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Population in the districts of Slovakia

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The analytical publication appraises population development in the districts of the Slovak Republic for period 1996-2005. It evaluates all the aspects of reproductive process and presents the regional demographic typology of districts.

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No language redaction has been made.

Contents

Introduction

The publication „Population in the districts of Slovakia 2005“ is the Demographic Research Centre's follow-up publication focused on the analysis of regional demographic development. Relatively large regional differences characterize also the demographic development. The aim of the publication is to point out these differences, to reveal new ones or to confirm known areas where the demographic development is complicated (high mortality, high abortion, over mature age structure, threat of depopulation enclaves formation, etc.) and where targeted measures are needed to influence it. Concurrently, the aspiration is to show how the changes in reproductive behaviour of the SR's population are being presented in particular regions and to which extent individual regions are similar or different to each other.

The content of the publication is divided into 9 chapters, i.e. each demographic process or structure has got one chapter. The introduction of each chapter is focused on brief characteristic of a given process or structure at the SR level, which is followed by a detailed analysis of selected characteristics at the level of districts. The conclusion of publication constitutes a synthesizing chapter, which puts an overall picture of demographic development in the SR districts over the last 10 year. The text part is supplemented by maps and graphs.

All data used in the analysis comes from the sources of the Statistical Office of the SR, the Ministry of Interior, and the Central Office of Labour, Social Affairs and Family, then from the Czech Statistical Office and from the Ministry of Labour and Social Affairs of the Czech Republic. Some data mentioned in this publication do not correspond entirely to those in the previous publications. They are only exceptional cases that demanded a specification or modification of computation of the relevant indicator.

The publication was prepared by researchers of the Demographic Research Centre: Viera Pilinská work out the chapters on nuptiality and divorce, Martina Lukáčová the chapters on fertility and abortion, Ján Mészáros the chapter on mortality, and Danuša Jurčová the chapters on migration, increase and number of population and its age structure. Ján Mészáros and Danuša Jurčová prepared the publication methodically and like editors and they participated also in the development of regional typology of districts together with Iveta Stankovičová from the Faculty of Management of the Comenius University.

The publication has been published in a restricted edition in both, Slovak and English versions. It will be distributed among representatives of the highest governing bodies, state administration, research institutions, universities, and media so that the professional and laic public awareness would be ensured in a sufficient measure.

The publication is fully available also on the web page of Demographic Research Centre on the address: www.infostat.sk/vdc .

Methodological notes

The submitted publication analyzes the demographic development at the level of SR districts and complements them with the characteristic of development in the biggest cities – Bratislava and Košice.

With respect to the fact that districts as regional units are very different and not only from the view of the number of population, and moreover marked year-to-year fluctuations appear often in the development of their demographic characteristics, we decided to present the regional analysis a little untraditionally.

We divided the analyzed period of years 1996-2005 into 6 phases (1996-2000, 1997-2001, 1998-2002, 1999-2003, 2000-2004, and 2001-2005). We calculated average values of particular indicators for each phase to eliminate random fluctuations[1]. For that reason when we talk about a value of certain indicator in a given phase – period in the following chapters, we mean its average value for this period[2].

Also from the methodical point of view the publication is worked out in a different way than our previous regional studies. It is based partly on the conventional regional analysis and partly on significantly wider application of statistical methods.

In the processes of natural changes of population we analyzed also trends of indicators in each district. On the basis of these trends we have defined convergent districts for each selected indicator, i.e. the districts where the trend of selected indicator (e.g. total fertility, total nuptiality, life expectancy, etc.) is getting close to the trend of selected values and divergent districts with a development moving away from this trend. We chose – according to the nature of indicator – maximal or minimal values of relevant indicator in individual periods for comparative values. These comparative values were different for each indicator and they are explicitly pointed out in the text. In those cases where the differences of trends were not significant from the statistical viewpoint, we chose the conventional comparative analysis.

The typology of districts according to individual indicators is depicted as cartogram on maps in every chapter. With respect to the trends we plotted only divergent districts on the same maps because of better orientation. They are marked with pointers. From a certain point of view some indicators could have unfavourable (or undesirable) trend in future just in these districts and they have to be pointed out.

On the top of this, the study includes a synthetic chapter, which presents an overall picture of demographic situation in the SR districts in the last period using principal component and cluster analysis. Applying the cluster analysis, we were proceeding in methodological steps as follows: we formed the matrix of input indicators that characterized districts from the view of nuptiality, divorce, fertility, abortion, mortality, and migration. As significant coefficients of correlation emerged among these indicators, such indicators could not have entered the cluster analysis directly. Therefore we by the principal component methods created independent variables called principal components and concurrently we decreased the dimension of task in this way, i.e. we used 3 principal components, which had explained 86.17 % of the total variability of original indicators. These three principal components (the first one expressed mainly the characteristics related to fertility, the second one characterized the mortality process, and the third one migration) formed the inputs of cluster analysis. Applying the hierarchic methods of clustering we learned that the file of 79 districts could be divided into 10 clusters. But from the view of pragmatic analysis the classification of districts into 7 clusters proved to be the most suitable one. We created them by means of non-hierarchic K-mean cluster method.

The result is the regional demographic typology of districts, i.e. seven spatial structures, which are different each other from the view of demographic behaviour (not only from the view of one indicator) and from which every structure includes districts with similar demographic behaviour. The created types of demographic structures are depicted on a map and their attributes are described in the 9th chapter.

[1] Random fluctuations appear mainly in districts with small number of population.

[2] Annual data for individual indicators are available in the publications of the Statistical Office of the SR *Number and change of population 1996-2005* and in the source study *Population change 1996-2004, Population change 2005* (in print).

1. Nuptiality

The close study of nuptiality has a great sense especially in countries where legitimate births comprise the substantial part of reproduction; partly for the deeper knowledge of natural increase process and also for estimates of the future fertility trends. The current nuptiality is a result of interaction of many factors. Among these are economic and social situation, overall population conditions, attitudes and relation of population to the institution of marriage and last but not least the preceding development of nuptiality and divorce. While the first three factors affect rather conditions and the interest to get married, the last factor affects the population structure, i.e. determines the size of population that can enter into marriage at a certain age (determines the size of marriageable population).

Two main features have been characterizing the development of nuptiality in Slovakia during the last ten years: low intensity and continuing increase of mean age at marriage and mean age at first marriage as well. The slump in nuptiality rate from the beginning of 90s started to soften gradually from 1996 onwards. This slightly descending trend was proceeding without noticeable deviations up to year 2001, when the registered number of marriages had reached its historical minimum from the year 1938. Also individual indicators of nuptiality reached its low values in the same year.

From 2002 the nuptiality rate started increasing again. The period of positive nuptiality trend was persisting only to year 2004. In year 2005 the nuptiality decreased again.

The total first marriage rate of men was reaching the value 0.548 in the period of years 1996-2000 in Slovakia. In 2001-2005 it fell to 0.498, but this indicator achieved the lowest value in the period of 1999-2003, when 46 first marriages fell per 100 single men up to 50 years[3] on average. In the case of women the decrease of total first marriage rate was milder - from 0.559 in period 1996-2000 to 0.520 in 2001-2005. There are more causes of decreasing interest in marriage and family life. The instability of economic and social conditions in the process of society transformation impacts on attitudes and behaviour of population. The lack of financially accessible flats for young people with low incomes in the first years of their economic activity is commonly regarded as a serious obstacle of entering into new marriages. On the other hand, the current social conditions permit the growth of individualism and preference for the self-realization in other life domains (in employment, study etc.), which eventually prolongs the period that is necessary for acquisition of input capital for constitution of family. While in 1996-2000 men were getting married as 27 years old on average, in the period of years 2001-2005 already as 29.5 years old. In the same time stages also the mean age at marriage for women – increased from 24.5 to 26.5 years. Due to the level of this indicator Slovakia starts approaching other western European countries. In the case of single betrothed couples, who represent the exposed part of marriageable population, the mean age (at first marriage) has increased by less than two years for both men and women. In the period of 2001 up to 2005 single men were entering into marriage as 27.6 years old on average and single women as 25 years old. The proportion of single men and women entering into marriage has not been changing in the long term. In all the five monitored periods the share of single bridegrooms comprised about 87 % and single brides 89 %.

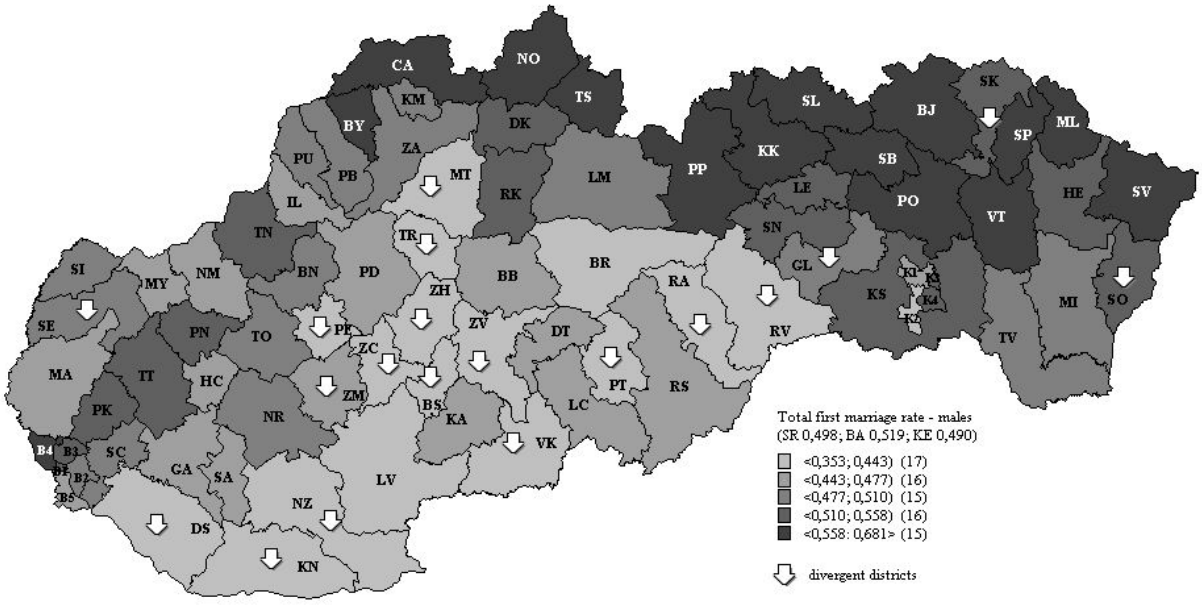
The low level of nuptiality causes the changes in structure of population by marital status. The postponement of marriage, which can result in refusing marriage in some cases, contributes to the increase in the proportion of single persons and on the contrary, to the decrease in the share of married men and women in population, which can influence also the course of other demographic processes. As it has been indicated in the introduction, the decisive part of fertility realizes just in marriage in the conditions of Slovakia. Therefore the changes in proportional representation of married persons in population refer mainly to fertility trend directly.

Nuptiality is markedly regionally differentiated in Slovakia. The decreasing trend of total first marriage rate appeared also at district level. Comparing periods 1996-2000 and 2001-2005 the values of total first marriage rate of men decreased in 70 districts, for women in 67 districts. On the contrary, the total first marriage rate increased in nine districts for men and in twelve districts for women, most of all in districts Bratislava IV, where the increase got over 35 % (36.2 % men, 35.5 % women) and Košice III (16.3 % men, 11.9 % women). Two mentioned districts are parts of our biggest cities – the capital Bratislava and Košice, which as a whole have been showing low level of nuptiality in the long term. For the last monitored period mean values of total first marriage rate have been computed from years 2001 to 2005. In the horizon of this interval years 2002, 2003, and 2004 were the years of temporarily increasing level of nuptiality, which was probably proved also in surprisingly increased values of total first marriage rate for both sexes in the districts Bratislava IV and Košice III. The temporarily increased of nuptiality in 2002-2004 is being ascribed to the realization of postponed marriages from the 90s, mainly by young single people born in the 70s, who came near the

[3] It is computed for marriageable population, i.e. for single persons who reach at least the minimal age necessary to get married. It is 16 years in The Slovak Republic.

psychological limit of 30 years. The other districts where the increase in total first marriage rate was recorded for men are districts Bratislava III and Bratislava V, Pezinok, Bardejov, Kežmarok, Medzilaborce, Poprad, Vranov nad Topľou. For women there are also districts Bratislava I, Ilava, Liptovský Mikuláš, Krupina, and Prešov.

Map 1.1 Total first marriage rate in the SR districts, 2001-2005, males



The spatial distribution of total first marriage rate for both men and women in period 2001-2005 is very similar and in essence corresponds to the spatial distribution from 1996-2000. A characteristic feature of spatial differentiation of nuptiality level is the north developing more progressively (in the sense of high level of nuptiality) and the eastern part of the SR territory. On the contrary, a low level of nuptiality is typical for the south and central area of Central Slovakian Region including the South Slovakian Hollow.

In 2001-2005 two significant regional units with high first marriage rate of men were formed in the SR territory (0.56-0.68). Districts Bytča, Čadca, Námestovo, and Tvrdošín have created the first one in the north of the Central Slovakian Region. The second one was created by Eastern Slovakian districts along the northern state boundary: Poprad, Kežmarok, Stará Ľubovňa, Bardejov, Medzilaborce, Stropkov and Snina, also Sabinov, Prešov and Vranov nad Topľou. The only district in the southwest of the SR that was reaching high total first marriage rate for men in the referred period was district Bratislava IV already mentioned. Several smaller regional units registered higher total first marriage rate for men in the range 0.51-0.56 – in the southwest - districts Bratislava III, Pezinok, Trnava, Piešťany, in the north districts Dolný Kubín and Ružomberok and in the eastern part Spišská Nová Ves and Levoča, also Košice vidiek, Košice III and Košice IV and finally Humenné and Sobrance. The regions of medium-high values of total first marriage rate for men from 0.48 to 0.51 created for example districts of western Slovakia Bánovce nad Bebravou, Topoľčany, and Nitra, in the north Púchov, Považská Bystrica, Žilina, and Kysucké Nové Mesto, in the Eastern Slovakian Region Michalovce and Trebišov. The lowest figures of total first marriage rate for men in the interval 0.35-0.44 were registered in districts of southern Slovakia - Dunajská Streda, Komárno, Nové Zámky, Levice, Veľký Krtíš, also rather extensive formation in the Central Slovakian Region formed by districts Martin, Trenčianske Teplice, Žiar nad Hronom, Žarnovica, Banská Štiavnica, Zvolen. Towards the east of the SR territory the last region emerges with the lowest total first marriage rate for men - district Revúca, Rožňava, among whose also district Brezno can be classified.

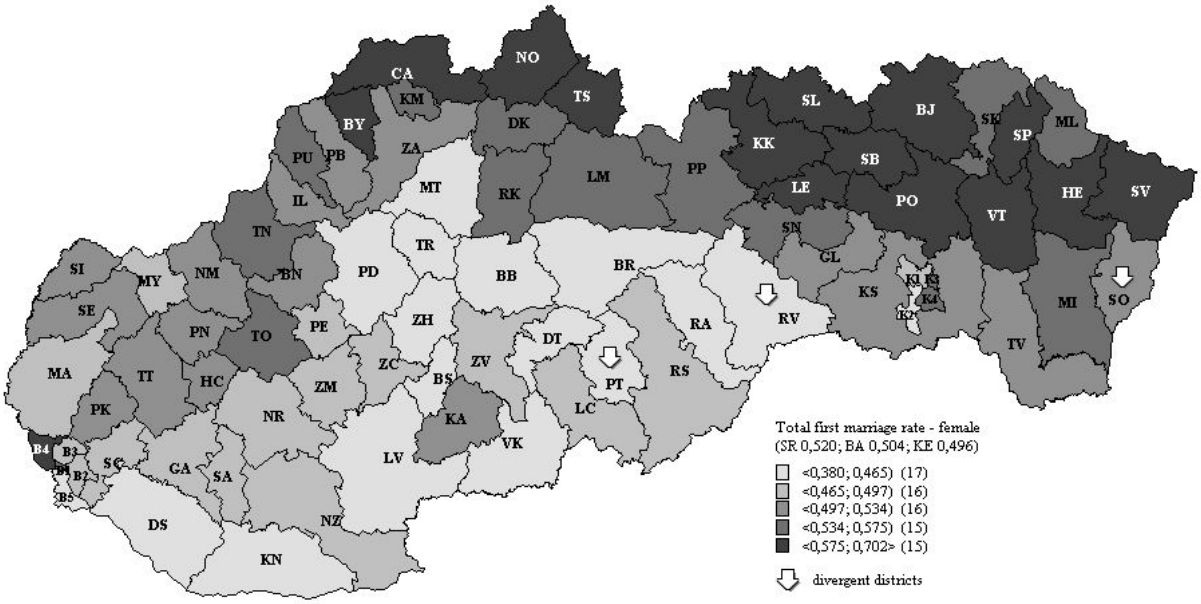
The outlined spatial distribution of districts depending on development of total first marriage rate for men points out the reality that tendency or level of the given event is not proceeding all the same in individual regions. On the contrary, it is diverging from the trend of maximal values. In all the regarded period from year 1996 (in all five periods) up to 2005 significant divergences in the development of total first marriage rate for men from the trend of maximal values were registered for some districts of Slovakia. There were 19 districts like this. The largest deviation from this trend is in districts Rožňava, Poltár, Turčianske Teplice, Veľký Krtíš, Žiar nad Hronom, and Banská Štiavnica.

In the period of years 2001-2005 the total first marriage rate for women was achieving its highest figures (0.58-0.70) in the same regions like for men. It is possible to attach also districts Levoča and Humenné to regions with the highest figures of total first marriage rate for women. The factor of religiosity influences significantly the intensity of nuptiality. Three isolated districts of western Slovakia register higher values of total first marriage rate for women (0.53-0.58): Topoľčany, Trenčín, Púchov, also the coherent whole of Central Slovakian districts Dolný Kubín, Ružomberok, Liptovský Mikuláš, which approaches continuously the Eastern Slovakian

Region, where stretches into districts Poprad and Spišská Nová Ves. Also Košice III and Košice IV and district Michalovce situated independently count among these districts with their figures of total first marriage rate for women. A decreased level of nuptiality for women is typical for the rest of the SR territory. Almost the whole central part of central Slovakia (Martin, Trenčianske Teplice, Prievidza, Žiar nad Hronom, Banská Bystrica, Brezno, Detva, Poltár) and Southern Slovakian districts (Dunajská Streda, Komárno, Levice, Veľký Krtíš, Revúca, and Rožňava) had the lowest total first marriage rate for women in 2001-2005, which was ranging from 0.38 to 0.47.

Despite the very similar spatial distribution of districts by the development of nuptiality for both men and women, so many districts that would register significant divergent deviations from the trend of maximal figures of monitored indicator were not detected for women. The development of total first marriage rate was moving off this trend only in three districts - Poltár, Rožňava, and Sobrance. The disproportion among the number of districts with an important divergence for men and women (19:3) points out a relatively more stable development of nuptiality for women than men.

Map 1.2 Total first marriage rate in the SR districts, 2001-2005, females

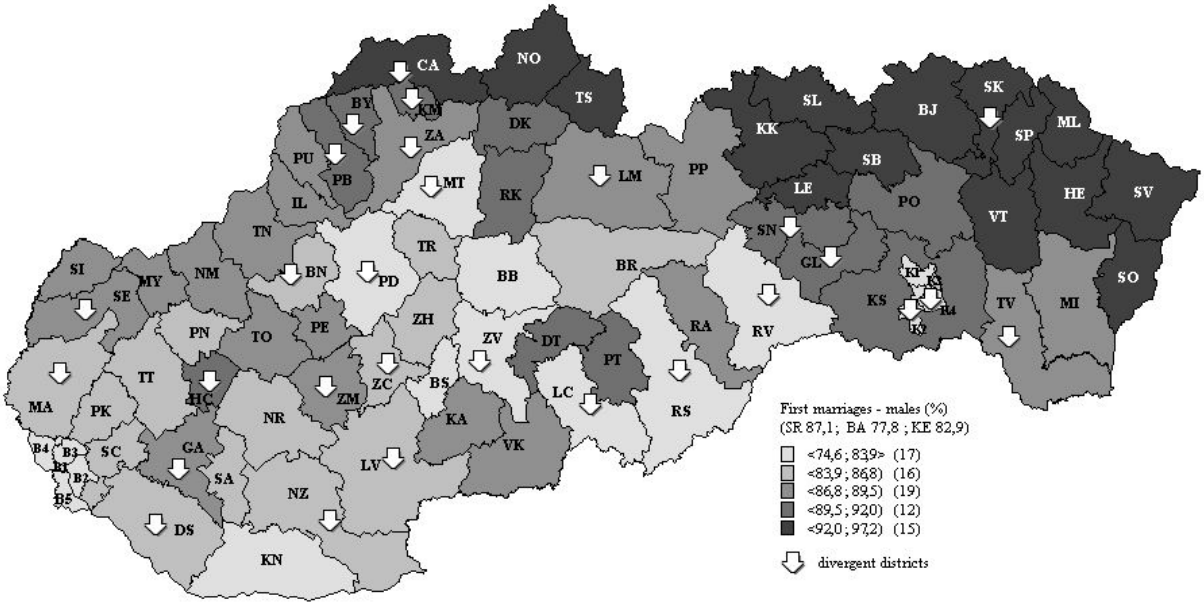


The first marriages comprise the greatest part of the total number of registered marriages in all districts and for both sexes. The proportion of single persons getting married is almost unchangeable in the long run. In separate analyzed periods the share of marriages of single men was ranging from 80 to 97 %. Only districts in the territory of capital Bratislava are the exceptions, in which the proportion of first marriages did not exceed 80 %. The situation was the same for women, with the exception of three Bratislava districts - Bratislava I, Bratislava II, and Bratislava V, in which the proportion of first marriages was below 80 %. Begin with the period of years 1998-2002 only district Bratislava II was below this limit.

