PRACE NAUKOWE UNIWERSYTETU EKONOMICZNEGO WE WROCŁAWIU
Nr 3(1203) 2008
Gospodarka lokalna i regionalna w teorii i praktyce

Petr Kačírek
University of J. E. Purkyně in Ústí nad Labem

POPULATION DEVELOPMENT IN THE ÚSTÍ REGION (MAIN TRENDS AND DEMOGRAPHIC AGEING)

1. Introduction

Demographic ageing is nowadays the most discussed topic in the population development of the majority of demographically developed countries. Demography distinguishes between ageing at the top of an age pyramid and on its base. Ageing at the top of the age pyramid is caused by prolonging human life and that leads to increasing live expectancy to see the rise of percentage of old and very old people in the population. Ageing on the base of the age pyramid is caused by decreasing number of born that leads to reduction of the children in the population.

In the Czech Republic demographic reproduction of the population has approximately during twenty years (so during relatively short period) changed significantly. It will result in gradual acceleration of the process of demographic ageing in the following decades of 21st century. As the main tendency could be seen from the point of view of ageing gradual increasing of life expectancy and decreasing of number of born. From the point view of demographically developed countries it is nothing extraordinary because the population of the Czech Republic only copies with delay similar development in the countries of western, northern and southern Europe in last decades. It is continuation of a demographic revolution or its next phase called the second demographic transition. The main characteristics of the second demographic transition are decrease of total fertility in the long term under 2.1 of a child per a woman, in other words under the level of pure reproduction. Decrease of fertility is accompanied by the growth of a mothers' age during the birth and during the first birth and the growth of children born outside a mar-

riage. (According to the evidence about one third of children is born outside a marriage in the Czech Republic, but children born to pairs with no formal bond are counted to this number as well.)

2. Age structure

A long-term process of demographic ageing is proceeding in the majority of the countries in Europe including the Czech Republic. In the 90s it was characteristic for the Czech Republic that the process of ageing speeded up and this was caused particularly by decrease of the number of born and shift of plentifully stronger generations born during the Second World War, after the War and in the half of the 70s to a higher age. Changes in mortality had two effects on the age structure and age of the society. On one hand they strengthened the process of ageing by decreasing mortality intensity in the middle and the higher age, on the other hand however decreasing of mortality rejuvenated the population. This was caused by the decreasing number in children mortality where higher and higher number of born children lived longer than higher intensity of mortality after the birth, and subsequently they lived to their reproduction age. This process of rejuvenation of the population was not dramatic due to decreasing intensity of fertility, but still it is necessary to point out its existence. Ústí region has younger population than the Czech Republic and the position of the region in the Czech Republic is in the long term relatively steady from the point of view of an age structure. Younger age structure is a result of long-term population development in the last 100 years. It is influenced by migration of the population (e.g. displacement of the population after the Second World War and subsequent migration particularly of younger population from inland and from Slovakia), natural increase (higher number of population in reproduction age with increasing subpopulation that have not gone through demographic revolution and therefore through higher level of fertility), social structure of the population that caused its worse death rate, geopolitical position of the region, economic development and structure of economy and so on.

One of the indicators of an age structure is an "average age" that could serve as a tool for measuring the process of demographic ageing and for comparison of age by different populations. It is an arithmetic average of number of years of life that were lived by members of the given population, this average is made from the number of the living population in the individual units of age. Graph number 1 presents this indicator values for the Czech Republic and Ústí region. In the given territorial units a process of demographic ageing is evident from the graph showing the period between 1991 and 2005. The population of the Czech Republic is older than the population of Ústí region and their mutual position has not changed. This is caused by similar reaction of the population to political and economic conditions after 1989 that subsequently influences various areas of life of both populations and leads also to similar reproduction behaviour patterns where the differences are

given predominantly by the initial structure of the population. Recent average age in Ústí region (39 years) is only the base for further population development and therefore also for development of the age structure. The process of ageing will continue not even in the Czech Republic but also in the majority of demographically (and at the same time economically) developed European countries. This process won't avoid Ústí region and it is necessary to take it into consideration during contemplation and prognoses in which the age structure of the population plays its role. From the point of view of demographic theories we can assume from the long term perspective that the interregional differences will decrease and not only in the age structure but also in other demographic processes and therefore it will cause convergence of reproduction behaviour of the population in Ústí region and the Czech Republic.

