this number slightly increased to 17 students per professor.

<i>Alexandru Ioan Cuza University of Iași</i>		
<i>1918-1919</i>		<i>2017-2018</i>
	<i>Teaching staff</i>	
<i>160</i>		<i>1.365</i>
	<i>Students</i>	
<i>2.551</i>		<i>23.124</i>
	<i>Faculties</i>	
<i>4</i>		<i>15</i>
	<i>Students/professor</i>	
<i>16</i>		<i>17</i>

Fig. 6. Alexandru Ioan Cuza University of Iași

Source: data compilation and own calculation based on Statistical Yearbook of 1922 and data provided by Alexandru Ioan Cuza University of Iași.

7. Conclusion

After passing 100 years from Great Unification, we can highlight a demographical growth of the Iași county and Iași city. Population has increased several times, even if the live birth rate decreased. The increasing was slightly higher at city level as a result of economical, cultural and educational factors. The increasing has become possible on the strength of decreasing mortality rate, spectacular decreasing of infant mortality rate and increasing of expectancy of life. Vital statistics changed thru the years as a

result of increasing of the quality of life, medical care, etc. We must notice that are no big difference between county and city on nuptiality rate or divortiality rate.

Instead of the main conclusion we will present a perspective of the citizens of Iași on the question that had been addressed in a sociological study that was made in 2018 “In generally do you think that Iași city is heading on a right or wrong direction?”. In accordance with the answers that was analysed, 79,2 percent thinks that we are heading on the right direction.

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