

CHANGES INSIDE THE AGE – GENDER STRUCTURE OF POPULATION WITHIN THE TRASCĂU MOUNTAINS AREA

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Abstract. The transformations taken place since 1989 both on a political and on an economical level have influenced the demographical structure of the population of Trascău Mountains. The economic and social decline has emphasized the depopulation process, disrupted the balance inside the age-gender structure reducing the natural increase rate and thus reducing the life quality and the life expectancy in this region. In the analysed period the demographic ageing of the rural population has reached the highest levels therefore today each forth person from the Trascău Mountains is elderly (≥ 60 years old).

The age-gender structure is of outmost importance, with remarkable demographical and economic consequences, and its detailed analysis allows the author to estimate the present and future potential of the structure's progressive tendencies, as well as the differences existing within the territory. The age-gender structure of the population is the result of a number of factors that varied in time, and that is strictly conditioned by the natural growth of the population and bears the mark of the events that took place prior to realising this analysis.

Key words: Trascău Mountains, demographic ageing, demographic ageing index, demographic dependency index

Introduction

The collapse of communism has lead to a series of political and economic changes, but the necessary demographical balance hasn't been re-established in the 18 years that past since. In the case of the Trascău Mountains population the situation is the same; its number continues to decrease as an effect of the stronger demographic ageing and a natural growth phenomena (low birth rates and increased death rates), on a background of a diminishing rural-urban migration phenomenon and a slightly urban-rural migration. For the administrative territorial units from the Trascău Mountains the average birth rate continued to decrease from 10.3‰ in 1992 at 6.9‰ in 2007, while the death rate grew from 17.9‰ in 1992 at 18.9‰ in 2007. The numeric evolution of the population of the analysed area is similar to the one at national level. We can't sustain that this area has evolved atypically. In the difficult demographic

competition with the city, the village of Trascău Mountains has generally lost its vigour.

The dynamic of the demographic processes caused changes in the age-gender structure of the population in the sense that the percentage of one age group increased and another one decreased. The corroborate analysis of the age-gender structure of the population points out the fact that the higher percentage of women is not specific to all age groups.

The tendency of the elderly population to increase in numbers is known as demographic ageing, phenomena that mustn't be confused with the individual biologic ageing of each person. Conventionally we say that a population is young when the percentage of the elderly population group is lower than 7% when it has between 7% and 12% they say that that demographic ageing process is underway and at values higher than 12% feature a population that is demographically aged.

Age – gender structure of the population

Age is a very important element within the age-gender structure of the population revealing important differences at all levels of analysis but especially on some basic indicators of the population dynamics like fertility, nuptiality, mortality, etc., having in the same time multiple consequences on the society and economy developing.

The population age-gender structure was analyzed using the normal intervals: 0-4 years, 5-9 years etc., and in order to determine the labour force resources and occupied population the following groups were used: 0-14 years for the young population, 15-59 for the adult population, 60 years and over for the elderly population. Taking into consideration these large groups I analyzed the evolution of the population both at the mountain area level and at the village levels for the 1977, 1992 and 2002 censes.

The political and economic changes that took place after 1998 have influenced the demographical structure of the population from Trascău Mountains. The economic and social decline has accentuated the rural depopulation process, the demographic imbalance of the age-gender groups, reducing the natural increase rate and finally reducing the quality of life and the life expectancy. In this period the rural demographic ageing reached the highest levels so that today one of every fourth person from Trascău Mountains is elderly (≥ 60 years).

On analyzing each settlement we can observe that between 1977 and 2002 (fig. no. 1) the youth group has decreased in numbers and the elderly population has increased.

The age group between 0 and 14 years old registered a constant decrease from 24.2% in 1977

to 15,1% in 2002. As for the settlements located in the mountainous area in 1997 this group had shares between 35,4% (Floreşti) and 12,2% (Isca), with more than 25% in 34 villages, and in 1992 a single settlement had a percentage higher than 25% (32,8%, Valea Făgetului), for a number of six settlements this population group is not even present (Borzeşti, Boţani, Cheia, Isca and Rachiş). In 2002 only 2 settlements had values over 25% (Podu lui Paul, 27,6% and Tecşeşti, 25,8%), and in other 5 the youth group is not present (Cheia, Izvoarele, Măgura Ierii, Rachiş, Zăgriş). The decrease of this group's percentage within the mountainous area population is caused by the migration of the young population, able to reproduce, thus explaining the constant decrease of the birth rate in the same period of time.