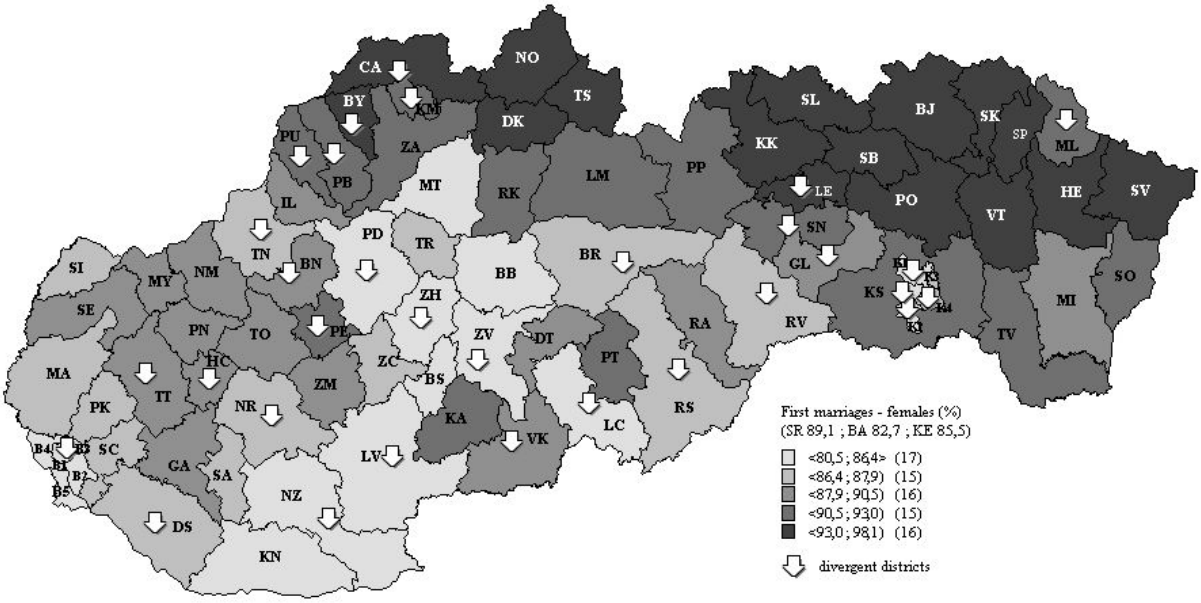
The spatial distribution of districts by percentage representation of first marriages is very similar for men and also women, like in the case of total first marriage rate. In 2001-2005 districts with the highest proportion of first marriages for both sexes (92-98 %) were located mostly in the north of central Slovakia and in the Eastern Slovakian Region, where they formed extensive compact wholes. Those were districts Čadca, Námestovo, Tvrdošín (also districts Bytča and Dolný Kubín for women) in the north, Kežmarok, Stará Ľubovňa, Bardejov, Svidník, Stropkov, Levoča, Sabinov, Vranov nad Topľou, Humenné, Snina in the east. The rest of districts from Eastern Slovakian Region - Spišská Nová Ves, Gelnica, Poprad, Košice vidiek counted among the districts with even a relatively high share of first marriages (90-92 %). In the case of women also the significant regional formation of districts Ružomberok, Liptovský Mikuláš, and Poprad can be classified like this. Districts in Považie (from Nové Mesto nad Váhom to Žilina) and in Záhorie (Malacky, Senica, Skalica) were characterized by medium-high figures of the share of single men's and also women's marriages (87-90 %) in 2001-2005. Also other districts of Western Slovakian Region (Hlohovec, Topoľčany, Prievidza, for women also Trnava, Piešťany, and Bánovce nad Bebravou) and several separate districts of southern Slovakia - Galanta, Krupina, Veľký Krtíš, Detva, Poltár, and Revúca were at the level of national average.

The districts with the highest proportion of first marriages were Námestovo, Tvrdošín, Stará Ľubovňa, and Sabinov in all the monitored period.

Map 1.3 First marriages in the SR districts, 2001-2005, males



Map 1.4 First marriages in the SR districts, 2001-2005, females



The low share of first marriages is typical of those regions of Slovakia where the intensity of nuptiality is quite lower. In 2001-2005 it was the area of southwest Slovakia and the central part of Central Slovakian Region. In eastern Slovakia there were only districts of Košice city, which counted to regions with the lowest proportion of single men and women's marriages along with the districts of Bratislava city. Both cases are highly urbanized centres with broad possibilities for individual self-realization, which acts like a significant competitor in relation to marriage. Other competitive factors are also problems connected with getting suitable accommodation for young families.

The number of districts that were getting far most from the maximal values trend of the share of first marriages during years 1996 up to 2005 is rather large for both sexes – 28 for men and 30 for women. The highest trend deviations from maximal values of the share of first marriages in the case of men were registered in districts Rožňava, Rimavská Sobota, Bánovce nad Bebravou, in the case of women in districts Levice, Bratislava III, and Rožňava.

Marriages of second order are statistically significant due to their fairly frequent occurrence. In the monitored period their proportion on total number of marriages was ranging from 2 to almost 25 %, for women to 19 %. The lowest proportion of marriages of second order has been persisting in district Námestovo in the long term, the highest one in district Bratislava I (men) and Bratislava II (women). At district level, the number and share of marriages of third and higher order were very low (0-3 % for men and 0-2 % for women) during the

last ten years. For this reason it is more suitable to analyze marriages of second, third, and next order together as remarriages.

While in the case of first marriages the north and east of the SR territory were developing more progressively, the southwest, south of Central Slovakian Region and districts of Southern Slovakian Hollow seem to be more progressive for remarriages. Higher divorce, a typical feature of these areas, is a decisive factor for increasing share of remarriages. In 2001-2005 it was possible to separate three relatively compact regions with high values of this indicator in Slovakia. Districts of Bratislava and neighbouring districts Pezinok, Senec, also Trnava, Skalica, and Senica formed the first one in the SR southwest. The second such region was created from districts of southern Slovakia - Dunajská Streda, Šaľa, Nové Zámky, Levice. The districts of Southern Slovakian Hollow form the third region - Lučenec, Rimavská Sobota, Revúca, and Rožňava. As for the Eastern Slovakian Region the higher share of marriages of second and next order exists only in districts Košice I, Košice II, and Košice IV.

The regional distribution of districts with low share of remarriages is identical to districts typical contrariwise of the highest share of first marriages. It is the area of Orava and Kysuce and the northern part of eastern Slovakia.

The intensity of marriages by age structure was showing several substantial changes in the monitored period. First of all it was a decreased level of nuptiality at lower age, then the shift of maximal nuptiality into higher age categories and following increasing nuptiality of older ages, especially for men. Due to these changes the structure of persons is naturally changing "at marriage market" – the potential of possible bridegrooms and brides has been enlarging by higher age categories. These changes are evident at district level, but they differ with their course and intensity.

In 1996-2000 like in 1997-2001 the highest nuptiality for both men and women was at the age of 20-24 years. The only exceptions were districts of Bratislava and Košice cities, in which the maximal nuptiality was realized already at higher age category 25-29 years (in the case of women this shift related only to the district Bratislava I). In 1996-2000 only 10 districts of Slovakia had the highest age-specific marriage rate for men aged 25-29 years, only one of which was outside Bratislava or Košice. It was the district Banská Bystrica, which due to the city of Banská Bystrica counts among the regions of Slovakia with earlier "start" of changes in marriage behaviour of population. In the following years the shift of the highest nuptiality of men to the age 25 to 29 years realized gradually also in other districts of Slovakia. In 1998-2002 already a half of districts in Slovakia had the highest nuptiality for men in the age group of 25-29 years old; while in 2001-2005 already all districts of Slovakia had the highest nuptiality rate for men in the mentioned age group apart from four - Čadca, Námestovo, Kežmarok, and Vranov nad Topľou. The districts where were recorded the age-specific marriage rate of men aged 25-29 in the last monitored period (2001-2005) were, apart from Bratislava and Košice, also Pezinok, Prešov, Trenčín, Sabinov, Poprad, Trnava, Levoča, Ružomberok. Districts Rožňava, Veľký Krtíš, Revúca, Trenčianske Teplice, Banská Štiavnica, Krupina, Brezno had the lowest age-specific marriage rate of men aged 25-29. Compared with the period 1996-2000 the highest increase in age-specific marriage rate was recorded for men aged 25-29 in districts Pezinok (by 64 %), Bratislava IV (by 57 %), Skalica, Humenné (by 53 % for both), and Sabinov (51 %).

The situation was different for women. The highest age-specific marriage rate for women was persisting in the age group of 20-24 years old in all the monitored period in majority of districts. The exception is district Bratislava I mentioned above with the highest nuptiality of women aged 25-29, to which also the other Bratislava districts were added in 1998-2003. Only in the last monitored period 2001-2005 already also Košice (in all four districts) had the highest level of nuptiality for women in age interval of 25-29 years. From the other districts with high age-specific marriage rate for women aged 20-24 districts Námestovo, Čadca, Bytča, Sobrance, Kežmarok, Vranov nad Topľou, Tvrdošín can be mentioned. On the contrary, the lowest level of nuptiality for this age group of women was in districts Žiar nad Hronom, Banská Štiavnica, Rožňava, Poltár, Komárno, Trenčianske Teplice, Martin, Brezno. In spite of that the highest nuptiality of women has been persisting at the age of 20-24 years in the long term, the decrease in its level came in the monitored period. The proof is a decrease in age-specific marriage rate in this age group in all districts of Slovakia, which was recorded in 2001-2005 compared to 1996-2000. The nuptiality rates for women aged 20-24 fell most in district Žiar nad Hronom (even by 40 %), also in districts Bratislava V, Bratislava III, Detva, Trenčianske Teplice, Košice I, Rožňava (by 36-38 %).

It results from the above stated that the marriage behaviour is much more stable for women than for men regardless regional differences. Only in cities of Bratislava and Košice a shift of maximal level of nuptiality has come from the age group of 20-25 years old towards the age category of 25-29 years old women. From this point of view, the rest of the SR territory seems to be more "conservative". It can be partially connected with a different attitude of men and women to the institution of marriage. In spite of that women have currently same possibilities to realize their personal goals in professional life like men, they have to solve also questions of family building and childbearing concerning marriage, which is more suitable at earlier age from the biological view-

point. In this context it is necessary to become aware also of cultural and social influence of society with prevailing type of countryside settle and its view of married and single woman.

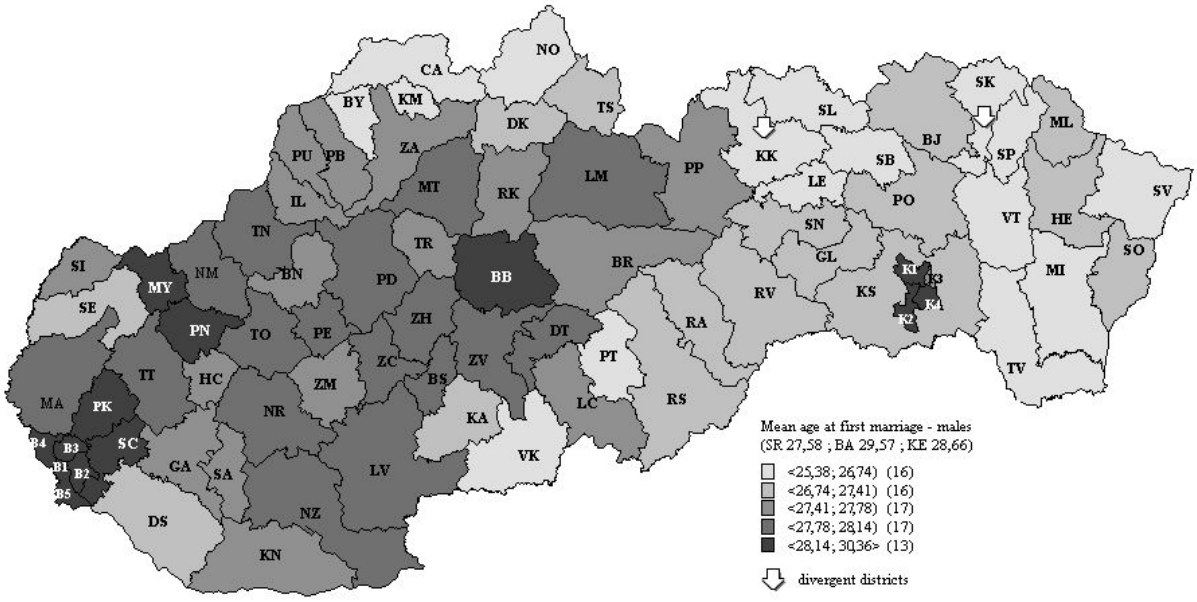
The postponement of marriages towards to older age has resulted in quite increasing nuptiality of higher age categories, which was manifested markedly even to the age category of 55-59 years old both men and women at the regional level. Comparing the period of 1996-2000 with 2001-2005 the level of nuptiality has increased for both men and women aged 30-34 in all the SR districts except for two districts where on the contrary, nuptiality rates of 30-34 years old has decreased – in district Trenčianske Teplice (for men) and Sobrance (for women). The age-specific marriage rate for men aged 30-34 increased by more than 100 % in districts Košice IV (118 %) and Snina (105 %). There were more districts with increases in age-specific marriage rate above 100 % for women aged 30-34: Považská Bystrica, Stará Ľubovňa, Dolný Kubín, Zlaté Moravce, Bratislava IV, Bytča, and Kysucké Nové Mesto. In the age category of 35-39 years old even 74 districts have recorded the increase of age-specific marriage rate for men, 69 districts in the case of women. In 2001-2005 compared to 1996-2000 the values of age-specific marriage rate have increased more than two times for men aged 35-39 in districts Bánovce nad Bebravou, Myjava, Sabinov, and Košice III. The increases of age-specific marriage rate for women aged 35-39 were not so high. The nuptiality of women aged 35-39 increased most in district Košice III (by 22 %), also in districts Krupina, Malacky, Bratislava V, Bratislava II, Bratislava IV, Košice II, and Levoča (by 12 - 17 %).

The level of nuptiality has been decreasing gradually with growing age for both men and women in separate age groups. During last ten years in connection with the all European trend of postponement and increase of nuptiality towards the older age groups we have been recording still a relatively significant increase in nuptiality for men aged 40-44 at district level. This increase referred to 71 districts of Slovakia. The nuptiality rates have increased for women aged 40-44 only in two thirds of districts.

The development of nuptiality of the youngest age group of men and women up to 19 years according decreased markedly also at district level. Comparing periods 1996-2000 and 2001-2005 the age-specific marriage rate for men up to 19 years have decreased in all districts except for Vranov nad Topľou, Stropkov, Snina, Kežmarok, and Medzilaborce. The age-specific marriage rate for men up to 19 years decreased the most noticeably – by more than 80 % in district Poltár, Bratislava II, Bratislava III, Prievidza. Unlike men the age-specific marriage rate for women younger than 20 years decreased significantly in all districts of Slovakia – most of all in district Poltár, Bratislava III, and Bánovce nad Bebravou (decrease by more than 70 % for all).

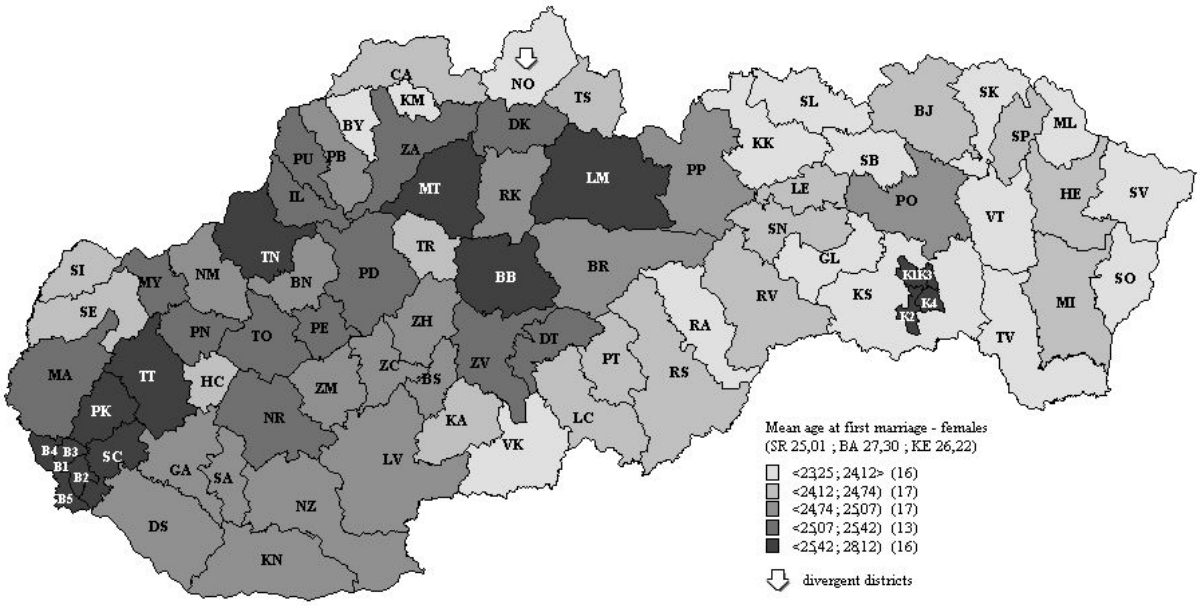
The level of nuptiality growth of older age groups of men and women caused the increase in mean age at marriage and mean age at first marriage too. The regional differentiation of both indicators was very similar for both sexes in particular analyzed periods and enabled to divide the SR territory into two parts. The first one were the areas of southwest and southern Slovakia and the central part of Central Slovakian Region, which were characterized by higher figures of mean age at first marriage and at marriage at all. The second were the areas of northern Slovakia and Eastern Slovakian Region – except for the city of Košice – with lower figures of these indicators.

Map 1.5 Mean age at first marriage in the SR districts, 2001-2005, males



In 2001-2005 the lowest mean age at first marriage for men was recorded in district Kežmarok (25.4 years) and the highest one in district Bratislava I (30.4 years). Compared to 1996-2000 the mean age of men at first marriage increased by 1.92 years on average in the SR districts, the most even by 3 years in district Košice IV, the least by 0.73 years in district Kežmarok. Districts with the highest mean age of men at first marriage (from 28 to 30 years) formed four significant centres in the last analyzed period. Two of them arose in western Slovakia from districts of capital Bratislava and neighbouring districts Pezinok and Senec and from districts Piešťany and Myjava. In the Central Slovakian Region the only formation with the highest mean age at first marriage of men was district Banská Bystrica and finally in eastern Slovakia it was a homogenous whole formed by the districts of Košice city. An extensive and relatively compact regional formation with the highest age at first marriage of men (27-28 years) was formed by districts Nitra, Nové Zámky, Levice, Topoľčany, Partizánske, Prievidza, Žiar nad Hronom, Žarnovica, Banská Štiavnica, Zvolen, Detva, and Lučenec.

Map 1.6 Mean age at first marriage in the SR districts, 2001-2005, females



In 2001-2005 the lowest mean age at first marriage for women and men was in district Kežmarok (23.3 years), the highest one in district Bratislava I (28.1 years). Compared to 1996-2000 this indicator recorded the highest increase in district Košice IV - by 2.8 years. But the mean age of women at first marriage increased the least, by 0.9 years, in district Medzilaborce. The regional distribution of districts depending on this indicator development was almost the same like for men in 2001-2005, but it seems to be more integrated. Districts with the highest mean age at first marriage of women (25-28 years) formed again two regional formations in the Western Slovakian Region – the first more extensive one was formed by districts Bratislava I up to Bratislava V, also Trnava, Pezinok, and Senec; the second one standing alone district Trenčín. Martin, Banská Bystrica, and Liptovský Mikuláš can be classified into the group of districts with the highest mean age at first marriage of women in the Central Slovakian Region, finally the city of Košice and its four districts in eastern Slovakia. Almost all the southern Slovakia was characterized by higher values of indicator (24.7-25 years) as well as the all Central Slovakian Region except for its northern part, which was characterized by values of mean age at first marriage for women below the SR average together with districts of eastern Slovakia.