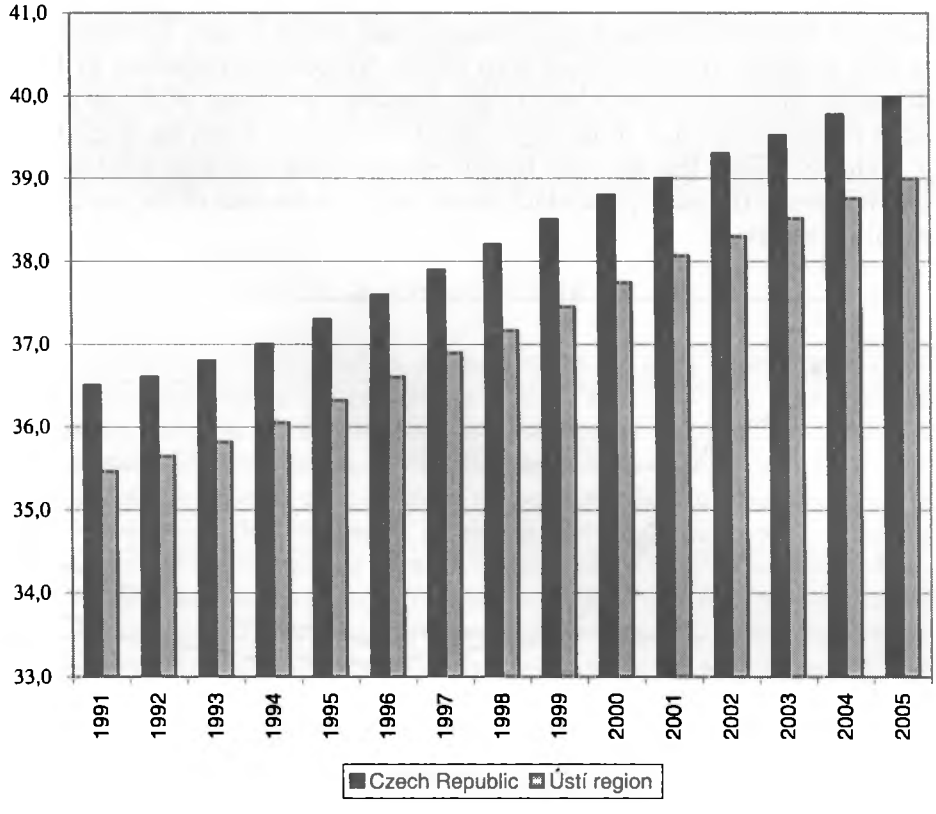

Fig. 1. Average age
Source: Data from the Czech Statistical Office.

Demographic ageing will distinctively influence particularly economic and social areas. Pension system, question of increasing of the limit for retirement and the

system of the height of various social benefits funded from the state budget will be necessary to solve predominantly in the national level, from the regional and local point of view it is mainly the question of expenses on health and social care of steadily increasing number of old and very old people.

3. Fertility

Phenomenon of annual decrease of the number of born babies could be noticed within population development of the Czech Republic since 80s of the last century. An outstanding turning point of the fertility in the Czech Republic was the first half of 90s when it happened for the first time in history of statistical observation that the number of born decreased to less than 90 thousand born alive. This was caused by above pointed change of political situation, new economic opportunities but also new social situation of many people connected not only with new opportunities but also new dangers. The number of born babies distinctively decreases in 1989 in Ústí region similarly to the whole Czech Republic. Decrease of fertility had its peak at the end of 90s and at the beginning of 21st century. From the graph number 2 it is clearly visible that the total fertility was decreasing in both territorial units approximately in the same pace which shows similar behaviour of the population in the fertility sphere.