Within the 15 – 59 age group manifests the same general tendency of constant decrease during the entire analyzed time period. Thus, from a percentage of 58,4% for the mountainous area in 1997 in 2002 this group registered 56,9%. In 1977 the adult group had shares lower than 50% in 9 settlements, in 16 settlements in 1992 and in 2002 in 28 settlements. This is the age group with the highest percentage out of all groups and suffered smaller changes with the passing of time because in spite of the increased migration phenomena the population number was compensated by the numbers of youth population that had important shares in the years prior to 1977.

The 60 years and over age groups registered a constant increase in the analyzed period from 17,4% (in 1977) to 28% (in 2002), meaning an increase of 10,6% in 25 years. The increase rate of the elderly population percentage exceeded the decrease rate of the youth population which in the same interval

reduced with only 9,1%. In 1977 the elderly population group had values over 25% in 5 settlements, in 1992 in 54 settlements and in 2002 in 69 settlements which reveals an intense demographic ageing process taking place.

The demographic ageing process is more obvious in the small and very small villages and has as a long term effect the disappearance of a series of villages. They have demographic behaviour similar to the less favourable areas characterized by advanced demographic ageing. The elderly population, that has the most important share, raises numerous problems regarding the necessity for social protection measures specific for this age,

difficult to accomplish due to the advanced degree of poverty of these villages.

Analyzing the evolution of the feminine population age groups one observe a decrease for the 0-14 and 15-59 years old groups, while for the ≥ 60 years group registered a constant increase. Thus during the analyzed period the values of the females from the young population group represented between 11.8% and 7.5% from the total population, decreasing all the time, out of the adult population percentage reduced from 29.1% in 1977 to 27.6% in 2002 and within the elderly population the feminine group had increasing values from 9.5% in 1997 to 15.8% in 2002 (table no. 1).

Table no. 1 The age-gender structure (1977, 1992, and 2002)

Groups	Total population						Total feminine population					
	1977		1992		2002		1977		1992		2002	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
0-14 years	10476	24,2	5798	16,6	4901	15,1	5086	11,8	2806	8,0	2415	7,5
15-59 years	25344	58,4	20022	57,4	18444	56,9	12548	29,1	9488	27,3	8906	27,6
60 years and over	7557	17,4	9040	26	9083	28	4067	9,5	4919	14,1	5106	15,8

These changes in the population age structure on the overall decrease of population number in this area are due to the dynamic of the birth rates – decreasing, death rates – increasing and migration – fluctuating.

Analyzing the population dynamic over time and correlating it with the age structure we can observe an obvious ageing phenomenon that raises a series of alarming signals both about the population vitality index and about the economic and social problems that may occur in the future in Trascău Mountains.

The demographic ageing factor

The demographic ageing factor is used to emphasize the demographic aging process and