The changes in development of mean age at first marriage were running relatively dynamically during last ten years. The evidence is a low number of divergent districts for both sexes when we were comparing trends of mean age at first marriage for men and women in particular districts with the trend of its maximal values in separate five-years periods (1996-2000, 1997-2001,..., 2001-2005). Divergences from the trend of maximal values of mentioned indicator were registered only in two cases for men and in one case for women. They were districts Kežmarok and Svidník of Eastern Slovakian Region (for men) and district Námestovo in Orava (for women), in which the increase in mean age at first marriage appeared else, but this increase was slower compared to the rest of SR districts and also considering the maximal values of given indicator.

2. Divorce

A high divorce rate is one of the characteristic features of current demographic development in Slovakia. Divorce trend was rather opposite in comparison to other demographic processes, whose previous high level fell in the 90s. The total divorce rate, which was ranging from 17 to 21 % in the 1980s, reaches 36 % currently. Since the mid-1990s more than 9 thousand marriages have been divorcing per year. In the period from 2002 to 2004 the number of divorces was fluctuating closely below 11 thousand. It exceeded this limit in 2005, when it achieved the number of 11.6 thousand. The number of registered divorces per year is increasing continuously despite the falling level of nuptiality and changing population structure by marital status. From 1999 the number of divorces per new marriage has been growing significantly - from 35 to the current 44 divorces per 100 marriages. The only indicator, whose trend can be evaluated positively in connection with divorce, is the decreasing proportion of divorcing marriages with under-aged children. In the half of 90s three quarters of divorces were divorcing marriages with under-aged children, it was 65.9 % in 2005.

In 2005 a new family law[4] came into force, which substituted theold law aftermore than 40 years. Divorce is connected closely with administration of judicial practice, which is being confirmed by short-term divergences of its development known from the past, caused by legislative measures. The development will show in the following years whether in 2005 the growth of divorce and its indicators was influenced in some way by passing this new act on family. The emphasis is being put on practice and interpretation of the law, but also society's attitude to divorces is important. Divorce is being accepted as admissible and usual way of marriage disagreements solving. The level of divorce indicators has been showing the growing trend at the SR level in separate analyzed periods of the last decade. In 1996-2000 the standardized divorce rate[5] had the same value 3.67 ‰ for both sexes. In 2001-2005 this indicator reached values 4.08 ‰ for men and 4.09 ‰ for women, which represents an increase by 0.4 points in both cases. Men aged from 30 to 34 and women aged 25-29 were divorcing the most often in all the monitored period. Even in 1999-2003 the highest level of divorce shifted to the age category of 30-34 years old where has been persisting up to the present.

Higher divorce activity is largely typical of women. Women file divorce petitions more often than men – it has been approximately twice the petitions filed by men in the long run. Mean age at divorce was 37.5 years for men, 35 years for women in 1996-2000. In 2001-2005 it increased approximately by one year for both sexes - to 38.5 for men and 36.2 for women. Also the average duration of marriage at dissolution increased approximately alike - from 12.6 years in 1996-2000, to 13.9 in 2001-2005. Marriages with under-aged children divorce more often and their most frequent cause is the divergence of natures, opinions, and interests from the side of both men and women.

The indicated trends reflected in the divorce development also at regional level. The level of standardized divorce rate was ranging from 1.0 to 6.5 ‰ for men and from 1.0 to 6.3 ‰ for women in particular analyzed periods in the SR districts. This indicator reached the highest value for men in district Bratislava V, except for the period 1999-2003, when the highest standardized divorce rate was in district Lučenec. District Rožňava was on the top of the list for women. On the contrary, the lowest standardized divorce rate was for both sexes in district Námestovo in the past ten years. Comparing the values of standardized divorce rate in 1996-2000 to 2001-2005, it increased in majority of districts in Slovakia. The values of indicator decreased only in 11 cases for men and 15 cases for women. The standardized divorce rate recorded the highest increase for both men and women in district Myjava (from 3.03 ‰ in 1966-2000 to 4.12 ‰ in 2001-2005 for men, from 3.12 ‰ to 4.30 ‰ for women). The standardized divorce rate decreased most for both sexes in district Žarnovica (from 4.27 ‰ to 3.82 ‰ for men, from 4.47 ‰ to 4.05 ‰ for women).

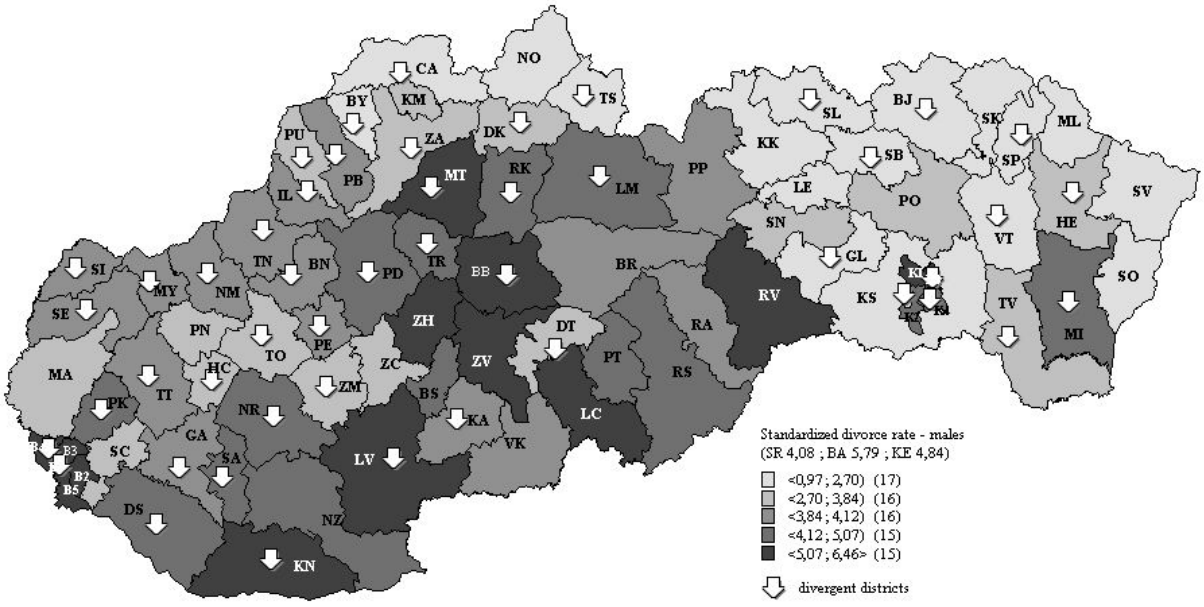
In 2001-2005 it was possible to divide the SR territory according to the achieved level of standardized divorce rate into three units: western, central, and eastern. Districts with medium-high, even high figures of indicator are typical of the west. The central part characterized by districts of combined type – from the lowest figures in northern districts to the highest figures in southern districts. From this viewpoint, the eastern part seems to be the most compact and is characteristic with low level of the monitored indicator. This dividing is the same for both men and women. In western Slovakia the only formation with high value of standardized divorce rate is the city of Bratislava with its all districts, while the highest one is in district Bratislava V and the lowest one in district Bratislava I. In the Western Slovakian Region high figure of standardized divorce rate is characteristic of two separate districts Pezinok and Prievidza, also district Myjava for women. Districts Komárno and Levice have the highest standardized divorce rate in the south of Slovakia. Their neighbouring districts - Dunajská Streda, Šaľa, Nitra, Nové Zámky count among districts with a relatively high level of indicator. In the Central

[4] Act No. 36/2005 on Family and amendments and additions of some acts
[5] The standard – population on 1 July in 2005

Slovakian Region an extensive formation of the highest divorce arose from districts Martin, Banská Bystrica, Žiar nad Hronom, and Zvolen. Districts Turčianske Teplice, Banská Štiavnica, Ružomberok, and Liptovský Mikuláš are situated with relatively high values of standardized divorce rate on its periphery. Also the area of Southern Slovakian Hollow with districts Lučenec, Poltár, Rimavská Sobota, Revúca, and Rožňava has a similar character. Districts of northern Slovakia - Bytča, Čadca, Námestovo, Tvrdošín along with districts of Eastern Slovakian Region count to the group with the lowest level of divorce for both men and women. Districts of Košice city and district Michalovce are exceptions. This regional arrangement stems from the regional differences, which are the result of concurrence of more factors. The religiosity of population has been mentioned as the main factor influencing divorce the most often. But it has not to be valid in general. Various cultural influences create social conditions that can be more or less "tolerant" of divorces. Divorce is regarded as a common form of dissolution of marriage in large urbanized types of settlements (e.g. cities Bratislava, Košice) with higher anonymity, less in the areas with prevailing country settlements. The development of divorce is influenced also by economic growth of territory, demographic structure, and naturally also previous nuptiality development. Especially women considering divorce take into account possibilities how to acquire separate accommodation and economic independency, which is less complicated in industry-urbanized regions.

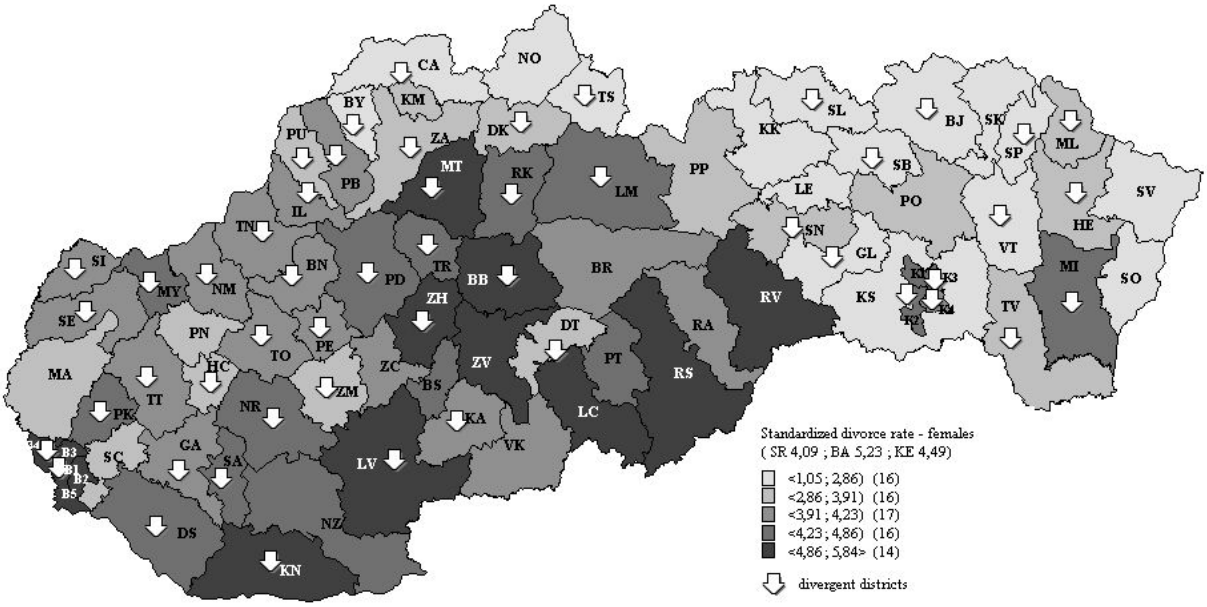
The development of standardized divorce rate and its deviation from the trend of minimal values is provable also at regional level. More than half of districts registered a divergence from the trend of the lowest values of standardized divorce rate in the monitored period in Slovakia. 48 districts were divergent in the case of men, even 51 in the case of women. Most of them were located in the Western and Central Slovakian Regions, less in the Eastern Slovakian Region. In spite of that the territory of eastern Slovakia has lower level of divorce compared to the rest of the SR, the number of divergent districts indicates that the situation starts changing in eastern Slovakia. The deviation from the trend of minimal values of standardized divorce rate is deepening. So we can expect an increase in level of divorce also in those areas that registered rather opposite trend in past. Bratislava I, Levice, Komárno, Turčianske Teplice counted among the districts with the largest divergence in the monitored period. They are Košice III, Michalovce, Humenné, Vranov nad Topľou from the Eastern Slovakian districts.

Map 2.1 Standardized divorce rate in the SR districts SR, 2001-2005, males



The age structure of divorcing married couples show three main tendencies at regional level – increasing mean age at divorce, increase in the maximal level of divorce at higher age, and decrease in divorce for the youngest age groups of men and women. The mentioned changes are mainly the consequence of postponement of marriage towards to higher age.

Map 2.2 Standardized divorce rate in the SR districts, 2001-2005, females



In the past ten years men aged 30–34 years were divorcing most often in districts of Slovakia. The highest divorce rate of mentioned age group was reached in districts of Bratislava and Košice cities. The significant divorce rate of men was achieving also by age group of 25-29 and 35-39,40-49 years old in separate analyzed periods. If we take into account the trend of postponement of marriage towards to higher age with the fact that men aged 25–29 get married the most often and the reality that the most of marriages will divorce between 10 to 14 years of their duration, the increase in divorce rates is natural and logical for men between 30 and 49 years. Comparing the periods 1996-2000 and 2001-2005 the divorce of men aged 30–34 increased the most in districts Stropkov, Myjava, Gelnica, Hlohovec, and Bytča. Divorce rates of men aged 35-39 increased almost two times in districts Sabinov, Medzilaborce, and Hlohovec, aged 40–44 in districts Stropkov, Námestovo, Stará Ľubovňa, and aged 45–49 in districts Medzilaborce, Revúca, Trenčianske Teplice, and Stropkov. Referring to women, in 1996-2000 25–29 years old women were divorcing the most often in the SR districts. Divorce rates of women aged 25–29 were achieving the highest figures in districts Poltár, Zvolen, Košice I, Žiar nad Hronom. The maximal level of divorce for women has shifted into the category of 30–34 years old already in the following period 1997–2001 in a third of total number of districts in Slovakia. Start with the period of 1998-2002 already more than half of districts had the highest level of divorce in the age group of 30–34 years old women. In the last five-year period 2001–2005 44 districts had the highest level of divorce for women aged 30–34, the highest figures of which were recorded in districts Bratislava V, Košice IV, Banská Štiavnica, Bratislava III, Zvolen, Banská Bystrica, and Lučenec. In 2001-2005 compared to 1996-2000 the level of divorce increased in the age groups from 25 years also for women like for men. While the increase in divorce was already less significant for men after 49 years, this increase was evident even to the age of 59 for women.

We can positively evaluate the decrease in divorce of the youngest age categories for both men and women. Divorce rates for men up to 19 years have decreased in all the SR districts in the last monitored period compared to 1996-2000, except for two – Nitra and Žiar nad Hronom. The decrease in level of divorce referred to 67 districts in the case of women at the same age. In the same period also divorce rates of 20-24 years recorded a significant decrease. Divorce rate for men aged 20-24 has decreased in more than two thirds of districts (most in districts Poltár, Trenčianske Teplice, and Banská Štiavnica), for women in all districts apart from Vranov nad Topľou, Medzilaborce, Bardejov, and Stará Ľubovňa.

The highest mean age of men at divorce was typical of cities Bratislava and Košice in the past ten years. A high value of mean age of man at divorce was also in districts Banská Štiavnica, Myjava, Zlaté Moravce, Trenčín, Piešťany, and Martin, except for districts of our biggest cities. During the monitored period this indicator increased in 70 districts of Slovakia. The mean age of man at divorce increased by more than two years in districts Revúca, Košice I, Medzilaborce, and Sobrance, the most, almost by three years, in district Krupina and Stará Ľubovňa. Nine districts recorded a decrease in the mentioned indicator in the range of 0.02-1.49 years. The mean age of man at divorce fell the most in district Banská Štiavnica the least in district Sabinov.

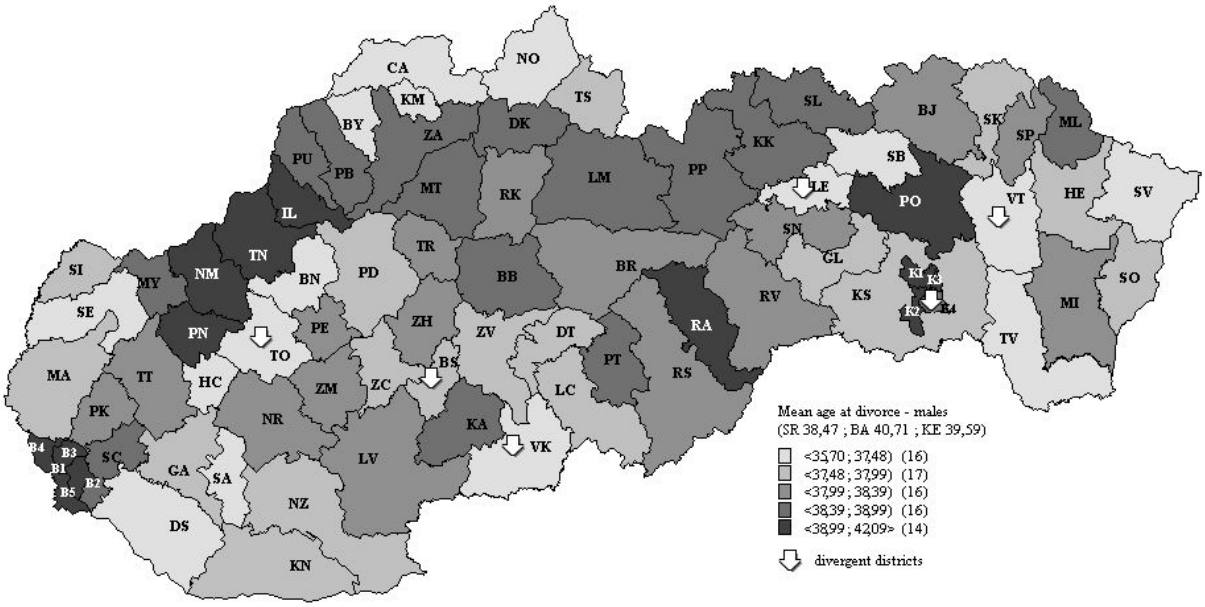
The districts of cities Bratislava and Košice had the highest mean age at divorce for women like for men, out of the other districts we can mention also district Banská Bystrica, Piešťany, Zlaté Moravce, Revúca, Poprad. On the contrary, the lowest mean age of women at divorce was recorded in the monitored period in districts Bytča, Námestovo, Sobrance, Stropkov, Vranov nad Topľou. In 2001-2005 compared to 1996-2000 the mean

age of women at divorce increased in the all territory of Slovakia, except for two districts - Levoča and Banská Štiavnica. It decreased by less than one year in district Banská Štiavnica, by only 0.15 years in district Levoča. The mean age of women at divorce increased the most - by 3.8 years in district Krupina. 14 districts altogether had increase in mean age of women at divorce in the range of 2 up to 2.8 years.

Spatial distribution of mean age of men and women at divorce is relatively various. Districts with the highest values of indicator formed into more aggregates scattered in the all territory of Slovakia for both sexes. These formations seem to be a little more compact for men. In southwest the most marked formation with high mean age of man at divorce is created by all districts of Bratislava, towards the north there are districts of Western Slovakian Region: Piešťany, Nové mesto nad Váhom, Trenčín, and Ilava, only Piešťany and Ilava for women. In the central Slovakia it is the isolated district Revúca, also districts Banská Bystrica and Krupina for women, and in the Eastern Slovakian Region districts Košice I, Košice II, Košice III, and district Prešov, also district Poprad for women. Also the districts neighbouring with mentioned centres of the highest figures have a relatively high mean age at divorce for man and woman - Senec, Myjava, Púchov, Považská Bystrica, Žilina, Martin, Dolný Kubín, Liptovský Mikuláš, then towards the east Poprad, Kežmarok, and Stará Ľubovňa. Several stand-alone districts with higher mean age of men at divorce are located also in the central part of central Slovakia. Those are districts Banská Bystrica, Krupina, and Poltár. From the group of Eastern Slovakian districts Medzilaborce and Košice IV can be classified here for both men and women.

A markedly low mean age at divorce is in districts Hlohovec, Topoľčany, and Bánovce nad Bebravou, Senica in Záhorie, Dunajská Streda and Šaľa in south. The mean age at divorce for both sexes is below the SR average also in districts of northern Slovakia - Bytča, Čadca, Kysucké Nové Mesto, and Námestovo, like in districts of Eastern Slovakian Region Levoča, Gelnica, Sobrance, also Vranov nad Topľou, Trebišov, Svidník – for women also district Snina. Low mean age at marriage is typical of all these districts, which can have an influence on the lower age of married couples in the case of their divorces, compared to the rest of the SR territory.