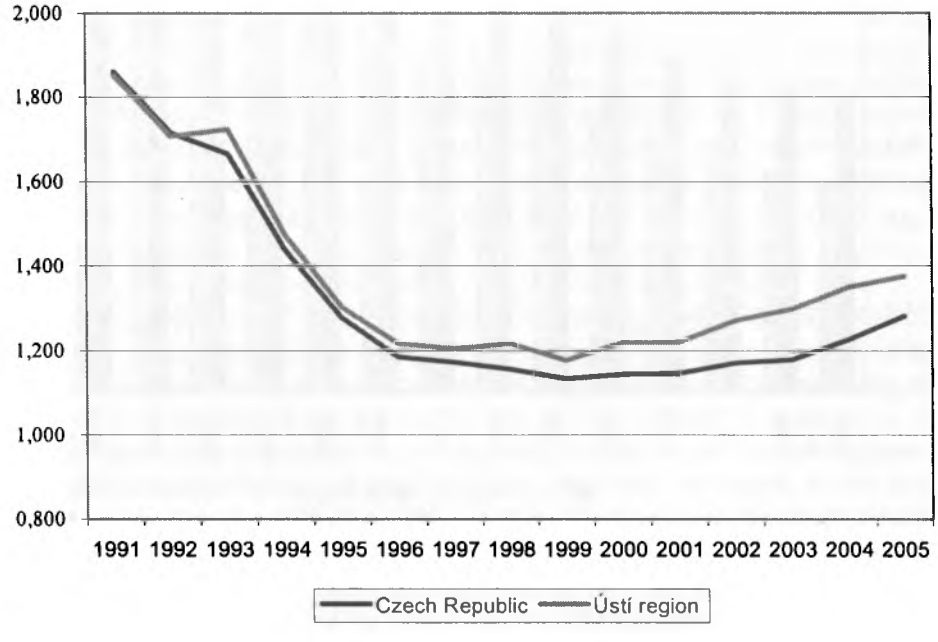

Fig. 2. Total fertility rate

Source: Data from the Czech Statistical Office.

At the same time an average age of mothers during the birth and during the first birth increased as well as the number of born outside a marriage. The number of born outside a marriage is however influenced by increasing interest, particularly of young people, in modern form of unofficial living together. According to the results of the last census this form of living together is more spread in Ústí region than average and at the same time greater number of children are not born within marriage. Further difference in the structure of fertility is a higher age of mothers during the first birth in the Czech Republic and earlier realization of pent-up fertility of populationally strong classes of 70s in Ústí region. Essential change from the point of view of reproduction is by both populations the transfer of the age of maximal fertility intensity from the age group of women between 20 and 24 years to the age group 25-29 years and distinctive increasing of involvement of the age group 30-34 years (in Ústí region this age group had in 2005 primacy over the age group 20-24 years). The beginning of 21st century is characteristic by increasing total fertility in connection with transfer of populationally stronger classes of women into the age of maximal fertility intensity. Even with the increasing number of born babies it is evident from generation numbers that a part of pent-up fertility of generation of women in interest remains unrealized. This situation is however typical for the majority of the countries going through the second demographic transition.

4. Abortion rate

Decreasing intensity of abortion rate belongs to the most important changes of reproduction behaviour of the population of the Czech Republic after 1989. It is mainly about the induced abortion rate that all together decreased to one third of the initial state at the beginning of 90s. The cause of so distinct decrease could be seen in spreading of new contraception methods and in the change of political-economic conditions that resulted in spreading of a new value system in the society. The cause of the decreasing number of miscarriage is to be searched rather in decreasing fertility intensity. From the values of total abortion rate in the graph number 3 it is apparent that the abortion rate in Ústí region is more intense than in the Czech Republic. Although the difference was maintained also in Ústí region the intensity of abortion rate decreased very distinctly in the last 15 years. From the point of view of fertility structure changes a common characteristic is the decreasing number of abortions in all age groups of women (e. g. in the age group 20-24 years the abortion rate decreased between 1992 and 2005 from 2893 to 906), decreasing abortion rate of single, married and divorced women and decreasing number of termination of pregnancy in all placings (the most abortions were on the first and on the second place).