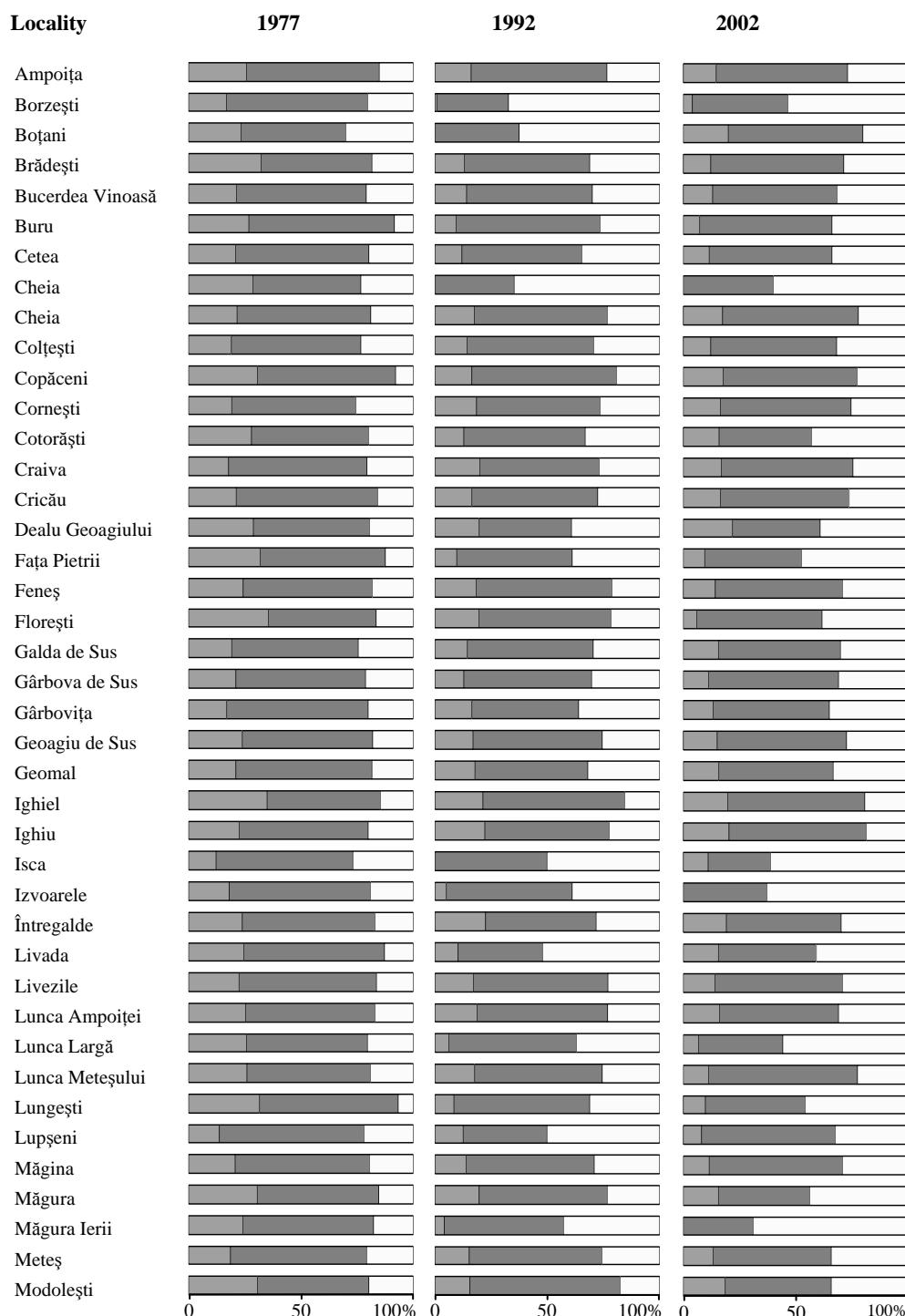
represents the ratio between the elderly population (60 years old and over) and the young population (0-14 years old). The population from the mountainous area had average value of this index increasing from 0.72 in 1977 to 1.55 in 1992 and 1.9 in 2002, which demonstrates that the population is going through a constant demographic ageing process. These values exceed the overall rural average index (0.71 in 1992 and 1.03 in 2002) registering an increase of over 2.5 times in 25 years.