Map 2.3 Mean age at divorce in the SR districts, 2001-2005, males

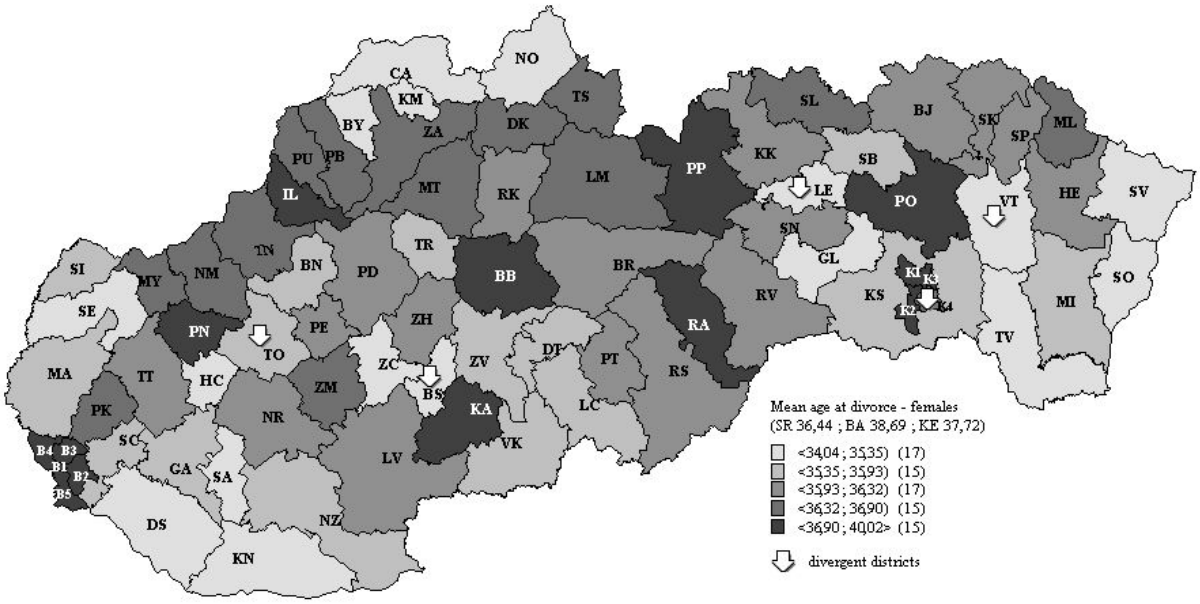


The increase in mean age at first marriage and mean age at marriage too has been reflected in the increase in mean age at divorce. Researching the divergence from the trend of maximal values of mean age at divorce achieved in the monitored period, a deviation was recorded for men only in six districts and for women in five districts. They were districts Topoľčany in the Western Slovakian Region, Banská Štiavnica and Veľký Krtíš in the Central Slovakian Region and finally districts Levoča, Košice IV, and Vranov nad Topľou in the east of Slovakia. The same districts related to women except for Veľký Krtíš. Only a minimal increase of mean age at divorce or even its decrease was in the mentioned districts unlike other districts of Slovakia.

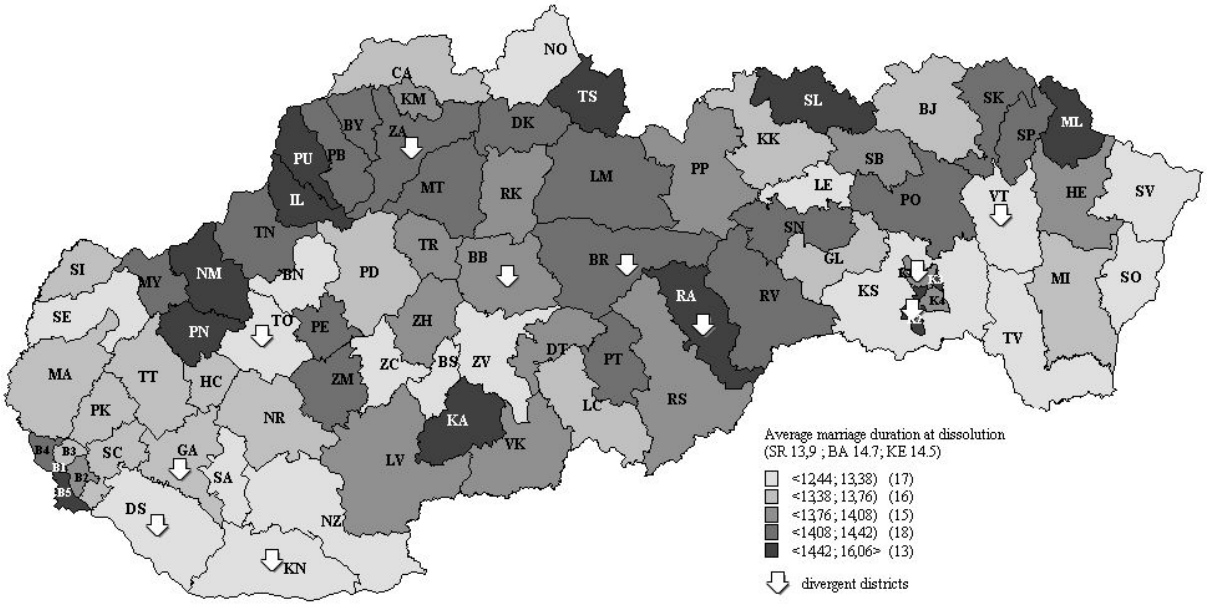
Divorce occurs the most often between 10 up to 14 years of marriage duration. The 4th up to 5th year from wedding seem to be the most critical for marriages that lasted shorter than 10 years. It is possible to observe the trend of progressive increasing average marriage duration at dissolution in majority of districts in Slovakia in the past decade. In period 1996-2000 the value of average marriage duration at dissolution was ranging from 10.8 years in district Sobrance to 14.7 years in district Bratislava V. The interval limits of the monitored indicator shifted in 2001-2005. Marriages lasted the shortest period of 12.4 years in district Banská Štiavnica, the longest period of 16.1 years again in district Bratislava V. The increase in average marriage duration at dissolution oc-

curred in all districts with the exception of Levoča, Námestovo, and Banská Štiavnica. The marriage duration shortened the most, by 1.1 years, in district Banská Štiavnica. In two remaining districts the decrease in average marriage duration presented only 0.1-0.2 years. The highest growth of monitored indicator was recorded in districts Medzilaborce (increase by 3.7 years), Krupina (increase by 3.6 years), and Tvrdošín (increase by 3 years).

Map 2.4 Mean age at divorce in the SR districts, 2001-2005, females



Map 2.5 Average marriage duration at dissolution in the SR districts, 2001-2005



Regional distribution of districts according to average marriage duration at dissolution was forming several smaller scattered formations in the territory of Slovakia in 2001-2005. It was a separate district Bratislava V in southwest, where marriages at dissolution had the longest duration on average – 16.1 years. In western Slovakia two similar formations arose with the average marriage duration at dissolution of 14.5 to 14.7 years formed by districts Piešťany, Nové Mesto nad Váhom and Ilava, Púchov. There were two separately lying districts Krupina and Revúca in southern Slovakia, with average marriage duration at dissolution 14.8 and 15 years; district Tvrdošín (14.6 years) in the north of Slovakia in the Central Slovakian Region, Stará Ľubovňa (14.8 years) and Medzilaborce (15.5 years) in the Eastern Slovakian Region. Another districts of the group of districts with the longest marriage duration at divorce are districts Košice II (14.8 years) and Košice III (15.9 years). Districts in the Central Slovakian Region, in its central part – Púchov, Bytča, Žilina, Martin, Dolný Kubín, Liptovský Mikuláš, and Brezno, were achieving relatively high values of average marriage duration at dissolution. In the

monitored period the mentioned districts formed the most extensive compact unit with average marriage duration of 14.1-14.4 years. According to indicator's values also districts of Southern Slovakian Hollow - Poltár, Revúca, and Rožňava can be assigned to the previous unit, like also districts Spišská Nová Ves, Prešov, Svidník, and Stropkov in eastern Slovakia. In 2001-2005 four larger regional formations had the shortest duration of marriage at divorce – 12.4 up to 13.4 years. Districts Dunajská Streda, Šaľa, Komárno, Nové Zámky formed the first one in southern Slovakia. The second one emerged from districts Topoľčany and Bánovce nad Bebravou in the west of the SR. Districts Zlaté Moravce, Banská Štiavnica, and Zvolen formed the third one in central Slovakia. And finally the fourth one was formed by districts Košice-okolie, Trebišov, Vranov nad Topľou, Sobrance, and Snina in the Eastern Slovakian Region. Also separately lying districts Levoča, Námestovo, and Senica are classified to this type.

In the observed period the analysis of development of average marriage duration at dissolution revealed 11 divergent districts, in which the value of indicator was diverging significantly from the trend of average figures for the SR. The figures of average marriage duration at dissolution were moving the most far from the given trend in districts Revúca, Košice II, Galanta, Žilina, Brezno.

Divorces of marriages with under-aged children concern the greatest social problem. Children coming from such marriages lose an everyday contact with one of parents, which can reflect negatively in their next growing.

Divorces of marriages with under-aged children comprise approximately two thirds of registered divorces. Marriages with one child are divorcing the most often. This trend is evident also at regional level where was recorded the highest share of divorces just for one-child marriages in the observed period. Their spatial distribution is related to the areas with features of new reproductive behaviour like is fertility decrease, preferring of less children in families and etc. It is mostly the area of southwest and southern Slovakia and the city of Košice, which has a specific position in the Eastern Slovakian Region. The level of demographic indicators' values and demographic development generally rank the city of Košice among the regions with earlier start of the model of western European reproductive behaviour.

During the past ten years marriages with one child had the highest share in the total number of divorced marriages with under-aged children in districts of Bratislava city (mainly Bratislava I and Bratislava III), Pezinok, Dunajská Streda, Komárno, Nové Zámky and mentioned districts of Košice city (most of all Košice III and Košice IV). The lowest proportion of divorces of marriages with one child was recorded in the same period in districts in the north of Slovakia – Bytča, Čadca, Námestovo, Tvrdošín and in districts of Eastern Slovakian Region: Levoča, Stropkov, Sabinov, Stará Ľubovňa, Kežmarok, Vranov nad Topľou. In 2001-2005 against 1996-2000 the share of divorces of marriages with one under-aged child increased in more than three quarters of districts in Slovakia. The number of divorces of marriages with one under-aged child increased more than two times in districts Medzilaborce, Stará Ľubovňa, and Stropkov. A significant increase of such divorces was referred also to districts Tvrdošín, Skalica, Bytča, and Trenčín.

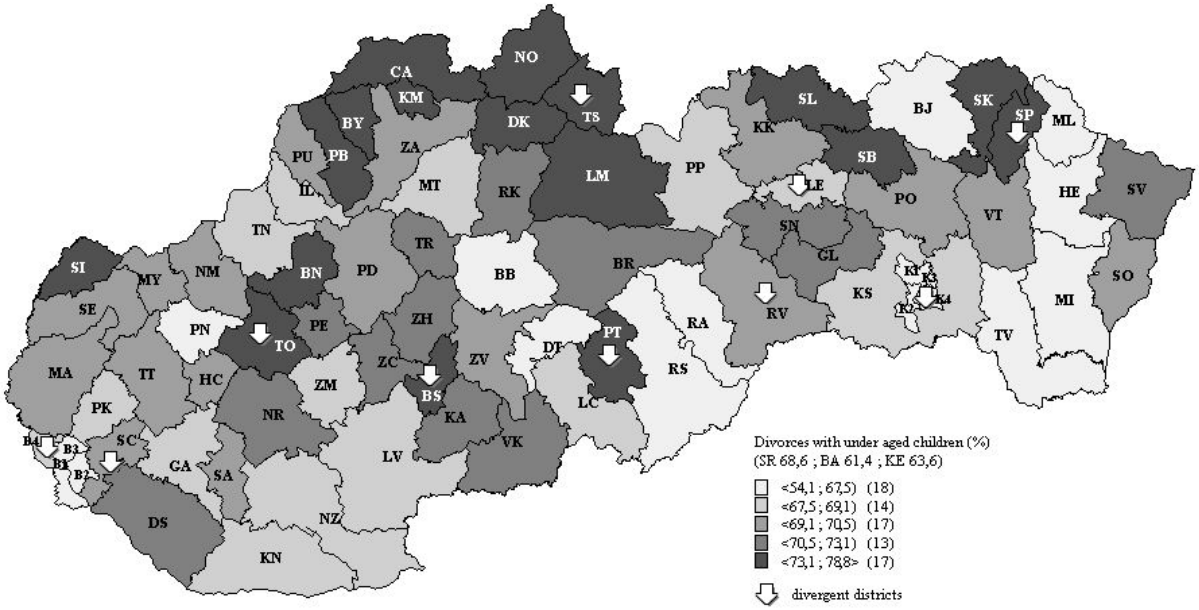
The development of divorces of marriages with two under-aged children registered a similar trend. In the observed period their share raised in 54 districts of Slovakia, the most of all in districts Košice-okolie, Stropkov, Bytča, Hlohovec, Bánovce nad Bebravou, Dunajská Streda, Čadca, Námestovo, and Detva. The situation was a little more favourable in the case of divorces of marriages with three and more under-aged children – the proportion of divorces of such marriages increased only for 38 districts, the most of all in districts Hlohovec, Stará Ľubovňa, Bratislava I, Krupina, Piešťany, Košice III, and Rožňava. From the view of spatial distribution the layout of districts according to the share of divorces with two and three and more under-aged children is opposed compared to divorces of one-child marriages. Higher shares of divorces of marriages with at least two under-aged children are connected with districts of northern part of Central Slovakian Region - Bytča, Čadca, Námestovo, Tvrdošín and districts of eastern Slovakia - Kežmarok, Levoča, Bardejov, Stará Ľubovňa, Svidník, Stropkov, i.e. areas, in which the old reproductive model with higher in tensity of fertility is still preferred.

Overall, the trend of divorces of marriages with under-aged children can be evaluated positively – their share was decreasing gradually in favour of divorces of childless marriages in the observed period. In 1996-2000 the share of divorces of marriages with under-aged children was in interval 58.4 – 82.8 %, in 2001-2005 in interval 54 – 78.8 %. The increase in number and proportion of divorces of childless marriages has being reflected in all the SR districts, except from four districts - Banská Štiavnica, Poltár, Košice IV, and Žarnovica. The number of such divorces increased more than two times in district Ilava and Humenné, also districts Krupina, Stará Ľubovňa, Vranov nad Topľou, and Sabinov recorded a significant growth. Regional distribution of districts accorging to the proportion of divorces of childless marriages was relatively variable in 2001-2005. Districts with the highest share of divorces of marriages without under-aged children (34 – 46 %) were concentrated into many smaller units, scattered the whole SR territory. In western Slovakia it is related to districts of Bratislava city, except for Bratislava IV and isolated district Piešťany, in central Slovakia districts Banská Bystrica and Detva, in the south of Slovakia districts Rimavská Sobota and Revúca. In the Eastern Slovakian Region the most extensive formation of districts with high value of observed indicator was formed by districts Medzilaborce, Humenné,

Michalovce, and Trebišov, also districts in the city of Košice territory and separately lying district Levoča and Bardejov.

In the observed period only ten divergent districts, in which the value of indicator was diverging from the trend of minimal values, registered the share of divorces of marriages with minors from the total number of registered divorces. Tvrdošín, Banská Štiavnica, Poltár, and Topoľčany counted among the most diverging districts.

Map 2.6 Divorces with under aged children in the SR districts, 2001-2005



Approximately in of the mid-1980s the structure of divorces by causes of marriage dissolution stabilized in Slovakia. The most frequent cause of divorce was the personality differences for both sexes in the observed period in all districts. High number of divorces as a consequence of this cause is induced by its general description, which enables to include also other concrete causes of divorces. So it provides participants of divorce with a feeling of preserving certain anonymity in such a delicate situation.

In 1996-2000 the proportion of divorces caused by personality differences was ranging from 22 to 90 % in the SR districts. The most of such divorces was registered for both sexes in districts Bratislava V, Pezinok, Bratislava II, Dunajská Streda. The capital Bratislava alone had the share of divorces of marriages as a result of personality differences 74 %, the city of Košice 64 % in the stated period. At the end of observed period - in 2001-2005, Kežmarok, Ružomberok Bardejov, Košice IV, and Piešťany joined the districts with high share of divorces caused by personality differences from the side of man and also woman. The city of Bratislava preserved the proportion of 74% from the beginning of observed period; a mild increase to 68 % was in Košice. The lowest share of divorces of marriages caused by the mentioned cause had districts Šaľa, Námestovo, Sabinov, and Revúca in 1996-2000, in period 2001-2005 districts Medzilaborce and Púchov joined the districts Námestovo and Revúca from the previous period. District Šaľa, which was at the end of the list in 1996-2000, recorded the highest increase in number of divorces for the stated cause, when the number of divorces with this cause increased more than threefold in 2001-2005. Also districts Stará Ľubovňa, Bytča, Sabinov, Myjava, Žilina, Gelnica, Skalica achieved high increases (over 100 %) in number of divorces of marriages as a consequence of personality differences. The share of divorces because of this most often stated cause increased in 70 districts of Slovakia altogether.

Other frequent causes of divorces of marriages are alcoholism and infidelity on the man's side. The share of divorces caused by man's alcoholism in total number of registered divorces was ranging from 1.5 to 32 % in the SR districts in the first observed period 1996-2000. The most marriages divorced as a result of declared cause in districts of eastern Slovakia - Snina, Medzilaborce, Humenné, Gelnica. Veľký Krtíš, Krupina, Námestovo, and Trebišov joined them in the last observed period. More than one half of districts in Slovakia (42 cases) recorded an increase in number of divorces caused by man's alcoholism during the observed period. The number of such divorces increased more than twofold in districts Turčianske Teplice, Stropkov, Košice III, and Tvrdošín.

The proportion of divorces caused by man's infidelity was ranging from 1.4 to 23% in the first observed period. In this period districts with the highest share of divorces caused by man's infidelity were Senica, Detva, Revúca, Partizánske, and Zvolen. In 2001-2005 Námestovo, Levice, Veľký Krtíš, and Púchov joined them, while values of the share of divorces of marriages caused by man's infidelity were ranging between 1.7 up to 21 %. Increase in the number of divorces of marriages caused by man's infidelity was reflected in more than two thirds of districts (57 districts altogether) in 2001-2005 compared to 1996-2000. The number of divorces because of the

declared cause increased the most in districts: Tvrdošín, Martin, Čadca, Lučenec, Dolný Kubín, Turčianske Teplice, and Stropkov.

The last relatively numerous group are divorces caused by man's lack of interest in family. In 1996-2000 their proportion was ranging from 0.8 % in district Martin to 28.8 % in district Stropkov. In the latest observed period the district with lowest share of divorces caused by man's lack of interest in family was Pezinok (0.5 %), Svidník was the district with the highest share (23.6 %). Within the past decade the number of divorces increased due to this cause in 25 districts of Slovakia, the highest increases were in districts Košice III, Košice I, Vranov nad Topľou, Martin, and Bratislava V. The city of Bratislava alone recorded contrariwise a decrease in this type of divorces. In 2001-2005 districts with the highest representation of divorces caused by man's lack of interest in family were situated mainly in the Eastern Slovakian Region – Svidník, Sobrance, Stropkov, Sabinov, Humenné, Michalovce, Snina and in north in the area of Kysuce and Orava – Čadca, Kysucké Nové Mesto, Námestovo.

From the woman's side the second position in ranking of causes of divorces belongs to divorces where the court did not find the fault. Their relative representation did not change more markedly in the SR districts in individual analyzed periods, though the interval range was rather wide, 1-51 %. In the all observed period the highest share was comprised by divorces where the court did not find the fault from the woman's side in districts Sabinov, Prešov, and Stará Ľubovňa in the Eastern Slovakian Region, in central Slovakia in districts Zvolen, Detva, Rimavská Sobota, Revúca and in districts Topoľčany and Levice in western Slovakia. Approximately one half of districts (39 districts) recorded increase in the number of divorces due to declared cause at the end of observed period. In 2001-2005 the number of divorces where the court did not find the fault from woman's side increased the most in district Košice III, Košice I, Turčianske Teplice, Námestovo, Poprad, and Košice-okolie.

Other causes comprise the third most numerous group of divorces with fault from woman's side. Unlike the previous group of divorces, the increase in number of divorces due to other causes from woman's side was related to more than two thirds of districts in Slovakia (53 districts). In the observed period the highest divorce increases were recorded in districts Dolný Kubín, Tvrdošín, Dunajská Streda, Snina, and Brezno. Districts Námestovo, Martin, Stropkov, and Košice III had the highest share of divorces in this group in last ten years. In the half of analyzed period also districts of northern Slovakia joined them - Čadca, Kysucké Nové Mesto, also Komárno and Brezno.

Finally the fourth most often causes of divorces from woman's side is infidelity. Districts Senica, Krupina, Revúca, Námestovo, Veľký Krtíš counted among districts with the highest share of divorces caused by woman's infidelity in the observed period. In 2001-2005 also Levice, Zvolen, and Púchov joined the mentioned districts. The share of divorces caused by woman's infidelity was ranging from 0.3 to 21 % in separate analyzed period, in 2001-2005 the interval of values constricted slightly – to the bottom limit 0.9 % and upper limit 16.7 %. Within the observed period the highest increases in number of divorces caused by woman's infidelity were achieved in districts Turčianske Teplice, Čadca, Dolný Kubín, Hlohovec, Kysucké Nové Mesto, and Stropkov. The increase due to given cause was recorded in 42 districts of Slovakia altogether.

3. Fertility

From a long-term perspective, fertility has a decreasing trend in the SR. It has been assuming features of the Western European reproductive model increasingly, which is characteristic besides other also in delay of births into higher age, increase in mean age at childbearing (also at first childbirth), as well as in higher level of non-marital fertility. Also contraception plays a significant role in realization of reproductive plans of population, and it determines the final level of fertility to a certain degree.