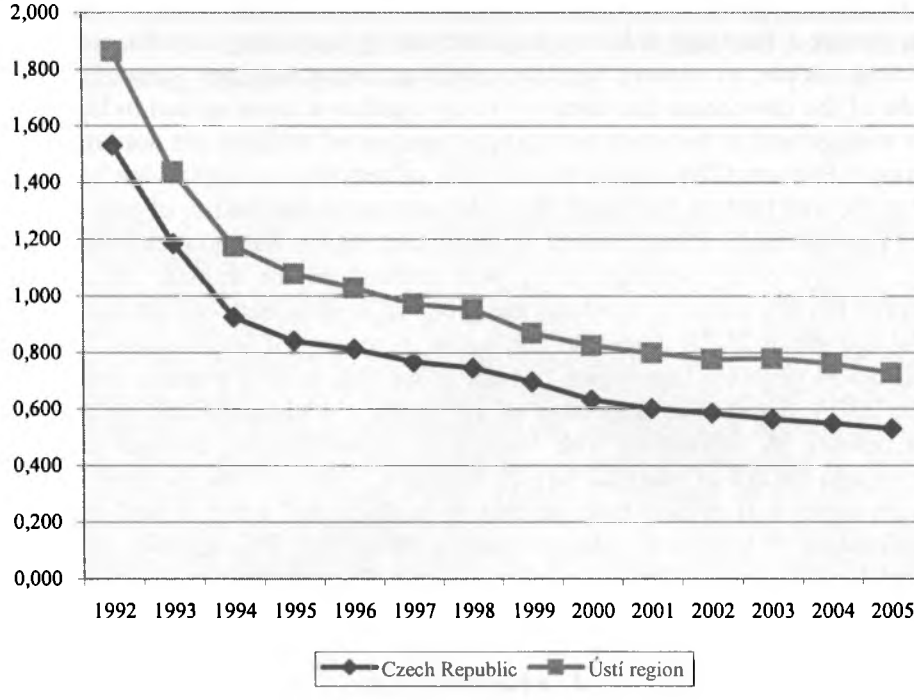

Fig. 3. Total abortion rate
Source: Data from the Czech Statistical Office.

5. Nuptiality and divorce rate

A relatively important change from the point of view of the overall intensity of marriage rate and its structure in 90s and at the beginning of 21st century is an increasing age by the first marriage and a transfer of maximal intensity of marriage rate from the age group 20-24 years to the group 25-29 years that is connected to this.

The number of ruined officially bound marriages falling to 1000 inhabitants is in Ústí higher in the period between 1991 and 2005 apart from the small exceptions region. The exception was the year 1999 when rough level of divorce rate in Ústí region (2, 2775) dropped under the value valid for the Czech Republic (2, 3006). It happened due to a decreasing number of handled requests for divorce in 1999 almost into a half of a number in 1998 in connection with the acceptance of a law amendment about family and temporary decreasing of the number of requests for divorce being handled by courts. From the point of view of divorce structure similar changes occur in the Czech Republic and in Ústí region. Increasing average age of divorcing married couples is first of all a consequence of increasing age of entering into a marriage because the intensity of divorce rate depends on the length of the marriage.

