GROWTH TRENDS OF THE DEMOGRAPHIC STRUCTURES IN THE CITY OF PITEŞTI

ADELIN DANIEL NEDELEA¹, ANA PUNCIOIU²

ABSTRACT - The city, depending on its size, represents a pole of attraction for different groups of people situated both near and far from the city. The causes that lead to the movement towards the city of the population living in the rural area are related to a more developed economic activity, the possibility of finding a job (especially for middle-aged persons), the presence of learning institutions, hospitals, cultural centres and better living conditions. The city's power of attraction is proportional to its size: the larger the city, the more people come to it from great distances or smaller cities whilst a small city attracts only the population from the neighbouring settlements. Presently, in large cities the population shifts from the urban area towards the rural one through the development of the suburban settlements and residential districts. For the city of Pitesti, this migration is available thus in its peripheral districts as residential neighbourhoods appeared within the adjacent settlements, a fact which caused the decline of the city population opposite to the growth of the rural population. A major influence on the evolution of the city's population is the natural movement of the population and the industrial restructuration, which forced the affected population to move to the rural area or to work in a foreign country. Between 1990 and 2010, the city's population recorded three evolution periods: a slight growth between 1990 and 1997, followed by a period of stagnation between 1997 and 2001, and a period of regression between 2002 and 2009. These periods were influenced by the economic activities, which initially grew then declined, by the natural movement of the population and the migration towards adjacent settlements or across the borders.

Keywords: demography, demographic trends, population

INTRODUCTION

Demography comes from the Greek term *demosgraphe* where *demos* means people/population and *graphos* means to write/describe. Consequently, the notion of *demography* can be translated as population description. The term *demography* was used for the first time by Achille Guillard in the essay entitled *Éléments de statistique humaine ou démographie comparé* in 1855. However, historians believe that the one who created the term is John Graunt, a London tradesman, who, in 1662, in his paper entitled *Natural and political observations made on account of mortality lists with special references to governing, religion, commerce, growth, air, diseases, etc. from the city of London, estimated London's population by investigating mortality records. A proof of his confirmation as creator of the term is the demographic tercentenary celebrated by all demographers in the world in 1962 and also the statistics documentation in which John Graunt is cited as creator of the term (Mureşan Cornelia, 2005).*

Numerous meetings took place focused on the discussions on the appearance of demography and on whether it is an independent science or part of another discipline such as economic, historical or social demography. It was concluded that demographers provide activities related to several sciences such as geography, economy, sociology, anthropology, etc.

¹ Ph.D., University of Bucharest, Faculty of Geography, 1 Nicolae Bălcescu Street, Bucharest, Romania. E-mail: adelindely@yahoo.com

² Ph.D., University of Bucharest, Faculty of Geography, 1 Nicolae Bălcescu Street, Bucharest, Romania. E-mail: anda580@yahoo.com

ADELIN DANIEL NEDELEA and ANA PUNCIOIU

Demographic structure or population structure represents the configuration of the population according to age groups, sex, marital status, environment, nationality, religion, etc.

Demographic trends represent the positive of negative trends of a population and the factors that influence it directly such as natality, mortality, migration (Trebici V., 1979).

Numerous authors have mentioned aspects concerning the analysis of demographic structures in works such as *Demografia* [Demography] (Trebici V., 1979), *Introducere în demografie* [Introduction to Demography] (Mureşan Cornelia, 2005), *Demografie şi sociologia populației* [Demography and Sociology of Population] (Ciocodeica V., 2007), *Introducere în sociologia populației și demografie* [Introduction to Sociology and Demography] (Roşca D., 2007).

References about the population of the city of Piteşti are provided by Greceanu Eugenia (1982), Popa P., Dicu P., Voinescu S. (1988), Poşircă Rozica (2004), as well as by the *General Urban Plan*, the Integrated Urban Development Plan for the City of Piteşti, Local Agenda 21–Local Plan for Sustainable Development in the City of Piteşti, Statistic Compendium of Argeş County and Argeş County Directorate of Statistics.