Over the observed period the total fertility rate was decreasing gradually in the SR. While in the period 1996-2000 total fertility rate was 1.38 children per one woman during her reproductive period, it was already only 1.22 children in 2001-2005. We can observe, except for decrease in the level of fertility, also a change in fertility distribution by age. In the first period the largest proportion of births concentrated into age group of women aged 20-24, nowadays the peak of fertility has shifted into age group of women aged 25-29. Postponement of childbearing and overall change in reproductive behaviour is reflected also in increase in fertility of women older than 30 years and in decrease in fertility of women up to 19 years old. Also the growth of mean age of women at childbearing confirms the shift of level of fertility into higher age categories. While in 1996-2000 the mean age of mother at childbearing reached 25.82 years, in the period 2001-2005 it increased to the value of 26.96 years. Also the mean age of mother at first birth registers similar tendencies, which increased from value of 23.35 years in 1996-2000 to the value of 24.92 years in 2001-2005.

Marital status of women is a factor that influences the level of fertility. During the observed period fertility of married women was significantly higher than the fertility of unmarried women. Although marital fertility rate has a decreasing trend, the prevailing proportion of children is still being born in marriage. In 1996-2000 the share of live births in marriage comprised 84.1 % and in 2001-2005 decreased to the 76.9%. It means that almost quarter of children is being born out of wedlock and consequently fertility stops being conditioned by marriage necessarily.

Timing of births as well as changes in reproductive behaviour was projected also into the structure of live births by birth order. The share of live births in first order was increasing; in 2001-2005 this proportion achieved almost 46 %. Proportion of live births of second and third birth order decreased. The share of children in second birth order fell from 32.6 % in 1996-2000 to 31.9 % in 2001-2005 and the share of children in third birth order decreased from 12.7 % to 11.7 %. Overall low level of fertility in the SR is also a consequence of the decrease in number and proportion of live births in second and third birth order.

Also the educational level of population influences reproduction. Generally speaking, the relationship between educational level and level of fertility of women is negative. The higher education woman has, the fewer children she bears and on the contrary, women with lower education have more children on average. This trend results partly from permanently lengthening educational process and partly due to the enrolment of women in labour market. Many women are trying to build a carrier, achieve satisfying social and working position at first and only later they decide to establish a family. The final result is a lower achieved fertility than it was intended originally.

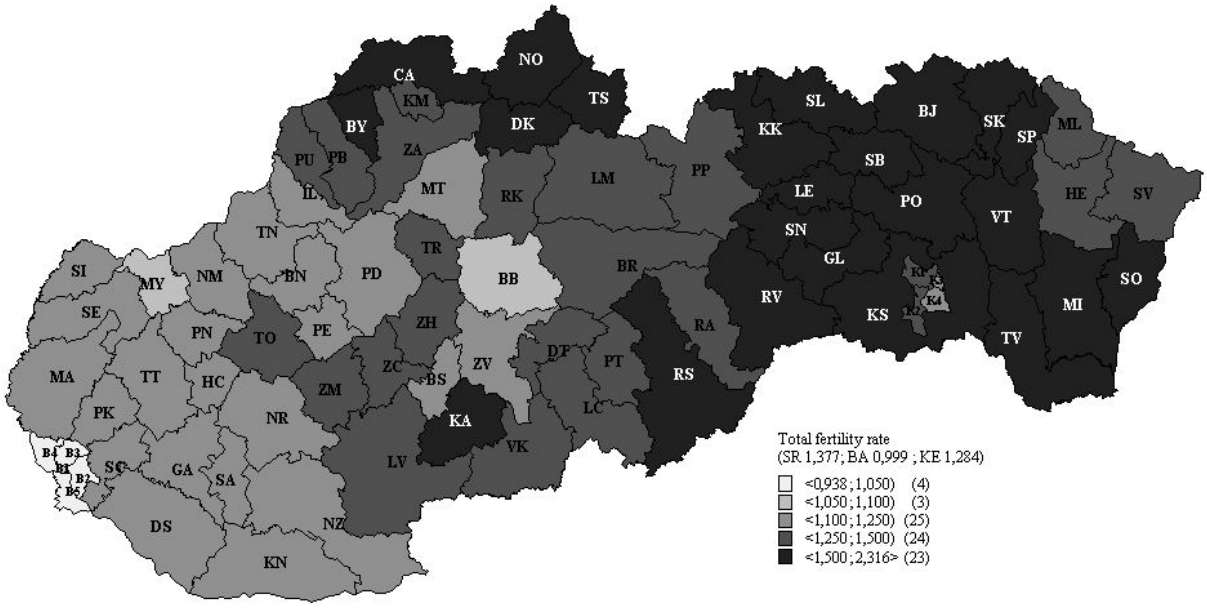
The territory of Slovakia is not homogenous in reproductive processes; individual districts record very different levels of fertility. In 1996-2000 total fertility rate was ranging from 0.94 (district Bratislava V) to 2.30 (district Námestovo) in the SR. In this period two homogenous regional areas with high level and one regional area with low level of fertility were in the SR territory. Districts of northern Slovakia (Bytča, Čadca, Námestovo, Tvrdošín, and Dolný Kubín) formed the first compact region with high fertility, in which 1.5 and more children fell per one woman at her reproductive period. The second relatively compact and extensive region with high values of fertility was formed in the eastern part of the SR. 16 districts of Prešov and Košice Regions formed it (only districts of Košice city and districts of utmost northeast with a little lower values of fertility were interfering integrity of this region), districts Krupina and Rimavská Sobota ranked else to this regional type in the southern part of central Slovakia.

On the contrary, very low fertility (below 1.05 children per one woman at her reproductive period) was typical of four districts of Bratislava - Bratislava II, Bratislava III, Bratislava IV, and Bratislava V.

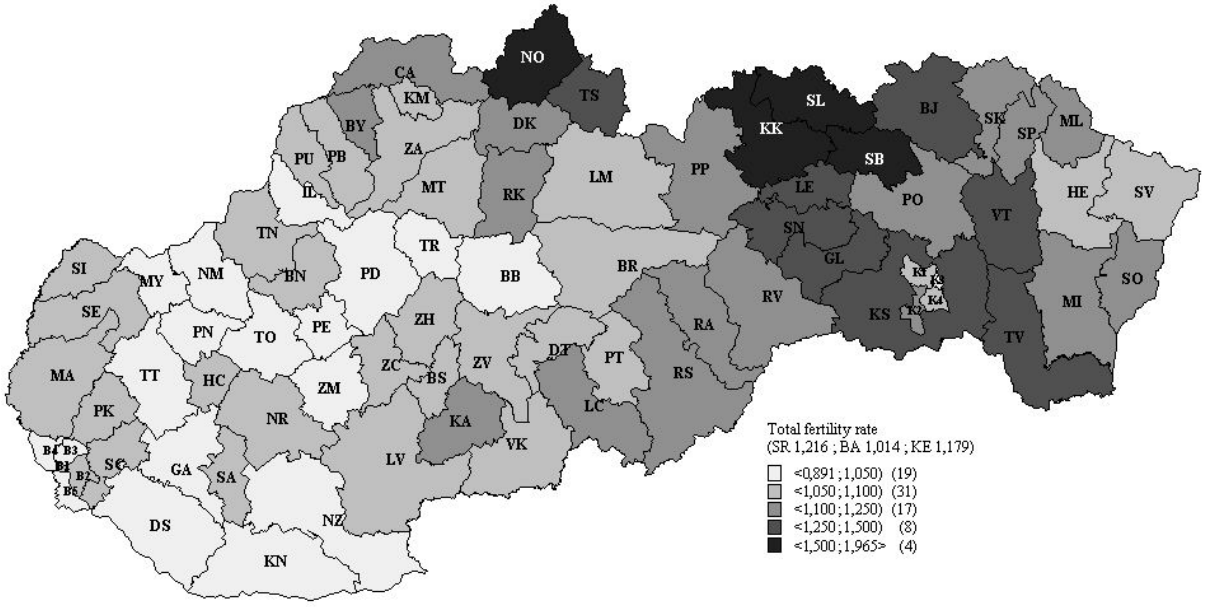
Fertility decreased in most of the SR districts in 2001-2005. The exceptions were four districts - Bratislava I, Bratislava II, Bratislava IV, and district Senec, which recorded slightly increasing fertility tendencies. But despite the increasing tendencies these districts still count among regions with very low level of fertility in the long term (and for a longest time). The blanket decrease in the level of fertility is being confirmed also by the fact that in 1996-2000 even 23 districts ranked to the interval of the highest fertility, but in 2001-2005 already only four districts remained in this interval (Kežmarok, Stará Ľubovňa, Sabinov, and Námestovo). In 2001-2005 the lowest figures of total fertility rate were in districts Myjava (0.98), Bratislava V (0.91), Banská Bystrica (0.96), Partizánske (0.97), Prievidza (0.98).

The maps show the division of the territory of Slovakia approximately into two great regions according to the fertility levels. The first region is formed by districts in the north and in the south of the SR, which have been recording higher level of fertility in the long run. The second one is formed by districts with lower fertility level, which are located in the southwest of the SR. Religiosity and ethnicity can be regarded as two significant factors that influence the level of fertility in a significant way in individual districts of the SR. The values of fertility are higher in the long run in districts with high representation of Catholic population and higher representation of population with Roma/Gypsy nationality compared to the districts with lower religiosity and low proportion of Roma/Gypsy ethnic minority. However, decrease in total fertility rate was the most dynamic only in districts with the highest level of fertility in the long term, such as Námestovo, Stará Ľubovňa, Snina, Sabinov, Levoča, Svidník, and Gelnica.

Map 3.1 Total fertility rate in the SR districts, 1996-2000



Map 3.2 Total fertility rate in the SR districts, 2001-2005

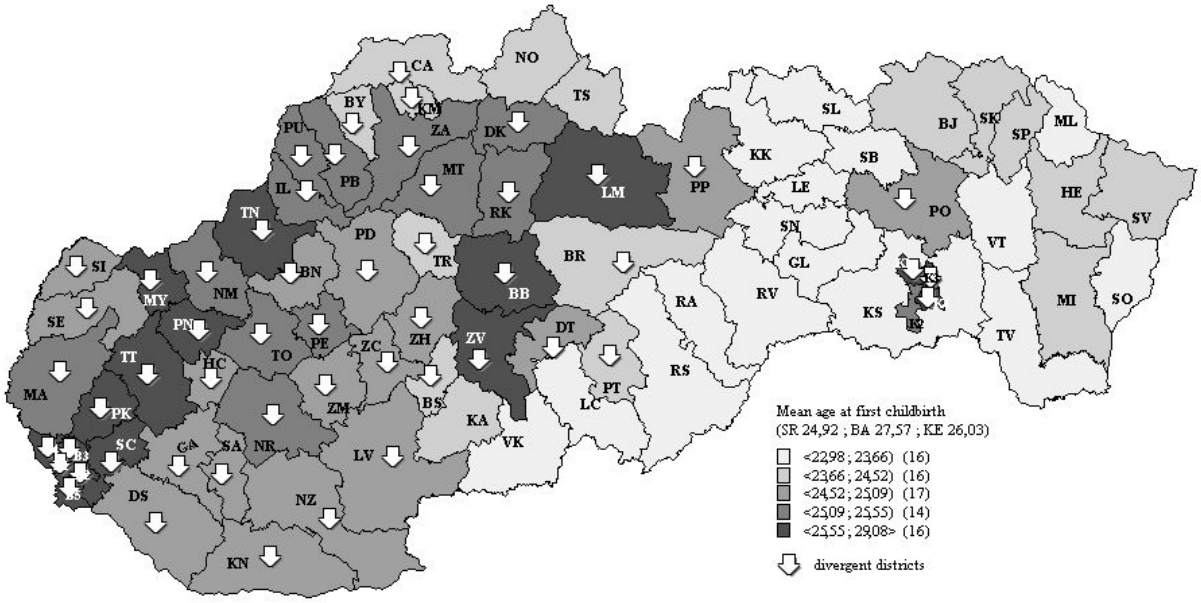


No district has been diverging or deviating in a significant way from the trend of maximal values of total fertility rate. It can be stated that regional differences are not increasing, values of total fertility rate are sustaining a stable trend or even they are approaching slightly to maximum.

The next indicator, which characterizes reproduction, is mean age of women at first birth. Higher values of this indicator are typical of big cities and also of districts of western Slovakia and a part of central Slovakia. In

2001-2005 mean age at first birth was ranging from 22.98 years in district Kežmarok to 29.08 years in district Bratislava I. The first compact region with high mean age at first birth (more than 25.55 years) emerged in western Slovakia and was formed by all districts of Bratislava, also districts Pezinok, Senec, Trnava, Piešťany, and Myjava, to which district Trenčín assigns. The second region of high values was formed in the central part of Slovakia from districts Banská Bystrica and Zvolen, to which also district Liptovský Mikuláš is classified. In the east of the SR districts Košice I and Košice IV come under this regional type. In these districts delay of first birth into higher age is probably caused by stronger tendency of population for a new reproductive model.

Map 3.3 Mean age at first childbirth in the SR districts, 2001-2005



On the contrary, women are giving birth to their first child substantially earlier in districts of eastern and southern Slovakia. In 2001-2005 the lowest values of this indicator were characteristic of districts Kežmarok, Rimavská Sobota, Gelnica, Revúca, and Trebišov. In these districts women were less than 23 years old at first birth on average. These are districts with high representation of Roma/Gypsy population. Roma/Gypsy women start their reproductive carrier substantially sooner than other women in the SR.

Mean age of women at first birth has an increasing trend in all the SR districts. And the highest growth of this indicator, by 2 years and more, was being recorded in districts Senec, Bratislava III, Košice IV, Bratislava II, Púchov, Dunajská Streda.

Even 53 districts were recording a more marked distance from the trend of minimal values of mean age at first birth. From the spatial view they were mostly districts of western and central Slovakia, i.e. districts where we record higher values of this indicator. Districts Bratislava I, Bratislava II, Bratislava III, Bratislava IV, and district Košice IV recorded the highest trend deviations.

Also mean age at childbearing is a spatially differentiated indicator. Speaking of the trend of mean age at childbearing, its general increase can be stated in all the SR districts from period 1996-2000 up to 2001-2005. The highest increase was recorded in districts Košice IV, Senec, Púchov, Turčianske Teplice, and Bratislava III.

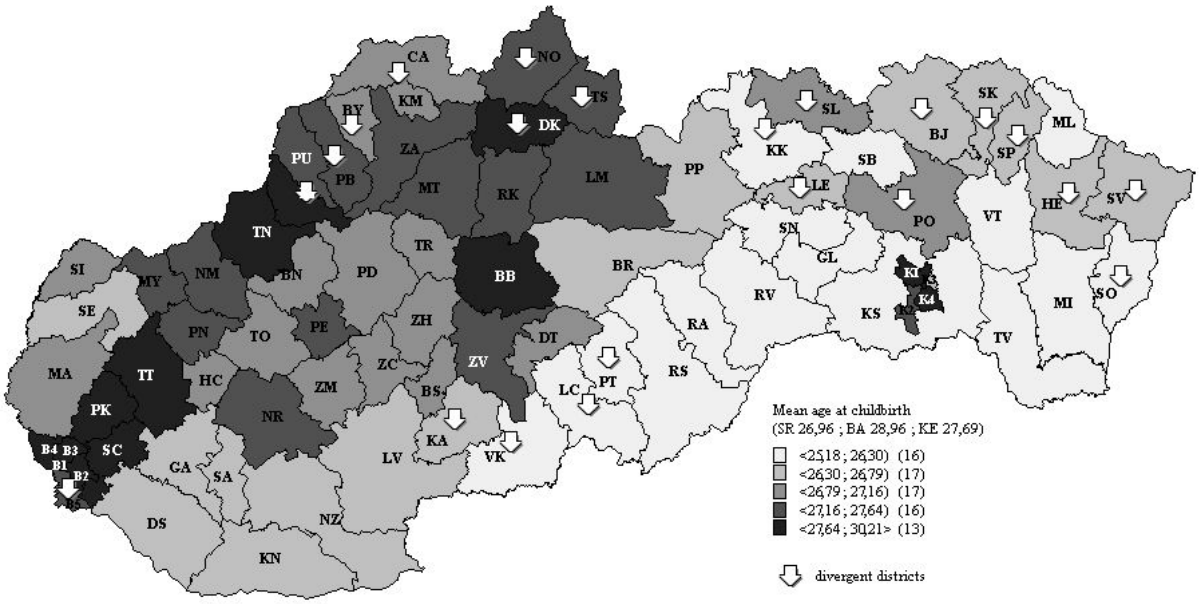
In 1996-2000 only in four Bratislava districts Bratislava I, Bratislava II, Bratislava III, and Bratislava IV women had mean age at childbearing above 27.5 years. However, there were already 19 such districts in 2001-2005. In the western districts Pezinok, Senec, Trnava joined the four mentioned Bratislava districts, districts Trenčín and Ilava formed another region with this value, and a small region arose from districts Košice I and Košice IV in the east. Also districts Dolný Kubín and Banská Bystrica come under this regional type.

It is generally true that higher mean age at childbearing is connected mainly with delay of great part of births into higher age and with greater population tendency for a new reproductive model in districts of western Slovakia as well as in the large cities districts. On the contrary, higher value of this indicator is associated mainly with higher number of children born in higher birth orders in districts with higher religiosity located in northern and northeast Slovakia, because population prefers the family model with more children in these districts.

In 2001-2005 there were 5 districts with the highest mean age of women at childbearing: Bratislava I (30.20 years), Bratislava IV (29.70 years), Bratislava II (29.19 years), Bratislava III (29.19 years), and Košice I (28.51 years). A shorter period remains for these women to realize their reproductive plans, which eventually influences also their level of fertility. Health or other complications can occur with increasing age and these can affect also in family size.

On the contrary, women had the lowest mean age at childbearing during the whole analysed period mainly in the southern and southeast part of the SR, in districts Rimavská Sobota, Rožňava, Revúca, Lučenec with figures below 25.7 years. They are districts of Southern Slovakian Hollow with high representation of population with Roma/Gypsy nationality.

Map 3.4 Mean age at childbearing in the SR districts, 2001–2005



22 districts were diverging from the trend of maximal values of mean age and these were district Bratislava V, districts in the northern and eastern part of the SR, and four districts in the south of central Slovakia. The highest deviations from the trend of maximal values appeared in districts Kežmarok, Sobrance, Lučenec, Stropkov, and Stará Ľubovňa.

Decreasing level of fertility, as well as shift fertility maximum into higher age categories of women, is being reflected also in fertility distribution by age.

In 1996-2000 the highest fertility was concentrated into age category of 20-24 years old women in most of the SR districts. But already during this period maximal fertility was shifting into higher age category, i.e. in category of 25-29 years old women, in 15 districts. Except for districts of two biggest cites Bratislava and Košice, also districts Banská Bystrica, Trenčín, Trnava, Ilava, and Pezinok registered the highest fertility in this age category. These can be denoted as districts with earlier start of changes in reproductive behaviour. Comparing periods 1996-2000 and 2001-2005 the level of fertility has decreased for women aged 20-24 in all the SR districts.

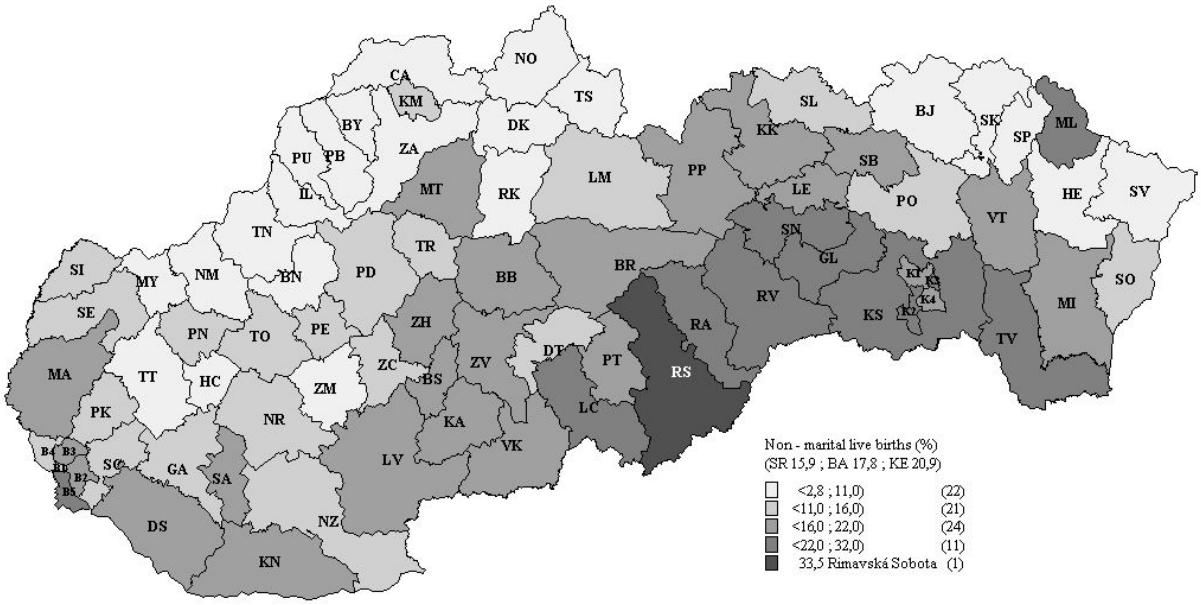
In 2001-2005 the peak of highest fertility shifted into age category of 25-29 years old women in most of districts. The highest fertility remained concentrated in the age category of 20-24 years old women only in 11 districts. These were districts of Southern Slovakian Hollow - Rimavská Sobota, Revúca, Lučenec, Rožňava, districts Trebišov, Košice-okolie, Medzilaborce, Gelnica, Kežmarok in eastern Slovakia, and districts Veľký Krtíš and Poltár in the southern part of central Slovakia.