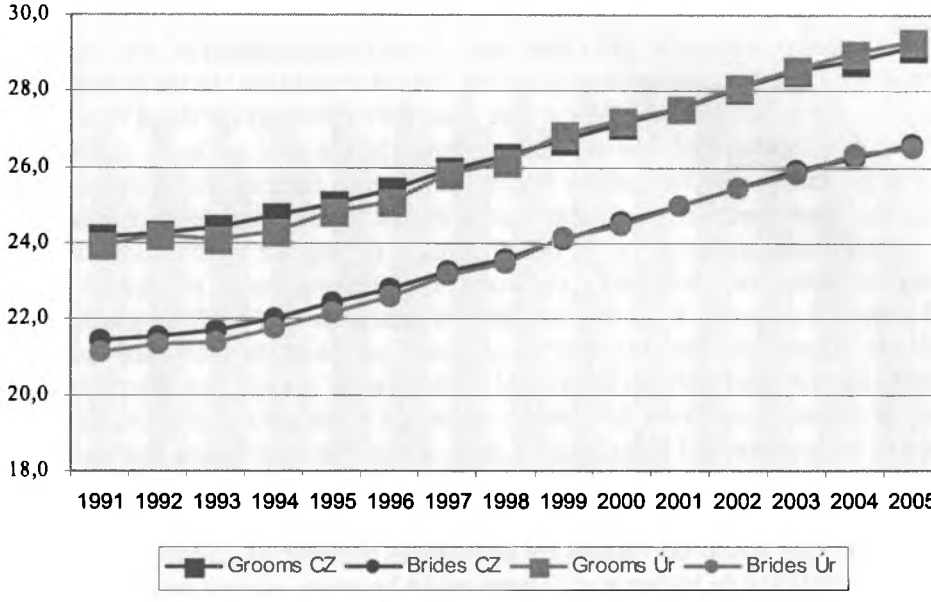

Fig. 4. Average age at first marriage
Source: Data from the Czech Statistical Office.

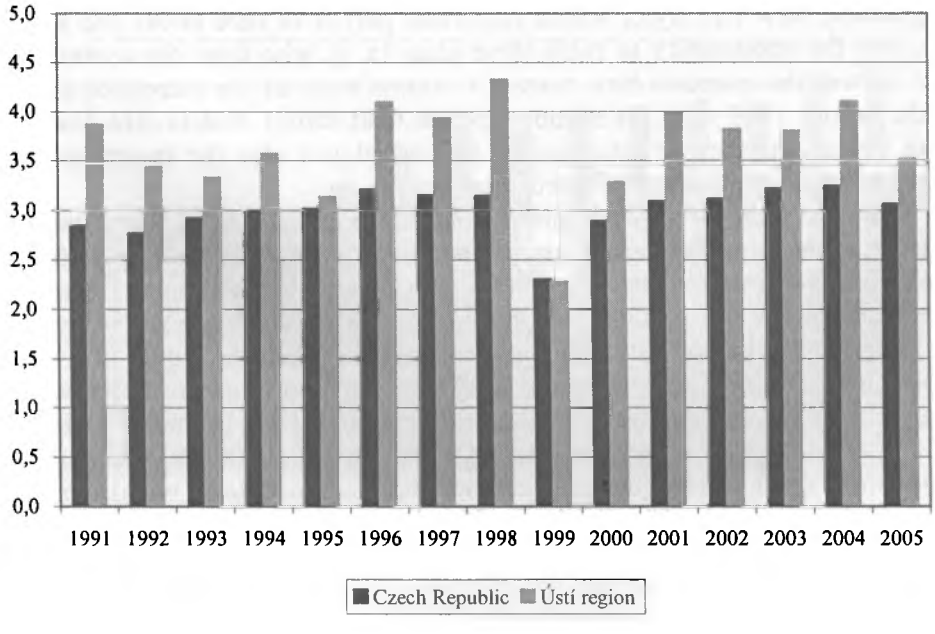

Fig. 5. Crude divorce rate
Source: Data from the Czech Statistical Office.