DOCUMENTATION AND METHODS USED

For this study case, the primary information concerning the demographic structure comes from the Argeş County Directorate of Statistics, population census, General Urban Plans, Statistic Compendium of Argeş County and from different papers in which the author mentioned aspects related to the population of the city of Piteşti.

The methods used in elaborating the study consisted in collecting, analysing and explaining statistical data using a questionnaire.

STUDY CASE

Situated in Argeş County, the city of Piteşti is the largest city of the county, both from numerical and economic point of view. Its development was favoured by its geographical position at the crossroad of two different relief units and of two national trade routes.

Another important factor that influenced the city's economic and numerical development is its industry, which after 1950 developed in various directions, contributing to the growth of the city's population due to the creation of new jobs that attracted people from the surrounding villages.

Population dynamics

The population of Piteşti has increased in number over the years but the highest growth began starting with 1950 when the local industry developed, thus creating new work places and attracting population from the nearby settlements.

The first account concerning the population of Piteşti was made in 1640 by the Catholic archbishop Bakšič who noted in a document that, at that time, Piteşti counted 200 houses belonging to "some wealthier citizens" out of the total number of approximately 1,000 city-dwellers (Popa P., Dicu P. Voinescu S. 1988, p. 73). Numerous travellers who passed through the city of Piteşti mentioned in foreign and local documents dates referring to the city's population at that moment. At the end of the first official census conducted in Wallachia in 1838, Piteşti numbered 4,050 inhabitants and approximately 773 houses and by the latest census conducted in 2002, the city's population numbered 174,668 inhabitants. For a better observation of the numerical evolution of the population, we have created a graphic (Figure 1) which illustrates the dynamics of the number of inhabitants at every official census between 1838 and 2002.

In Figure 1, two periods of evolution concerning the population of the city can be identified: a period of growth between 1838 and 1992, when the population grew rapidly especially after 1960, the main cause being the industrial development, and a period of numerical downfall after 1992. It must be mentioned that the population's highest numerical value was recorded in 1997 and not in 1992 as shown in Figure 1 and that massive decrease began after 2001. Between these two periods, no large fluctuation was recorded (1997 - 2001), but because of the ten-year difference between censuses, the number of the population can be modified both positive and negative according to different factors. In

this case, the main modifications that took place in the population dynamics can be found after the Revolution of 1989, more precisely between 1990 and 2009. In this respect, a graphic was made (Figure 2), which highlights the population's dynamics between 1990 and 2009 and the main periods of evolution.

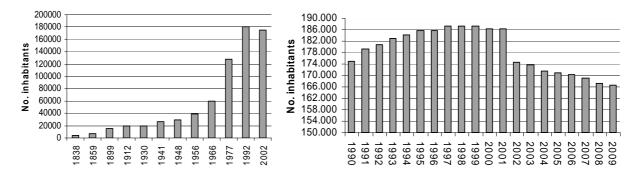


Figure 1. Population censuses in the city of Piteşti

Figure 2. The evolution of population in the city of Piteşti between 1990 and 2009

The main periods of population evolution:

- the *growth period*, recorded between 1990 and 1997, highlights the increase in the number of inhabitants from 174,790 recorded in 1990 to 187,181 in 1997. It is easily observed that the number of inhabitants increased by 12,391 people during a period of seven years which is due to the natural balance and migration dynamics;
- the *stagnation period*, between 1997 and 2001, is characterized by the stagnation of the numerical value of the city's population to 187,000 inhabitants due to the reduction of the natural balance in comparison to the prior period and because of the negative value of the balance due to change of domicile;
- the *period of decrease* in the number of inhabitants, between 2001 and 2009, is highlighted by the decrease in the number of inhabitants by 19,601 people, the main cause being the massive reduction of industry that made the natural balance and migrations reduce rapidly.

Population structure by sex and age

Population structure by sex separates the total population in two parts: males and females, while age groups help establish the ratio between males and females but also highlight the evolution of the young, adult and old population groups.

In this case, when analyzing Figure 3, a predominance of females can be observed to the detriment of males. This predominance tends to increase as we approach the year 2009. Thus, in 1990, the difference was of 2,840 people in favour of the female gender and by 2009, the difference rose to 8,225 people (Figure 4).