On the other hand, district Bratislava I represented a specific case, where the fertility maximum was shifted even into age category of 30-34 years old women. The level of fertility for women aged 30-34 increased in all the observed period in all the SR districts, apart from districts Námestovo and Krupina.

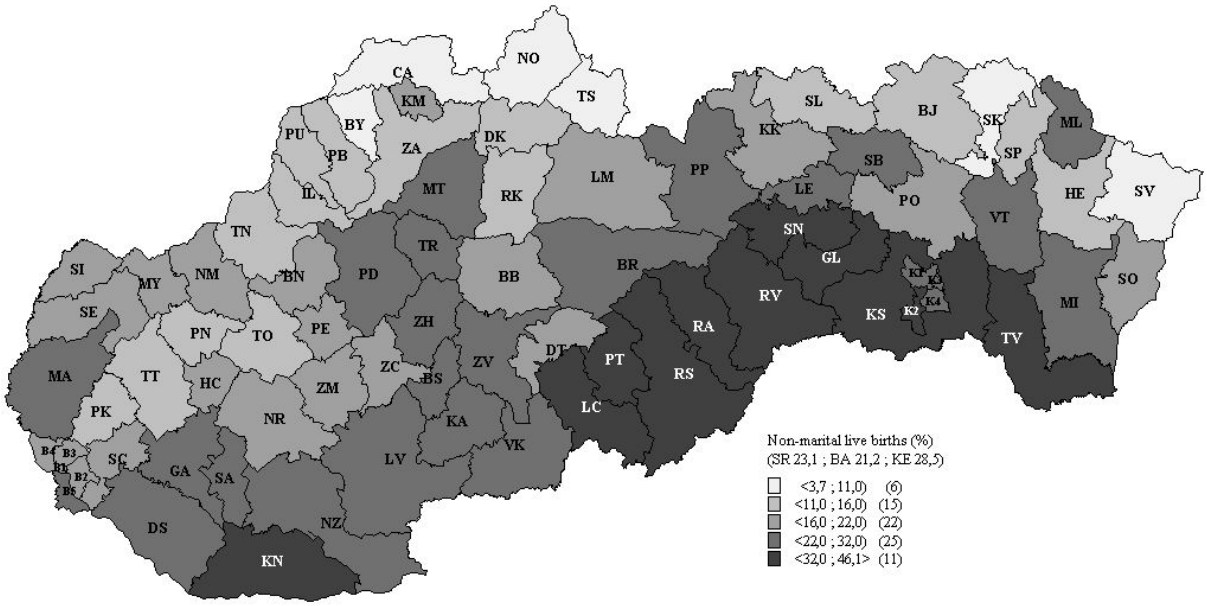
In 1996-2000 fertility of women of the youngest age group (15-19 years old) was of a larger proportion on the total fertility rate and teen-age fertility was of a higher intensity than the one of women aged 30-34. The old reproductive model, typical of fertility concentrated into lower age and closely connected with early marriages, deceases away. On the other hand, in 2001-2005 women aged 30-34 were already recording a higher level of fertility than women up to 19 years, and in all districts except for Rimavská Sobota.

Also the proportion of non-marital births documents the shift in reproductive behaviour towards the new reproductive model. In 1996-2000 the share of non-marital births was ranging from 2.8 % in district Námestovo to 33.5 % in district Rimavská Sobota. The span of values of this event increased in 2001-2005, when the share of non-marital live births was moving in 3.8-46 %. The increase in the share of non-marital live births is confirmed also by the fact that while in 1996-2000 even 22 districts were in the interval of lowest figures of this indicator, it was already only 6 districts in 2001-2005.

Map 3.5 The share of non-marital live births in the SR districts, 1996-2000



Map 3.6 The share of non-marital live births in the SR districts, 2001-2005



Districts with traditionally the lowest proportion of non-marital live births were districts of Kysuce (Čadca, Bytča) and Orava (Námestovo, Tvrdošín, Dolný Kubín), districts Svidník and Snina in the east of the SR, with the share of non-marital live births below 11 %. In these districts the low proportion of non-marital births is determined mainly by high religiosity of population and also strong orientation to marriage and parenthood (type of nuclear family is a dominant form of consensual union for this population). Only district Rimavská Sobota had the share of non-marital live births above 32 % in 1996-2000. However, there were already 11 such districts in period 2001-2005. Those of the southeast part of Slovakia form an extensive regional formation that begins with district Lučenec (41.6 %) and Poltár (35.1 %), continues with district Rimavská Sobota, in which the proportion of non-marital live births increased to 46 % (i.e. almost every second child was born out of wedlock), then districts Revúca (43.6 %), Rožňava (45.2 %), etc., to district Trebišov (36.9 %), with the exception of districts Košice I, III, and IV. These are districts with high representation of Roma/Gypsy population, who has a different attitude to marriage and parenthood. Roma/Gypsy couples live together often without official wedding. Their cohabitation is usually approved by community and legal marriage is not necessary for family building according to them.

The new reproductive behaviour modifies, besides the emerged delay of births into higher age and increase in non-marital fertility, also value of child changes. Child currently presents emotional and not economi-

cal asset for parents. The expenses invested in education and upbringing of children are increasing, which is being reflected in the structure of births by birth order and mainly in reduction of births of higher orders for majority of the SR population.

Generally speaking, the largest proportion of children of first birth order is born in the long run in districts where the level of fertility is generally lower. In 2001-2005 the most children of first birth order was born in all districts of Bratislava (even 63 % in Bratislava V), then in district Košice III, Banská Bystrica, Pezinok, Senec, Dunajská Streda, and Myjava (above 53 %). The least children of first order are in districts Stará Ľubovňa (31.2 %), Sabinov (31.9 %), Námestovo (34.9 %), Kežmarok (34.9 %), Spišská Nová Ves (35.7 %).

Opposite spatial differentiation is characteristic of the fertility of higher orders. Districts of northern and eastern Slovakia (Bytča, Čadca, Námestovo, Tvrdošín, Dolný Kubín, Kežmarok, Stará Ľubovňa, Sabinov, Vranov nad Topľou, Snina, and Bardejov) are recording the highest proportion of children born in the third, fourth, and higher birth orders. On the contrary, substantially fewer children of higher birth orders are being born in districts of cities Bratislava, Košice like also in districts of western and southwest Slovakia. While this situation is caused by greater tendency of population for new reproductive model in big cities and in districts of western Slovakia, in the south of the SR it is influenced by high representation of Hungarian population, who prefer lower number of children in families.

Also women's education influences the level of fertility substantially. It is generally true that in western Slovakia and a part of central Slovakia as well as in big cities are women with higher attained educational level overrepresented and these women have fewer children on average. On the contrary, in the southeast, east and in remote regions of northern Slovakia is higher proportion of women with lower attained educational level and they have more children on average. In 2001-2005 districts of Bratislava, district Košice I, Banská Bystrica, and Zvolen were recording the most births of women with university education (more than 20 %). Universities, educational institutions, and also jobs requiring higher education are concentrated in these districts. Contrariwise, districts with the highest share of births of women with elementary education were Gelnica (49.5 %), Rimavská Sobota (48.3 %), Revúca (48.0%), Spišská Nová Ves (48.0 %), Košice–okolie (46.5 %).

The capital Bratislava has been recording lower fertility than the city of Košice in the long run, also despite the tendencies of slightly increasing fertility in districts Bratislava I, Bratislava II, Bratislava IV. During the observed period total fertility rate was only one child per one woman in Bratislava. In Košice a little higher values of total fertility rate are observed, but overall decreasing trend was confirmed also here. While in 1996-2000 1.28 children fell per one woman at her reproductive period, over the period 2001-2005 it was already only 1.18 children.

Both cities have similar trends in mean age of women at childbearing and first birth. In both cities women give birth to their first (and also other) children substantially later than the SR average is. In 2001-2005 mean age of women at first birth was 27.57 years in Bratislava, in Košice a little lower mean age - 26.03 years. The same holds also for mean age of women at childbearing. In Bratislava women give births as 29 years old on average, in Košice as 28 years old.

The proportion of non-marital births has an increasing trend in Bratislava and also in Košice. In Košice the proportion of non-marital births was higher during the analysed period. Both cities are above the SR average in the long run regarding this indicator.

Finally, it can be stated that women living in these both big cities are typical representatives of new reproductive behaviour that is being reflected not only in lower level of fertility, delay of births into higher age, but also in new forms of family and partnership coexistence. The model of new reproductive behaviour is coming in faster in Bratislava than in Košice.

4. Abortion

It can be generally stated that from the long-term viewpoint abortion has been decreasing in the SR. However, the number of spontaneous abortions is decreasing at slower rate than number of induced abortions. Moreover spontaneous abortions share in the total number of abortions at substantially lower rate (approximately one quarter of all abortions).

The values of total spontaneous abortion rate have not changed much; in period 1996-2000 0.13 miscarriages fell per one woman at her reproductive period, in 2001-2005 it was 0.12 abortions. The mean age of women at spontaneous abortion has a growing tendency; it increased from 27.53 years to 28.64 years during the observed period. The abortion ratio has changed only minimally. While in 1996-2000 9.4 miscarriages fell per 100 births, in 2001-2005 it was 9.5. In the first period 8.7 spontaneous abortions fell per 100 terminated pregnancies, 8.4 in the second period.

Spontaneous abortion is differentiated also by marital status of the woman. The proportion of miscarriages is decreasing among married and increasing among unmarried women. In 1996-2000 68.8 % of married women experienced miscarriages, in 2001-2005 their proportion decreased to the value of 63.4 %. On the contrary, the share of spontaneous abortions increased from 31.2 % to 36.6 % for unmarried women, while the greatest proportion fell traditionally per single women.

Induced abortion is of a different character. Its intensity depends on more factors – mainly on legislation, total population conditions (birth rates, planned and realized fertility), economic, social factors and contraceptive use (price, accessibility, access to information on contraception). Also cultural factors, as e.g. public opinion, religiosity, social control, and sexual behaviour patterns, play a significant role in relation to induced abortions. Induced abortion comprises the substantial part of total abortion in the SR.

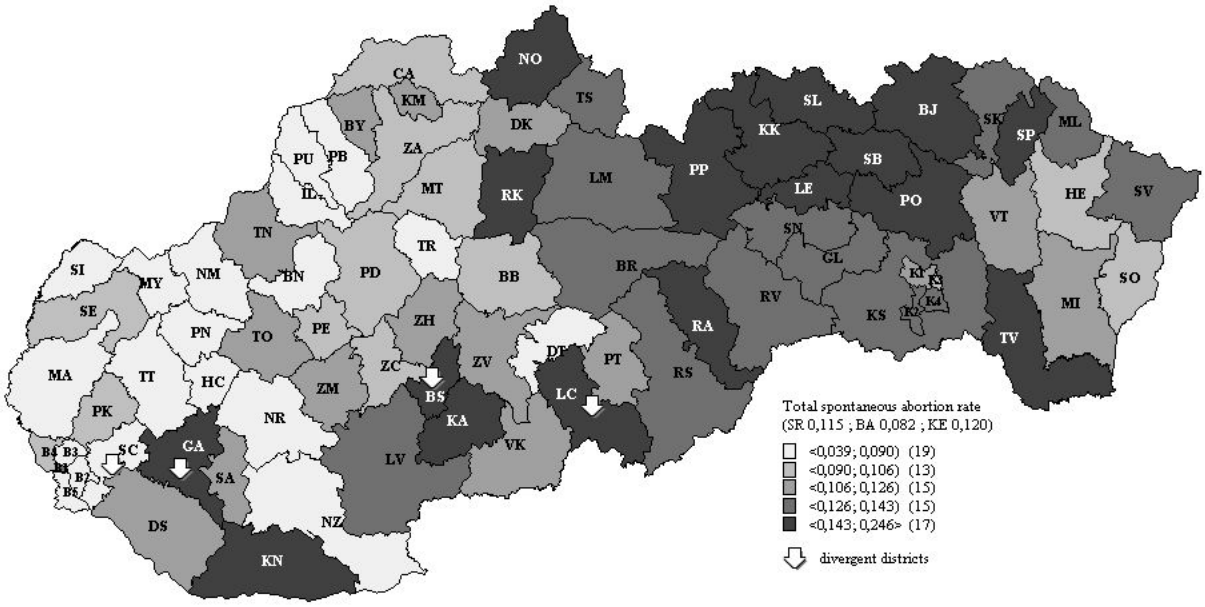
Within the whole SR territory induced abortion has a favourable trend, whereas the number and also the proportion of induced abortions are decreasing. In period 1996-2000 0.53 induced abortions fell per one woman at her reproductive period, in 2001-2005 it was already only 0.39 induced abortions. The mean age of women at induced abortion was also increasing as it was in case of spontaneous abortion; it dropped from 29.08 years in 1996-2000 to 29.30 years in 2001-2005. Induced abortion ratio decreased from 37.0 % to 30.9 % during ten years. In the first period 27.0 induced abortions fell per 100 terminated pregnancies, in the last period already only 23.6.

In 1996-2000 married women dominated clearly among the applicants for induced abortion (66.3 %). In the second period their share was decreasing and currently reaches the value of 57.3 %. The proportion of unmarried women who decide for induced abortion is increasing, contrariwise. While in 1996-2000 33.7 % of unmarried women underwent induced abortion, in 2001-2005 their proportion reached 42.7 %. The increasing share of unmarried women on the total number of abortions (spontaneous and also induced) can be caused partly by delay of marriages and births into higher age, and also by increase in cohabitations and other informal forms of consensual unions.

The territory of Slovakia is not homogenous with respect to the abortion indicators. In the long run, women had the most of miscarriages in districts of northern and eastern Slovakia, i.e. in districts with the highest birth rate. In period 2001-2005 the highest total spontaneous abortion rate (above 0.14) was recorded in a relatively large region of districts in Prešov region – from Poprad to Bardejov and Prešov, including also district Stropkov, separately lying district Trebišov in Košice region, districts Banská Štiavnica, Krupina, Lučenec, Revúca, Ružomberok, and Námestovo in the Central Slovakian Region. Districts Galanta and Komárno reached these values in the southwest of the SR. On the contrary, 19 districts of the SR recorded less than 0.09 spontaneous abortions per one woman, mostly in western Slovakia. The lowest values of this indicator were typical of districts Piešťany (0.04), Bratislava II (0.05), Bánovce nad Bebravou (0.06), and Ilava (0.07).

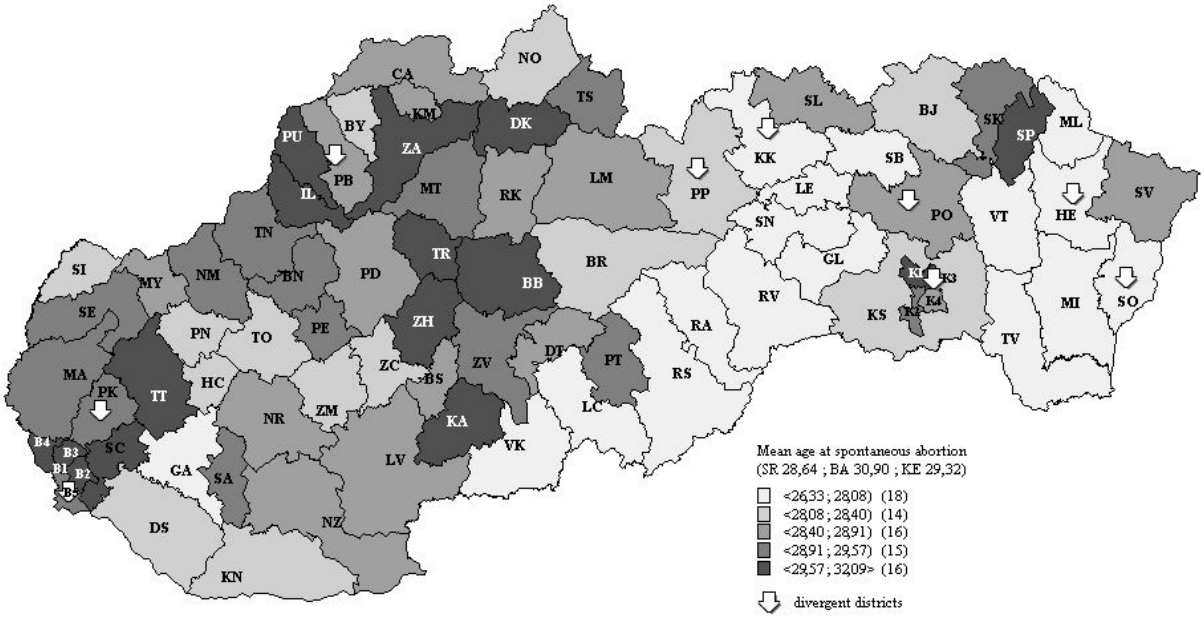
It is generally true that more urbanized districts have lower spontaneous abortion rate than districts with dominance of rural population, where the network of health facilities is scarce and their accessibility more complicated. Only four districts - Senec, Galanta, Banská Štiavnica, and Lučenec registered more remarkable divergence from the trend of minimal values of total spontaneous abortion rate during the observed period.

Map 4.1 Total spontaneous abortion rate in the SR districts, 2001-2005



Mean age of women at spontaneous abortion was ranging from 26.34 years in district Medzilaborce to 32.08 years in district Bratislava I in period 2001-2005. Districts of southeast and eastern Slovakia (from Veľký Krtíš through Lučenec, Rimavská Sobota, to Kežmarok and Sabinov) formed a homogenous region with the lowest values of this indicator with mean age at spontaneous abortion of 28 years and less. A higher proportion of Roma/Gypsy population is typical of these districts; their low living standard, unfavourable living conditions, overall worse health have been contributing to the higher level of spontaneous abortion. The second region with such values has formed in eastern Slovakia from districts Trebišov, Michalovce, Sobrance, Humenné, Medzilaborce, and Vranov nad Topľou. Also in district Galanta in western Slovakia women recorded low mean age at spontaneous abortion.

Map 4.2 Mean age of women at spontaneous abortion in the SR districts, 2001-2005



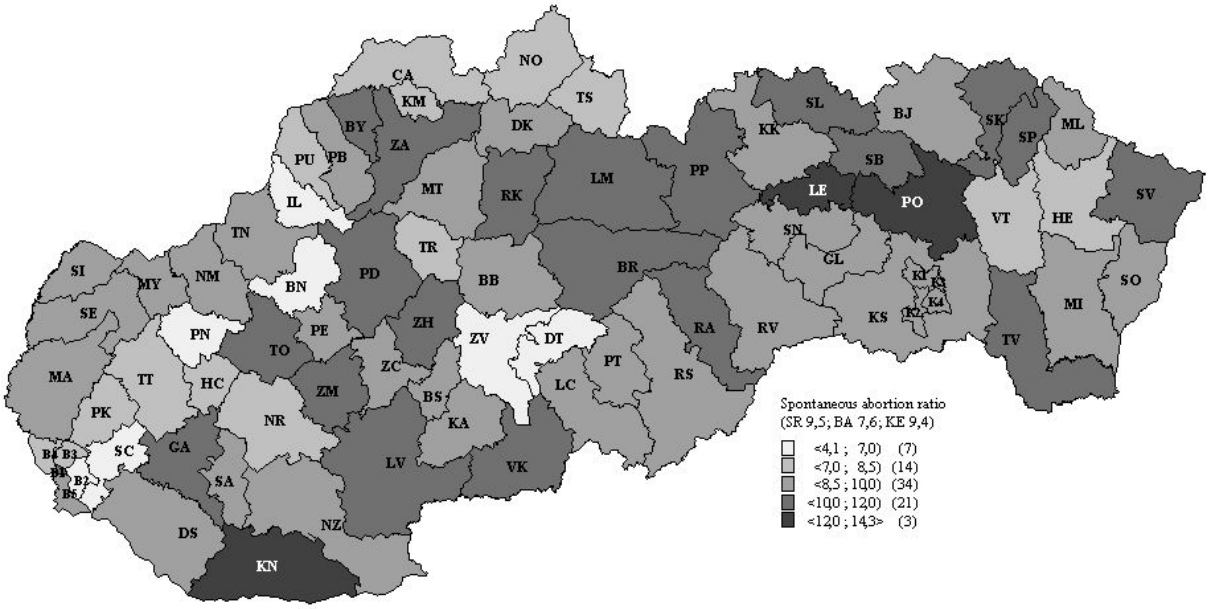
Women with the highest mean age at spontaneous abortion were in districts Bratislava I (32.09 years), Bratislava IV (31.79 years), Bratislava II (31.30 years), Bratislava III (30.69 years), Turčianske Teplice (30.75 years), Košice I (30.08 years). In these districts women postpone their pregnancies to substantially higher age.