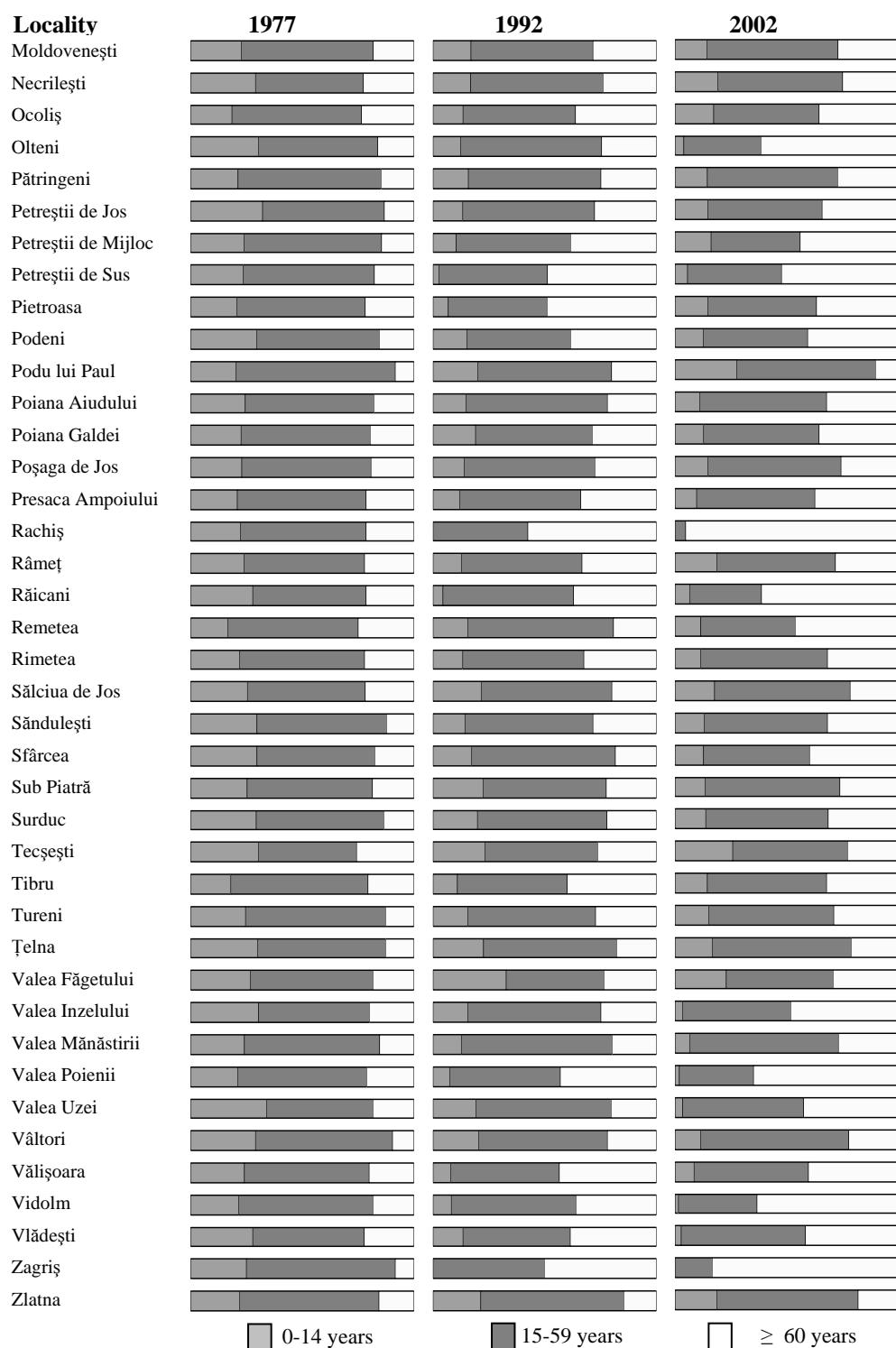
In 2002 the values for each locality oscillated between 0.0 – in the case of the villages where the youth group is not present (Cheia, Izvoarele, Măgura Ierii, Rachiș, Zăgrîș), and 40.5 in Vidolm. Depending on the values that the demographic ageing index may take the villages were divided into 5 categories (fig. no. 2).