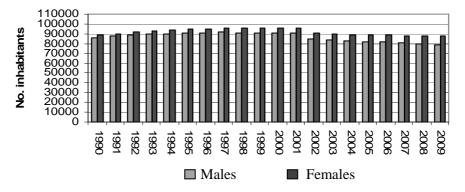


Figure 3. The sex structure of the population in the city of Piteşti city between 1990 and 2009

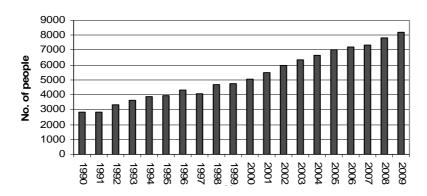


Figure 4. *The difference in number between males and females (1990 - 2009)*

The causes of this decrease in the male population are represented by the migration of population outside the country in search of a work place due to the massive reduction of industry in the city of Piteşti, the high mortality of the male population and the reduction in life expectancy in comparison to the female population.

As regards age, population is divided into three categories: the young population (0 - 14 years), adult population (15 - 59 years) and elderly population (over 60 years). For this study, we have chosen three years of reference: 1990, 2000 and 2009. For these years, we have calculated the population structure by sex and age, thus observing the evolution trend for each group (Figure 5).

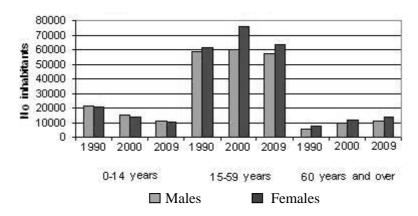


Figure 5. The population structure by age and sex in 1990, 2000 and 2009

By analyzing Figure 5, the population structure at the level of each age group for the three years of reference can be identified:

- the age group of 0 to 14 years (*young population*) shows a descending trend, from the total value of 41,894 people recorded in 1990 to the value of 21,762 people recorded in 2009. There can be observed a reduction of more than half the initial number of young people and the causes that influenced this reduction are the decrease of the natural balance and migration to the surrounding settlements or outside the country together with their parents.
- the age group of 15 to 59 years (*adult population*) shows a stability in comparison to the other two age groups, the total number of people belonging to this group numbering around 125,000 inhabitants, the female population being predominant during all the three years of reference. The decrease in the male population, especially around the years 2000, occurred due to the migration to foreign countries in search of a work place.
- the age group of 60 years and over (*elderly population*) developed contrary to the young age group. The total population recorded in 1990 was of 12,721 inhabitants and it continued to grow to 21,192 inhabitants in 2000, reaching 25,285 inhabitants at the end of the analyzed period, in 2009.

Therefore, a doubling in number of the elderly population can be observed in the analyzed period. In comparison to the first age group, where population decreased to more than half the initial value, this age group doubled its size. Consequently, it can be said that in a near future, we will assist to a process of population aging.

Population natural dynamics

Population natural dynamics is represented by natality, mortality and natural balance, the last one representing the difference between the first two.

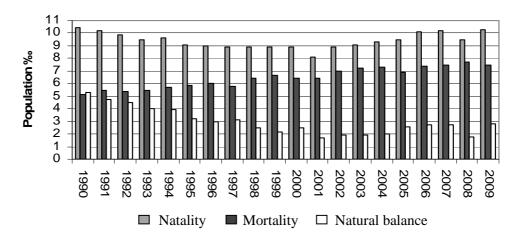


Figure 6. The natural dynamics of population in the Piteşti city – period 1990 – 2009

Figure 6 highlights the evolution of the three indicators of the population natural dynamics. Natality presents both a degressive evolution between 1990 and 2001 (a decrease from 10.4% in 1990 to 8.1% in 2001) and a positive one between 2001 and 2009 (a growth from 8.1% in 2001 to 10.3% in 2009). Mortality is characterized by a growth of 2.4% at a general level from 5.1% in 1990 to 7.5% in 2009, but it also presents several decrease periods which do not influence very much its growth trend during the analyzed period. Consequently, the natural balance undergoes a decrease from 1990 (5.3%) to 2001 (1.7%), when its lowest value is recorded, subsequently followed by a slight growth, recording a value of 2.8% in 2009. Thus, a reduction of the natural balance to approximately half its recorded value in 1990 can be noticed. The factors that contributed to the decrease of the natural balance are the reduction of natality until 2001 and the increase of mortality, causes which were influenced by the change of the political regime, standard of life, regulation of abortion and the migration of the young population of fertile age outside the country.