6. Mortality

Changes in values of life expectancy since the beginning of 90s prove positive demographic development after the Velvet revolution. In the Czech Republic after the Second World War it was possible to distinguish three main periods of the development of this indicator values. In the first period – during 50s – life expectancy was increasing in similar pace as in west European countries. This development was particularly contributed to measurements in health care. All these measurements (e. g. establishment of regular vaccination) have distinct influence on decreasing of mortality, predominantly children mortality. The second period – from 60s to 80s – is characteristic by falling behind west Europe where the life expectancy of men and women increased during the whole period relatively monotonously (because of decreasing mortality mainly due to blood circulation diseases) and in the Czech Republic increased very slowly by women and stagnated by men. In middle and higher age by men life expectancy was in some age groups even higher in 60s than in 80s. In the third period – after 1989 – life expectance is increasing more noticeably by both sexes and this could be caused by decreasing number of children mortality, as well as mortality in higher age. There could be more causes: new medicaments and medical technologies and methods in health care, much food is accessible during the whole year and strictly speaking without any limits for every one, the change of social situation brought also new approach to life aims of the population, new life style, whose important part is to care about one's health but also the opportunity to fulfil these aims (e. g. who from the eyewitnesses can answer the question how many fit centres were in the surrounding of his home before 1989 with the number greater than zero?), that is also connected with better approach to information. Its part played also the improvement of environment often in very affected areas, and so on.

From the point of view of interregional differences it is apparent that there exists a connection between social-economical structure of the population and the position of a region according to life expectancy. In Ústí region in comparison with the Czech Republic (see graphs number 6 and 7) a positive tendency to increasing indicator values is apparent in both territorial units. Life expectancy in Ústí region belongs in the long term by both sexes to the smallest in the republic. From the point of view of the causes of death in middle and higher age it is a consequence of overmortality of the population in the Ústí region due to the main death causes (blood circulation deseases, neoplasm but also external causes.) The primary reason of this unflattering position of Ústí region could be seen particularly in the social structure of its inhabitants.

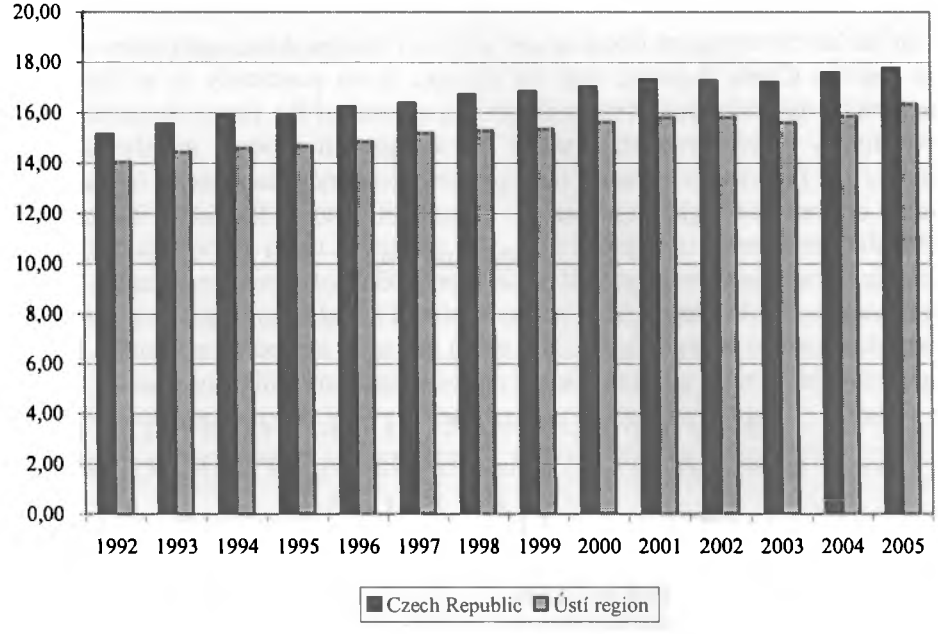

Fig. 6. Life expectancy in the age of 60 – men
Source: Data from the Czech Statistical Office.