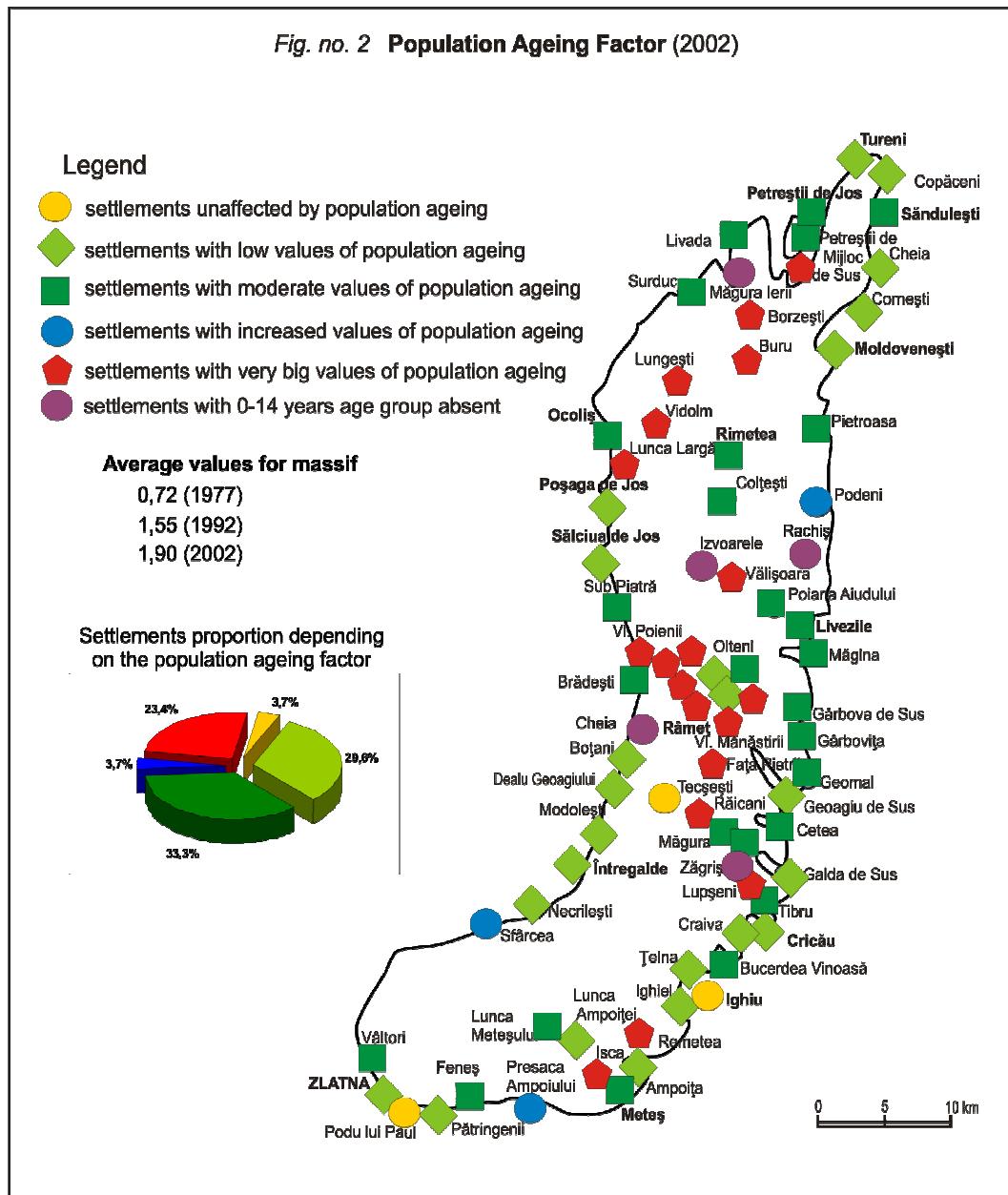
The villages where this index is 0.0 have a population that is massively aged from the demographical point of view. One can observe that

in 27 villages the demographic ageing process is intense.

**Fig. no. 1 Population structure by age groups (1977-2002)
(1977-2002)**







The demographic dependency ratio

The obvious population demographic ageing process influences the demographic dependency ratio which is calculated as a ratio between the population with ages between *0-14 years* and ≥ 60 years and the adult population with ages between *15-59 years*. The calculus formula is:

$$R_d = (P_{0-14 \text{ years}} + P_{60 \text{ years and over}}) / P_{15-59 \text{ years}} \times 1000.$$

For the mountainous area the number of youth and elderly population per 1 000 adult persons

increased from 711‰ in 1977, to 741‰, in 1992 and 758‰ in 2002, this phenomenon is due to the decrease of the youth population, increase of the elderly population associated with the decrease of the adult population number (fig. no. 3).