Population migration dynamics

Population mobility phenomena or its movement inside a territory interests more social and human sciences such as demography, population geography, sociology, economy, etc. From the factors which influence the population mobility, the most important are the economic, social, political and cultural factors. From the factors mentioned earlier, the most important are the economic ones. In the case of Piteşti, the problems concerning the migration process are treated in close relation with the production forces and the urbanization process within the city. An important role for the migration process was the status of county seat, the social-economic and cultural structures existing within the city meanwhile it represented a pole of attraction for Argeş county. These elements determined and motivated commuting and the influx of population.

Figure 7 highlights both the change in the balance of homes in the locality (the difference between the number of arrivals in the locality and the number of departures) and the change in the balance of residence (the difference between the number of residential arrivals and the number of residential departures). Thus, during the analyzed period, the change in the balance of homes presents

ADELIN DANIEL NEDELEA and ANA PUNCIOIU

a decrease from 17,862, value recorded in 1990, to -1,068 in 2009. The decrease is mainly due to the growth of house pricing, the low buy value, the reduction of the main industrial domains - influencing the decrease in the number of immigrants, and lately, population migration towards the surrounding settlements and the appearance of residential neighbourhoods.

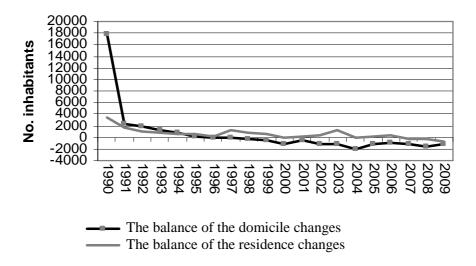


Figure 7. Migration dynamics of the population in Pitești city between 1990 and 2009

The balance of change of residence generally presents a descending trend between 1990 and 2009, with small periods of growth which did not have a major influence on the general trend.

For a more ample analysis concerning the migration dynamics of the population from the city of Piteşti, a graphic was made (Figure 8), which highlights the positive and negative evolution of the population of Piteşti and its surrounding settlements.

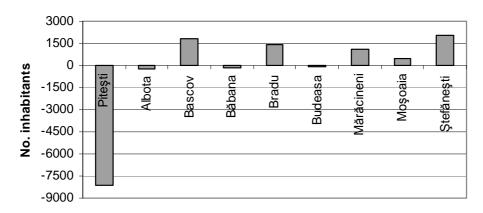


Figure 8. The dynamics of the population of Piteşti and its surrounding localities for the period 1990 – 2009

Thus, it can be observed that in three surrounding settlements, the population records a negative value up to -220 inhabitants for the commune of Albota, while in the other settlements the values are positive, the highest growth belonging to the town of \$\forall \text{tefăneşti}\$ (2,015 inhabitants).

The city of Piteşti records a negative value of -8,153 inhabitants and the surrounding settlements a positive value of 6,477 inhabitants. These values are available for the period between 1990 and 2009, but if we compare the population dynamics in Piteşti and its surrounding settlements from 2001 to 2009 (2001 represents the year when a fast decrease in population took place, from

186,238 inhabitants in 2001 to 166,673 inhabitants in 2009), we can clearly see a major change in the sense that the number of people leaving Piteşti is 19,601 inhabitants and the number of people moving to the surrounding settlements is 6,923 inhabitants. The difference of 12,678 inhabitants is due to migration of the population outside the country but also to the surrounding settlements.

In order to observe what the people living in the city of Piteşti think about several problems which the city faces, we have applied a questionnaire based on 20 questions and a question referred to the destination of the inhabitants that left the city after 2001 (*Piteşti population decline after 2001 occurred due to migration to: a) foreign countries, b) neighbouring localities, c) other places*). The questionnaire was applied on a sample of 100 subjects and based their answers, we have realized a graphic (Figure 9) which illustrates the opinion of those who were questioned.