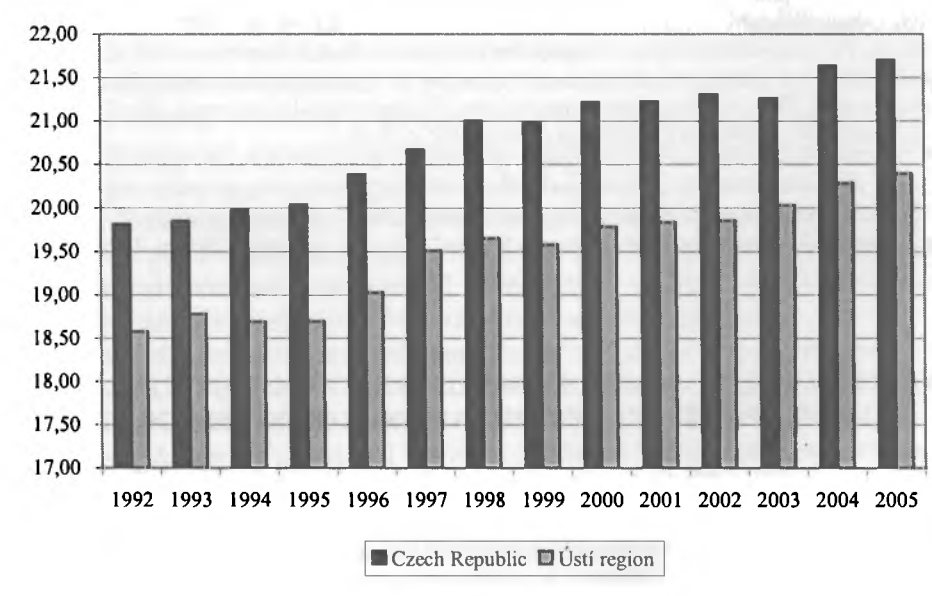

Fig. 7. Life expectancy in the age of 60 – women
Source: Data from the Czech Statistical Office.

7. Conclusion

In the last twenty years it is characteristic for demographic development of Ústí region and the Czech Republic that the changes occur practically in all the parts of demographic reproduction. Recent population growth of the Czech Republic is given especially by positive migration saldo. Natural growth depends mainly on the age structure and the transfer between the age units, temporary decrease or increase in the number of born and slight improvement of mortality rate. In the future it could be expected that the process of population ageing will speed up in all regions of the Czech Republic. From the short-term and middle-term point of view demographic development reacts to the development of economical and social area because various steps in these two areas can (mainly in the short term) influence a population climate. From the long-term point of view a reaction in the opposite direction will be necessary.

Literature

ČSÚ, *Populační vývoj v krajích ČR*, Praha 2006.

ČSÚ, *Projekce obyvatelstva České republiky do roku 2050*, CD, 2004.

Hampl M. a kol., *Geografická organizace společnosti a transformační procesy* v ČR, Přírodovědecká fakulta UK, Praha, str 395.

Population Development in the Czech Republic 1990-2002, ed. Z. Pavlík, Department of Demography and Geodemography, Faculty of Science, Charles University in Prague, 2003.

Rabušic L., *Česká společnost stárne*, Masarykova univerzita v Brně, Georgetown 1995.

Šašek M., *Population Structure and Regional Development. Regional Interests in the Ústí nad Labem Region and Their Holders*, Proceedings of the 2nd International Conference, Faculty of Social and Economic Studies UJEP, Ústí nad Labem 2002, p. 9-14.

Šašek M., *The Educational Structure of Migrants in the Ústí n. L. Region and in the Czech Republic in the Years 1996-2001. Social and Economic Development and Regional Politics in Ústí Region in Years 2000-2004 (First Election Period of Regional Executive Bodies)*, Proceedings of the 3rd International Conference, Faculty of Social and Economic Studies UJEP, Ústí nad Labem 2003, p. 7-26.

PROCESY ROZWOJOWE LUDNOŚCI W REGIONIE ÚSTÍ (GŁÓWNE TRENDY I PROBLEM DEMOGRAFICZNEGO STARZENIA SIĘ)

Streszczenie

Niniejsza praca zajmuje się wybranymi tendencjami rozwoju demograficznego w regionie Ústí w kontekście rozwoju Republiki Czech. W odniesieniu do drugiego, demograficznego okresu przejściowego oraz demograficznego starzenia się analizie poddane zostały problemy rozwoju, przyczyn i konsekwencji zmian w strukturze wiekowej ludności, a także zmian w zachowaniach mieszkańców.