The value of mean age of women at spontaneous abortion was increasing in the observed period in most of the SR districts. The exceptions were four districts that recorded moderate decreases - Bratislava V, Medzi-

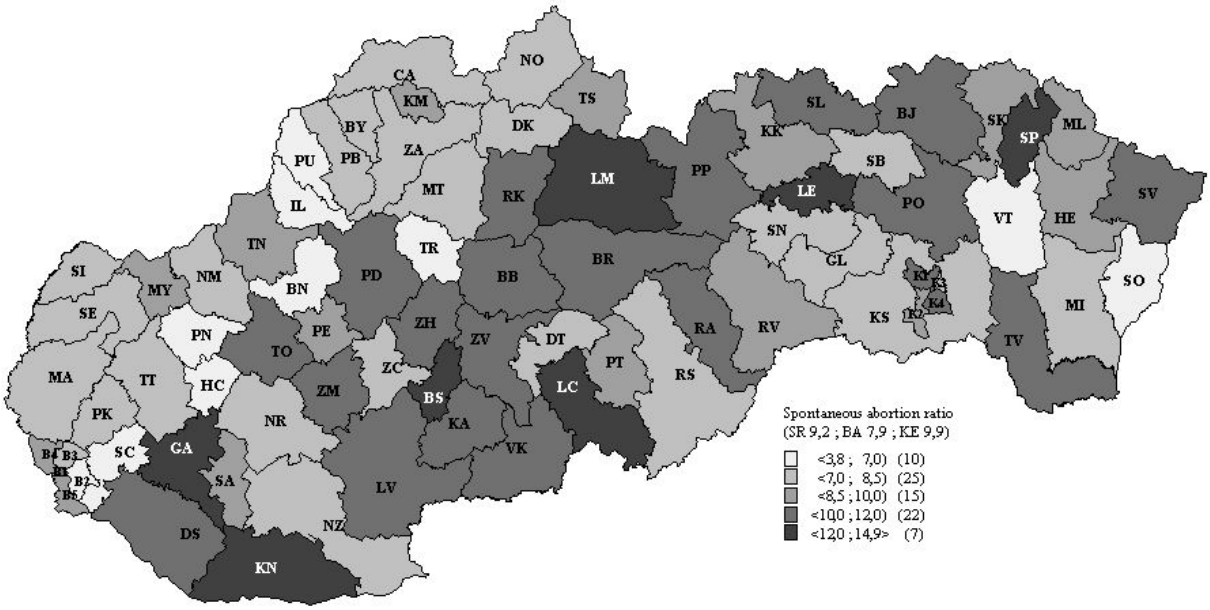
laborce, Sobrance, Kežmarok. On the contrary, district Turčianske Teplice recorded the most dynamic increase of mean age, even by 3.6 years.

The analysis of development of mean age at spontaneous abortion revealed 9 divergent districts, in which trends of values of mean age were diverging significantly from the trend of maximal values. Districts Bratislava V, Pezinok, and Kežmarok were moving off this trend the most.

Map 4.3 Spontaneous abortion ratio in the SR districts, 1996-2000



Map 4.4 Spontaneous abortion ratio in the SR districts, 2001-2005



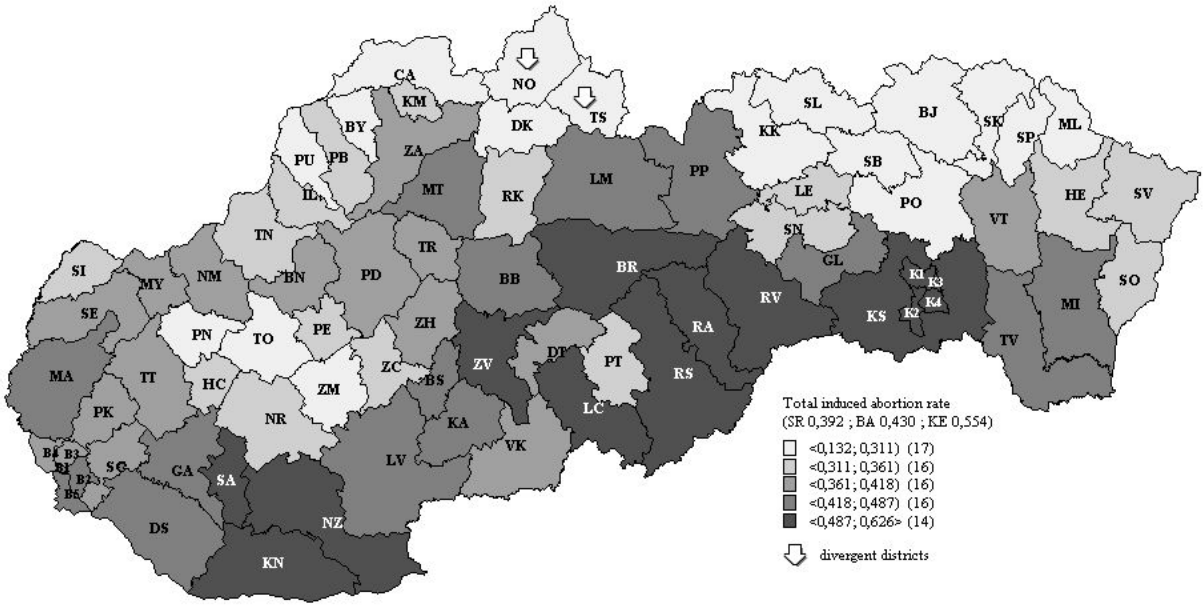
One of the characteristics of abortion is proportion of number of abortions to number of births, so called abortion ratio. In period 1996-2000 the lowest spontaneous abortion ratio (low than 7 miscarriages per 100 births) was registered in districts Bratislava II, Senec, Piešťany, Bánovce nad Bebravou, Ilava, Detva, and Zvolen. In 2001-2005 also districts Hlohovec, Púchov, Turčianske Teplice ranked among these districts and in the east of the SR districts Vranov nad Topľou and Sobrance. Only three districts disposed of the highest values of this indicator (12 and more miscarriages per 100 births) in the first period. It was district Komárno in the southern Slovakia and districts Prešov and Levoča in eastern Slovakia. In 2001-2005 even seven districts reached this value. They were districts Komárno and Galanta in the south of the SR, in central Slovakia districts Banská Štiavnica, Lučenec, and Liptovský Mikuláš, and in the east of the SR districts Levoča and Stropkov. It can be generally stated that while in 1996-2000 higher values of spontaneous abortion ratio were connected largely with

the territory of northern and eastern Slovakia, in 2001-2005 they shifted towards southwest and their spatial distribution has more or less the character of mosaic in eastern Slovakia.

In 2001-2005 the least of miscarriages per 100 terminated pregnancies (below 5) was recorded in districts Piešťany, Bratislava II, and Bánovce nad Bebravou. On the contrary, the most of spontaneous abortions per 100 terminated pregnancies (above 12) fell per women in districts Banská Štiavnica, Levoča, Komárno.

Spatial differentiation of induced abortion was more or less converse in comparison with spatial differentiation of spontaneous abortion. It means that low figures of induced abortion were often in districts with high values of spontaneous abortion and reversely.

Map 4.5 Total induced abortion rate in the SR districts, 2001-2005



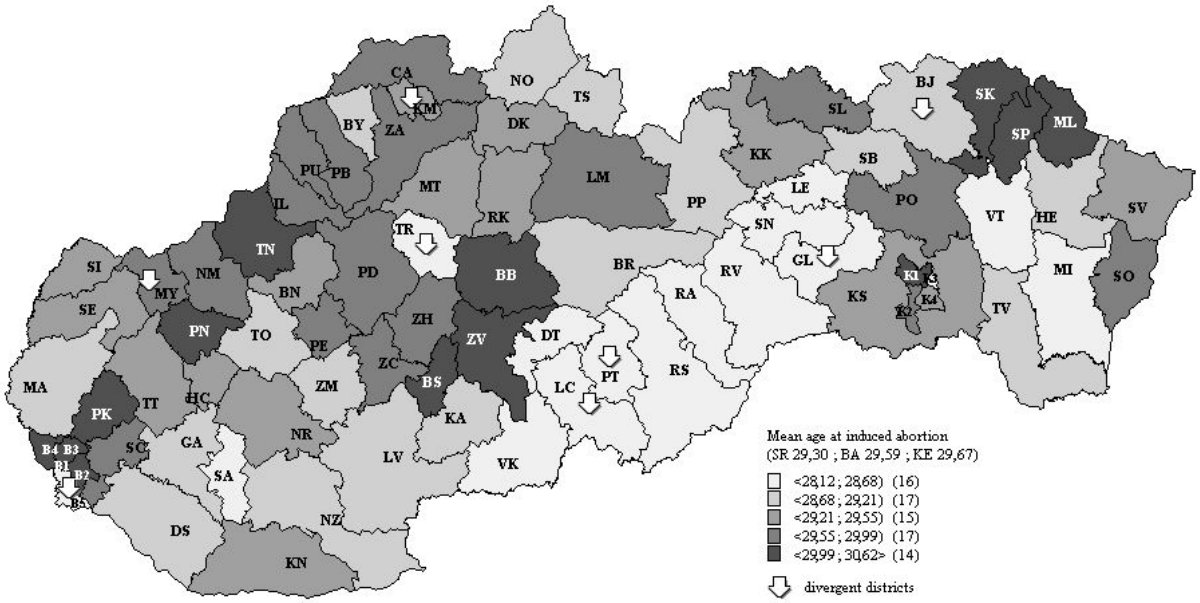
In 2001-2005 it was possible to set apart three compact regions with low and two regions with high intensity of induced abortion in Slovakia. Districts Piešťany, Topoľčany, Zlaté Moravce formed the first region with low induced abortion in the western part of the SR. The second region with low values of induced abortion was formed from districts Tvrdošín, Námestovo, Dolný Kubín, Čadca, Bytča in the north of Slovakia and the separately lying district Púchov joins them in Považie. Districts of northern part of eastern Slovakia - Kežmarok, Stará Ľubovňa, Sabinov, Prešov, Bardejov, Svidník, Stropkov, and Medzilaborce formed the third region of low values. In these three regions the intensity was less than 0.31 induced abortions were per one woman.

Regions with the highest values of induced abortion were formed in the south of Slovakia. Districts Šaľa, Nové Zámky, and Komárno formed the first one. The second more extensive region was formed by districts Zvolen, Brezno, districts of Southern Slovakian Hollow - Lučenec, Rimavská Sobota, Revúca, and Rožňava, then district Košice–okolie and districts of Košice city. In these districts an average of more than 0.49 induced abortions fell per one woman at her reproductive period.

Induced abortion decreased during the observed period in all the SR districts, except for districts Námestovo and Tvrdošín. Concurrently a significant divergence of values from the trend of minimal values of total abortion rate was recorded in these two districts.

Mean age of women at induced abortion was ranging from 28.13 years in district Poltár to 30.62 years in district Svidník in 2001-2005. The highest values of this indicator were in districts Bratislava IV (30.50 years), Bratislava I (30.48 years), Piešťany (30.47 years), and Košice I (30.31 years). On the contrary, the lowest values were in districts Levoča (28.16 years), Bratislava V (28.27 years), Lučenec (28.30 years), and Vranov nad Topľou (28.44 years). Considering different age structure of individual districts of Bratislava city, it is interesting that while district Bratislava V counts among districts with the lowest mean age of women at induced abortion, other four districts of Bratislava rank among districts with the highest mean age at induced abortion, on the contrary. These four Bratislava districts together with district Pezinok formed a small region with high mean age at induced abortion in western Slovakia, in central Slovakia such region was created from districts Banská Štiavnica, Zvolen, and Banská Bystrica, and in eastern Slovakia from districts Svidník, Stropkov, and Medzilaborce. Also districts Piešťany, Trenčín, and district Košice I came under this regional type. Low mean age at induced abortion was in districts from Veľký Krtíš towards the northeast up to districts Levoča and Gelnica, districts Vranov nad Topľou, Michalovce, and Košice I and districts Šaľa and Turčianske Teplice. In most of the SR districts mean age of women at induced abortion increased, and 25 districts recorded converse tendencies.

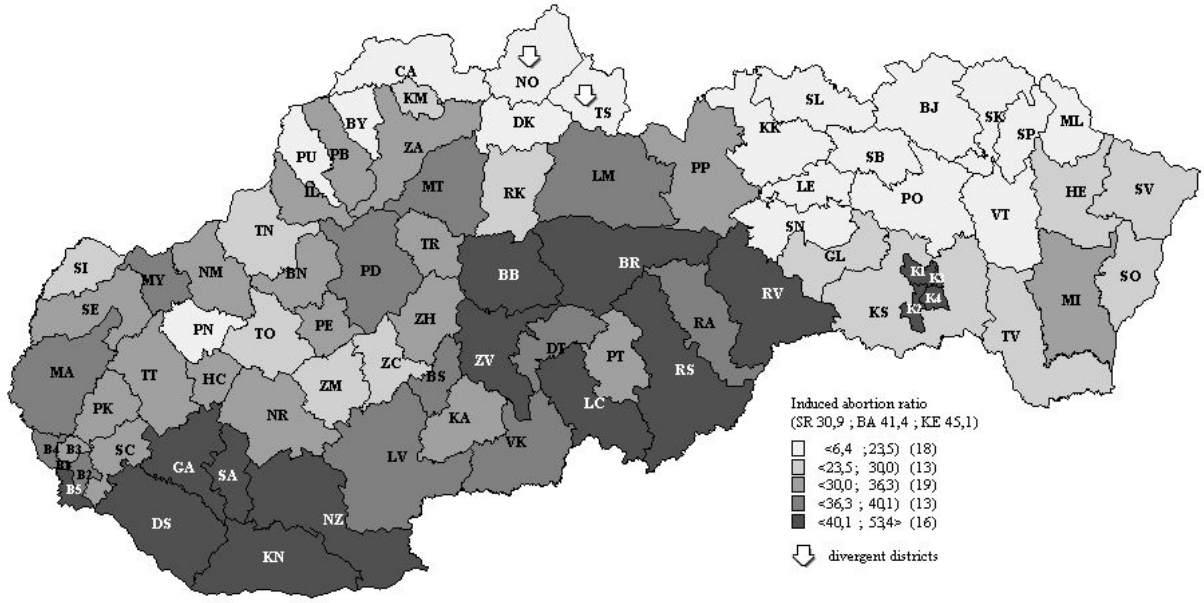
Map 4.6 Mean age at induced abortion in the SR districts, 2001-2005



5 districts, Bratislava V, Myjava, Kysucké Nové Mesto, Turčianske Teplice, and Bardejov, registered significant divergences from the trend of maximal values of mean age.

Regarding the spatial differentiation of induced abortion ratio, the territory of Slovakia can be divided into two parts – northern to north-eastern part with lower and southern to south-western part with higher values of this indicator. Concurrently we can state that two large regions were formed with high and two large regions with low values of induced abortion ratio. The first region with high values was created from districts Dunajská Streda, Galanta, Šaľa, Nové Zámky, and Komárno in southern Slovakia. Districts in the central part of central Slovakia - Zvolen, Banská Bystrica, Brezno Lučenec, Rimavská Sobota, and Rožňava, form the second region of high values. Districts of Košice city form a little region in the east. A region with low induced abortion ratio in the long run was created in the north of the SR (districts Bytča, Čadca, Námestovo, Dolný Kubín, and Tvrdošín). The next region of low values was formed from districts of northern part of eastern Slovakia from Kežmarok and Spišská Nová Ves to Vranov nad Topľou, Stropkov, and Medzilaborce. Extremely low values were in districts Sabinov (6.4 %), Stará Ľubovňa (8.0 %), and Námestovo (8.1 %).

Map 4.7 Induced abortion ratio in the SR districts, 2001-2005



The value of induced abortion ratio decreased in most of the SR districts. The exceptions were 6 districts, district Považská Bystrica, Turčianske Teplice in the northwest, district Námestovo, Tvrdošín in the north, and

district Svidník and Vranov nad Topľou in the east. However, despite the increase of this indicator in the mentioned districts, these are still among districts with the lowest induced abortion ratio in the SR. Only districts Námestovo and Tvrdošín recorded significant deviations from the trend of minimal values.

The least induced abortions per 100 terminated pregnancies were in districts Sabinov (6.1), Stará Ľubovňa (7.4), Námestovo (7.5), Bardejov (8.9), and Tvrdošín (9.8). On the contrary, the most of induced abortions per 100 terminated pregnancies were in districts Bratislava V (34.8), Košice II (32.3), Banská Bystrica (32.0), Komárno (31.6), and Nové Zámky (31.6).

Generally speaking, the city of Košice has a higher level of spontaneous abortion compared to Bratislava, whereas more pregnancies are recorded in Košice. Bratislava lies below the SR average regarding the intensity of spontaneous abortion, while Košice registers values above the average of all Slovakia. In period 2001-2005 mean age of women at spontaneous abortion reached 30.90 years in Bratislava and 29.32 years in Košice. In Bratislava, 8 miscarriages fell per 100 births and 10 in Košice in 2001-2005.

Both cities have higher values of induced abortion than the average of Slovakia and in both cities women undergo induced abortion the most often at the age of 30 on average. Induced abortion ratio has values above the average of all Slovakia in Bratislava (41.4 %) and also in Košice (45.1 %). 29 induced abortions fall per 100 terminated pregnancies in Bratislava and 31 in Košice. While in Bratislava unmarried women (54 %) are prevailing among the applicants for induced abortion, the situation is contrasting in Košice, ergo 54 % of the total number of induced abortions fall per married women.

5. Mortality

Mortality is one of the factors determining the dynamics of population. It is known that it causes population ageing in the case of its falling and decreases population in the case of its increasing. Its total level is a synthesis of mortality in various regions where biological, social, economic, and environmental factors impact at various intensities. This gives reason to research the spatial differentiation of mortality and hereby select areas to which measures that decrease mortality should be oriented.

Mortality has been still improving in the Slovak Republic. The life expectancy at birth increased for men from 68.91 to 69.96 years[6] from 1996-2000 to 2001-2005. This increase was milder for women, from the value of 77.53 to 77.91 years. A similar improvement can be observed also at age 60-64, i.e. at the age that characterizes the mortality of older generation. The life expectancy at this age[7] achieved 16.32 years for men and 21.08 years for women in the last period. Also infant mortality has been recording an improvement; it fell from 8.94 ‰ in 1996-2000 to the value 7.14 ‰ in 2001-2005.

The percentage distribution of deaths by main causes of death[8] has not been changing over time, for men and women as well. The variation recorded 0.5% at most. The most of deaths for men were due to circulatory system diseases, 47.9 % out of the total number of deaths for men. It was followed by deaths due to neoplasms with 24.9 %. The next were deaths due to external causes of death with 8.8 %, respiratory system diseases with 6.1 %, and digestive system diseases with 6.1 %.

The percentage distribution of deaths by main causes of death is different for women but practically constant in time as it has been already mentioned. The highest percentage was recorded for deaths due to circulatory system diseases, 61.8 %. The second most numerous cause of death was due to neoplasms with 19.7 %. Unlike in men, deaths due to respiratory system diseases were the next with 5.2 %, digestive system diseases being the next with 4.2 %, and finally deaths due to external causes with 2.6 %.

From the view of change in the level of mortality[9] by main causes of death between 1996-2000 and 2001-2005, also a general decrease can be stated with one exception – increase in mortality due to digestive system diseases for both sexes. The increase was by 1 % for men, while even by 14 % for women. Mortality due to circulatory system diseases decreased approximately by 6 % for both sexes, due to neoplasms by 6 % for men and 4 % for women, due to respiratory system diseases by 3 % for men and by 16 % for women. The highest decrease in mortality was recorded due to external causes of death, by 9 % for men and by 21 % for women.

Excess male mortality has been still high, without any sign of improvement in the researched period. The highest one is due to external causes of death, where excess mortality ratio achieves approximately 450 %; it is 210 % due to neoplasms, 220 % due to respiratory and digestive systems diseases. The lowest excess mortality is due to circulatory system diseases, 150 %.

As it has been mentioned, indicated tendencies of mortality in the whole territory are not being proved uniformly in each region, in our case in district, whether by sex, age, or causes of death. Computed regional indicators are deviating either in a positive or negative direction depending on conditions in which the mortality develops. It is important to point out the districts registering extreme values, but also districts in which the trend of indicator diverges in time significantly[10] from the trend of the best values within all the SR[11]. They are districts where mortality can also fall, but in future it will hardly reach the level of mortality of these districts where the lowest one is.