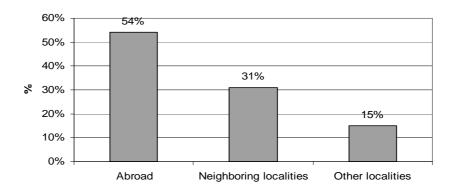


Figure 9. The migrating people of the city of Piteşti after 2001

It is noted that most of the responses, namely 54%, are allocated to people leaving abroad, followed by migration to the neighbouring localities (31%) and travel to other cities (15%). Restructuring of the local industry is behind the departure of people abroad, while resettlement in the neighbouring villages and construction of private dwellings in these locations is mainly due to the city's congestion.

INTERPRETATION OF RESULTS

The results of the present study indicate the existence of three periods in the evolution of population: a growth period (1990-1997), a stagnation period (1997-2001) and a period of decrease (2001-2009). The factors that had an influence during each period are also mentioned: the low value of the natural balance was influenced by the reduced birth rates in the first period, followed by a recovery after 2001, increasing mortality rates, while the development process of industrialization that took place before 1990 continued up to 1997 by attracting people. After 1997, a brief period of economic relief followed, leading to the restructuring of industries and the closure of some units, thereby affecting the employees and increasing the migration process both abroad and towards the people's native villages.

CONCLUSIONS

Based on the results of the current study, it can be concluded that the population decline recorded at national level can be found at the level of the city of Piteşti as well. The decrease is primarily due to population migration abroad in search of a job due to industry restructuring and the decrease in the number of employees, but also to the migration to the surrounding settlements and the building of houses in these places, resulted in the creation of the so-called residential neighbourhoods. Another aspect to note is the decrease in the number of the young and the elderly population, thus influencing the process of population aging.

A solution to stop the migration of population is the industrial recovery, which would create new jobs, a measure to be taken as soon as possible.

ADELIN DANIEL NEDELEA and ANA PUNCIOIU

ACKNOWLEDGMENTS

This work was funded by the project "Financial support for doctoral studies on the complexity of nature, environment and human society", contract no. POSDRU/6/1.5/S/24.

REFERENCES

- CIOCODEICA, V. (2007), *Demografie și sociologia populației* [Demography and Sociology of Population], Editura Universitas, Petroșani.
- GRECEANU, EUGENIA (1982), *Ansamblul urban medieval Pitești* [Medieval Urban Ensemble of Pitești], Editura Muzeului Național de Istorie, București.
- MUREȘAN, CORNELIA (2005), *Introducere în demografie* [Introduction to Demography], Editura Presa Universitară Clujeană, Cluj-Napoca.
- NEDELEA, A. (2009), Considerații privind evoluția populației orașului Pitești de la atestare și până în prezent [Considerations on the Evolution of Population in the City of Pitești from the First Mention until Today], in: Abstract proceedings, The First International Symposium of Geography Landscapes: Perception, Knowledge, Awareness and Action, București.
- POPA, P., DICU, P., VOINESCU S. (1988), *Istoria Municipiului Pitești* [History of the City of Pitești], Editura Academiei Române, București.
- POŞIRCĂ, ROZICA (2004), Resursele de apă în Câmpia Înaltă a Piteştiului şi alimentarea cu apă a municipiului Piteşti [Water Resources in the High Plain of Piteşti and the Water Supply for the City of Piteşti], Editura Independența Economică, Piteşti.
- ROŞCA, D. (2007), *Introducere în sociologia populației și demografie* [Introduction to Sociology and Demography], 4th edition, Editura Fundației România de Mâine, București.
- TREBICI, V. (1979), Demografia [Demography], Editura Științifică și Enciclopedică, București.
- *** (1992, 2009), *Planul Urbanistic General* [General Urban Plan].
- *** (2004), Agenda Locala 21 Planul Local de Dezvoltare Durabilă a Municipiului Pitești [Local Agenda 21 Local Plan for Sustainable Development in the City of Pitești].
- *** (2007), *Planul Integrat de Dezvoltare Urbană a Municipiului Pitești* [The Integrated Urban Development Plan for the City of Pitești].