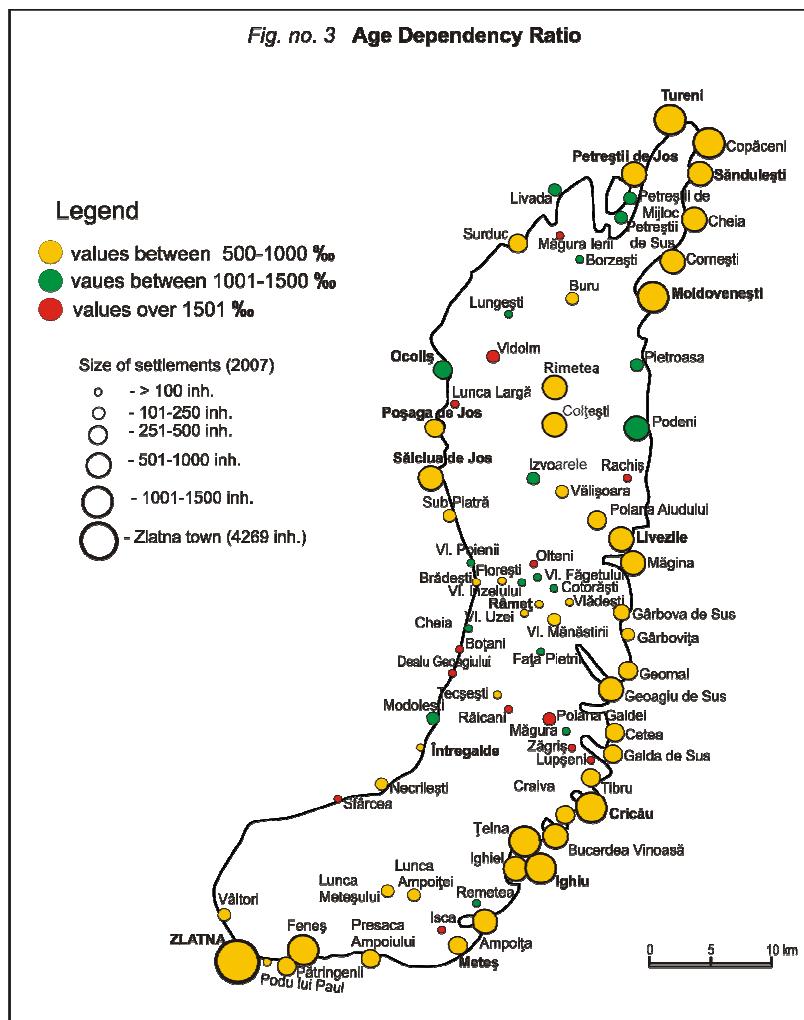
In the case of individual villages the extreme values oscillated in 2002 between 496‰ (Valea Mănăstirii) and 2.600‰ (Isca), and in Rachiș and Zăgriș the youth and adult population groups were absent.

Depending on the values of the demographic dependency ratio the villages were divided as follows:

- Values between 496-1.000% are met in 53 villages (65.4%);
- Values between 1.001-1.500% are met in 15 villages (18.5%);

- Values between 1.501% are met in 15 villages (18.5%), very small villages with less than 100 inhabitants where the elderly population represents more than 30% from the total population number.

Thus the biggest pressure is brought to bear on the labour force due to the high percentage of the inactive population.



The strong rural degree of the area tends to conserve the traditional character to which the work migration phenomenon of the young towards either the nearby cities or abroad is added.

Eliminating the legislative restrictions regarding the population establishing in a big city has contributed to the acceleration of the rural

demographic ageing process, and causing a general decrease of the fertility rate.

Another characteristic is given by the return of the elderly population in the rural areas as a consequence of unemployment from the large cities or from their outskirts, but also from the rural settlements with industrial functions; another

consequence of the pensions off especially from the extracting industry as well as a direct effect of the individual property rights over the landed fond.

Thus, the age-gender population structure from the mountainous area and the adjunctive administrative units' presents in most cases a tendency towards demographic decline shown by a continuous decreasing young population, the birth

rates values after 1990 were half of what they were in the 70th. This regressive dynamic has two cause: an endogenous one namely its traditional demographic pattern and an exogenous one due to the elimination of the legislative provisions from the communist era that encourages birth as opposed to family planning.

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