In general, life expectancies at birth in districts, which characterize the length of life of all population in region, reach higher values in districts situated around the river Váh, in the northeast of country, and in cities Bratislava and Košice. On the contrary, they achieve low values in southern districts, for both men and women. In 2001-2005 the values were for men in interval 65.40 to 73.77, for women in interval 74.98 to 79,75, i.e. the highest value of life expectancy for men was lower than the lowest value of life expectancy for women. Moreover, different range (8.37 for men and 4.77 for women) give evidence of higher sensitivity of male mortality to

[6] Life expectancy at birth is 70.11 years for men in 2005 in the SR. The mentioned lower figure results from the computation for the given five-year period.

[7] It is the indicator life expectancy exactly at the age of 60 years computed by abridged mortality table for five-year age intervals. We will call it life expectancy at age 60-64 years.

[8] Main causes of death are: circulatory system diseases, neoplasms, respiratory system diseases, digestive system diseases, and external causes of death.

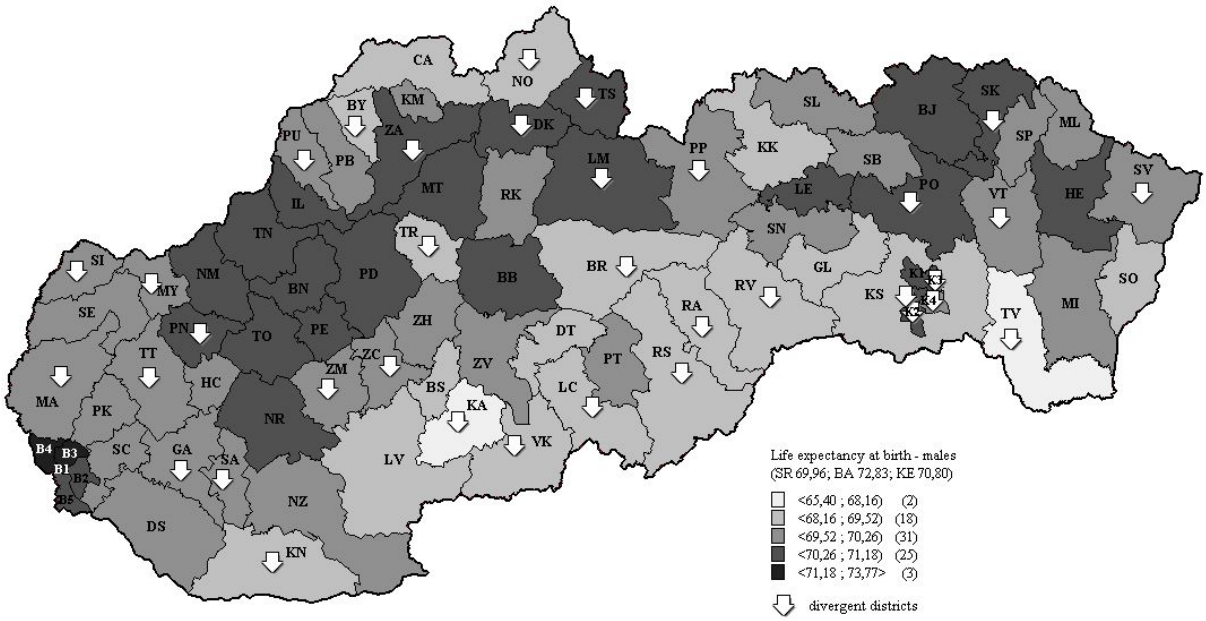
[9] The level of mortality was measured by standardized mortality rate.

[10] With probability 95 %.

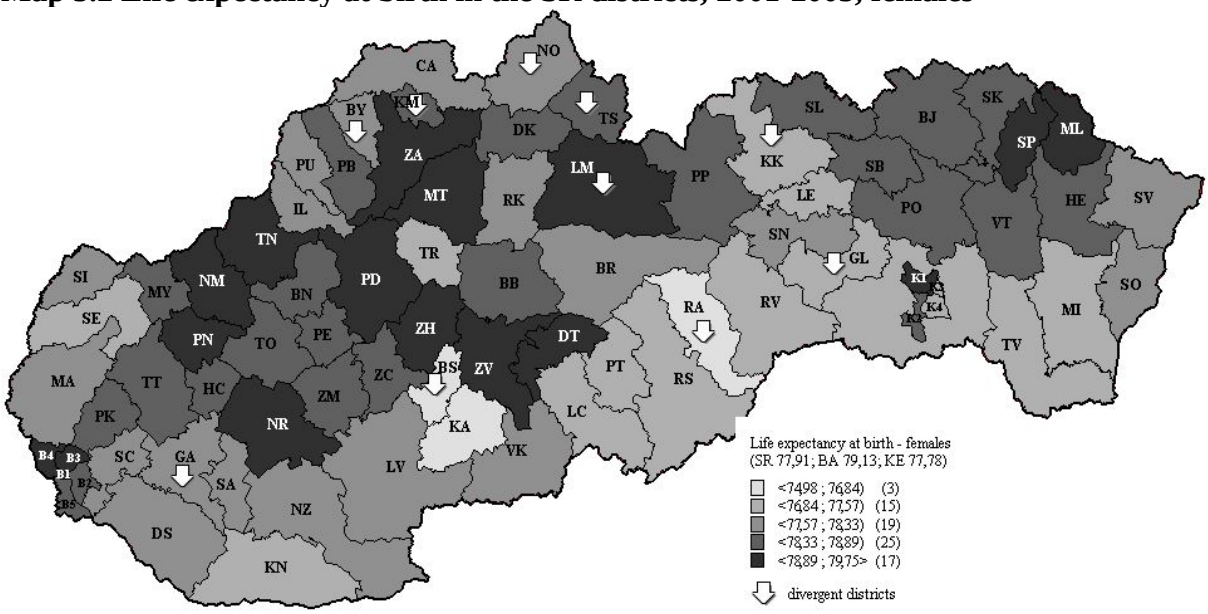
[11] The best value of indicator life expectancy is its maximal value; it is minimal value for indicator of infant mortality and standardized mortality rate.

regional differences. The highest figures of men were recorded in districts Bratislava I (73.76), Bratislava IV (73.45), and Bratislava III (73.03), while the lowest in districts Krupina (65.41) and Trebišov (66.51). The highest figures of women were in districts Trenčín (79.74), Bratislava IV (79.41), and Liptovský Mikuláš (79.39), contrariwise the lowest in districts Banská Štiavnica (74.98), Revúca (75.42), and Krupina (75.79).

Map 5.1 Life expectancy at birth in the SR districts, 2001-2005, males



Map 5.2 Life expectancy at birth in the SR districts, 2001-2005, females

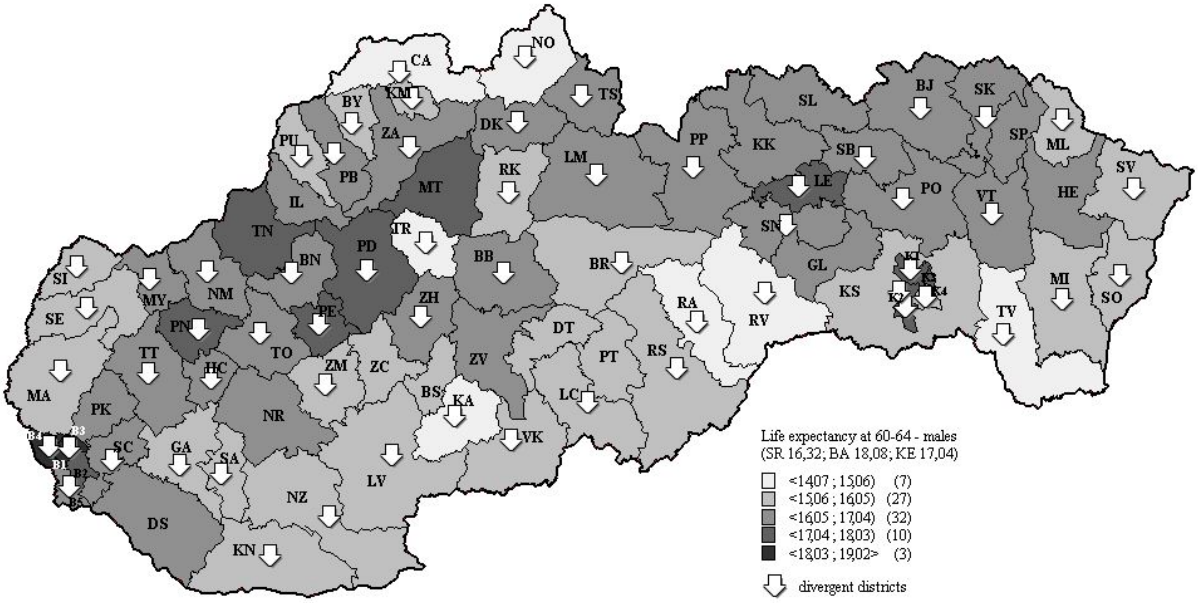


With respect to the development of life expectancy at birth from 1996-2000 to 2001-2005 the increase in value can be stated in districts, but for five districts for men and eight for women. These are districts Bytča, Komárno, Košice III, Revúca, and Turčianske Teplice for men. And the highest decrease was recorded in district Turčianske Teplice, by 1.16 years. They were districts Banská Štiavnica, Bytča, Kežmarok, Kysucké Nové Mesto, Námestovo, Poltár, Revúca, and Tvrdošín for women and the highest decrease was recorded in district Banská Bystrica, by 1.55 years.

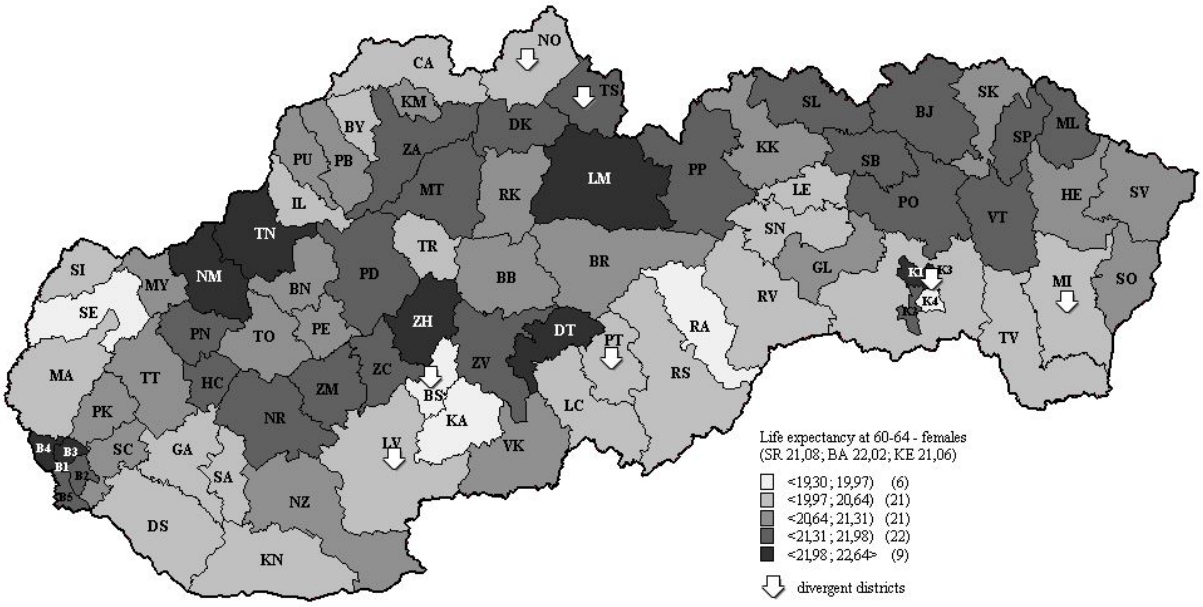
In terms of the future development it is important to draw attention to divergent districts. Even 35 divergent districts are for men and only 10 for women. Five districts of them that register the highest negative trend deviations are districts Bytča, Lučenec, Námestovo, Revúca, and Turčianske Teplice for men. It is demanded here to draw attention to districts Lučenec and Námestovo, though they rank among districts with increasing life expectancy at birth, but this increase is not fast enough to make them rank among districts with the highest val-

ues of this indicator in future. The highest trend deviations were for women in districts Banská Štiavnica, Bytča, Kežmarok, Námestovo, and Revúca and all these districts registered decreasing values of life expectancy at birth.

Map 5.3 Life expectancy at age 60-64 in the SR districts, 2001-2005, males



Map 5.4 Life expectancy at age 60-64 in the SR districts, 2001-2005, females

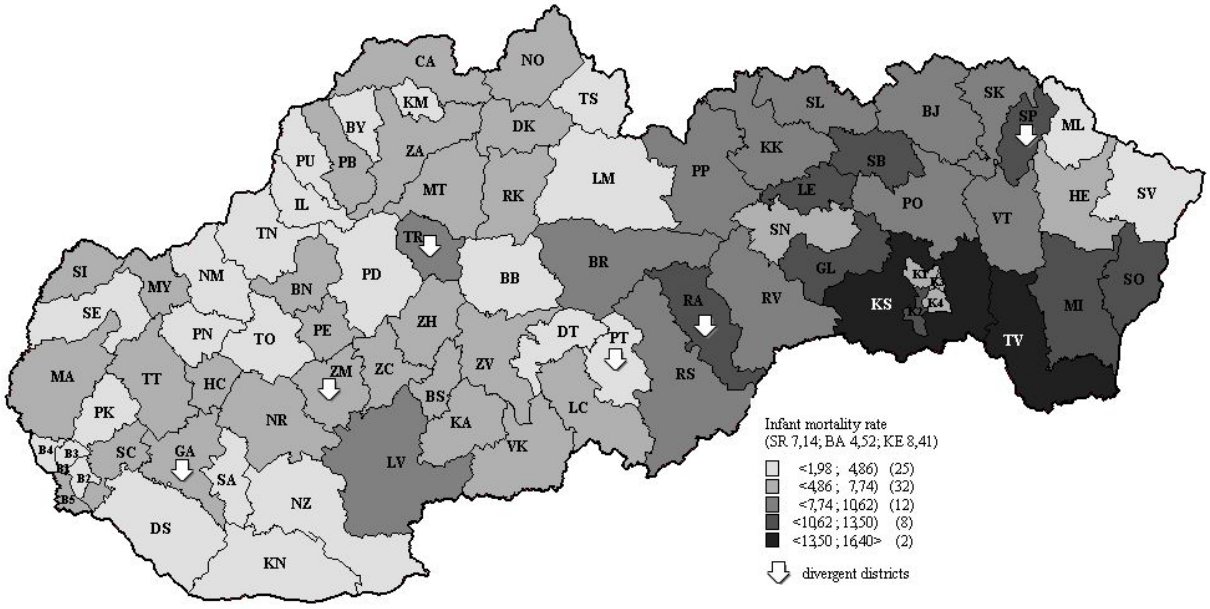


Life expectancy at age 60-64, like for the previous indicator had in general higher values for both sexes in districts around the river Váh and in districts of cities Bratislava and Košice. In 2001-2005 the figures were in interval 14.07 to 19.02 for men while in interval 19.30 to 22.64 for women. The highest values were recorded for men in districts Bratislava I (19.01), Bratislava III (18.49), and Bratislava IV (18.36), for women in districts Bratislava I (22.64), Liptovský Mikuláš (22.60), and Bratislava III (22.33). On the other hand, the lowest figures were for men in districts Krupina (14.08), Revúca (14.43), and Námestovo (14.45), for women also in district Krupina (19.31) and Revúca (19.52), which are being joined by district Banská Štiavnica (19.48). It is interesting that districts with the lowest values were also districts Košice III (19.57) and Košice IV (19.54) while districts Košice I (22.29) and Košice II (21.73) counted among districts with the highest figures of indicator.

Life expectancy at age 60-64 decreased for men in 15 districts comparing 1996-2000 to 2001-2005; the highest decrease was in district Námestovo, by 1.08 years. Decrease in value was recorded also for women in 14 districts, the highest one in district Košice III, by 0.79 years.

A great difference was in the number of divergent districts for men and women. 60 such divergent districts were for men, only 7 for women. This difference indicates a worse perspective of mortality improvement for older men than for older women. The highest trend deviations are registered for men in districts Galanta, Námestovo, Púchov, Revúca, and Turčianske Teplice, for women in districts Banská Štiavnica, Košice III, Michalovce, Námestovo, and Poltár.

Map 5.5 Infant mortality rate in the SR districts, 2001-2005



Infant mortality rate characterizes the mortality in the first year of life. As it follows from the enclosed map, it has higher values in the eastern part of Slovakia than in other parts. The range is great, from 1.98 ‰ to 16.40 ‰, which can be partly ascribed to the low number of births in particular districts with that a little difference in number of deaths will influence the value of indicator significantly. But this is not the case of districts Košice-okolie and Trebišov, where infant mortality was the highest (15.28 ‰ and 16.39 ‰). Infant mortality reached more than 10 ‰ even in 11 districts. These were districts Gelnica (12.13 ‰), Kežmarok (10.25 ‰), Košice II (11.84 ‰), Levoča (11.60 ‰), Michalovce (10.89 ‰), Revúca (11.40 ‰), Sabinov (11.40 ‰), Sobrance (12.57 ‰), and Stropkov (11.25 ‰) together with two already mentioned districts.

Concerning the future prospects, 6 districts registered a significant divergence. These were districts Galanta, Poltár, Revúca, Stropkov, Turčianske Teplice, and Zlaté Moravce. Districts Revúca and Stropkov, which will get off the mentioned group probably very hardly, have the worst position.

Percentage distribution of deaths by main causes of death in particular districts does not differ from the whole Slovakia values very much for both men and women. In each district deaths due to circulatory system diseases are at the first place and deaths due to neoplasms at the second place. Orders of other main causes of death are changing, but significant differences are not among them.

Mortality by main causes of death is an important factor for typology of districts. The level of this mortality measured by standardized rate registers excess male mortality in all districts. Only one district is the exception, district Levoča where in 2001-2005 excess female mortality was recorded from digestive system diseases. But this needs to be assigned to the low mortality and within that, to small number of deaths due to this cause of death in this district.

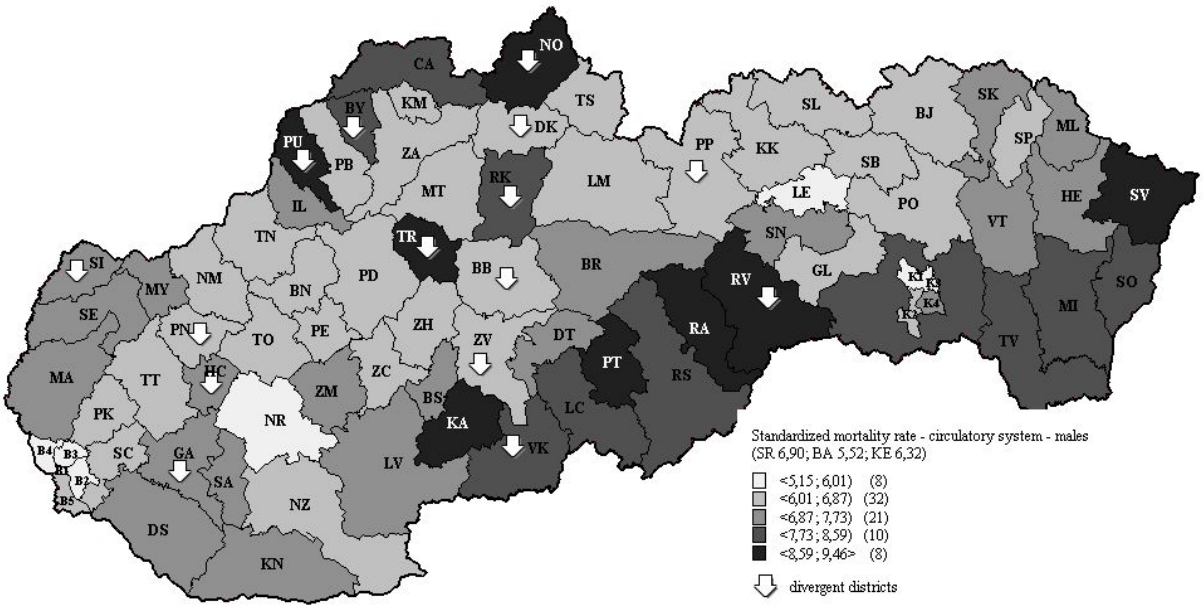
21 districts registered increase in mortality due to circulatory system diseases for men from 1996-2000 to 2001-2005. The highest increase in standardized rate was in districts Dolný Kubín, Púchov, Rimavská Sobota, Turčianske Teplice, and Tvrdošín. On the other hand, the highest decrease was in districts Banská Štiavnica, Gelnica, Krupina, Stará Ľubovňa, and Stropkov. 15 districts were recorded with the increase in mortality due to this disease for women.

Districts Krupina, Námestovo, Poltár, Púchov, Revúca, Rožňava, Snina, and Turčianske Teplice registered the highest mortality for men. We can refer to districts Banská Štiavnica, Krupina, and Revúca for women. On the other hand, the lowest male mortality due to this disease was in districts of Bratislava, in Košice districts I and III, in district Nitra and Levice. Also districts of Bratislava, districts Košice I and II, district Nitra and Liptovský Mikuláš can be stressed for women.

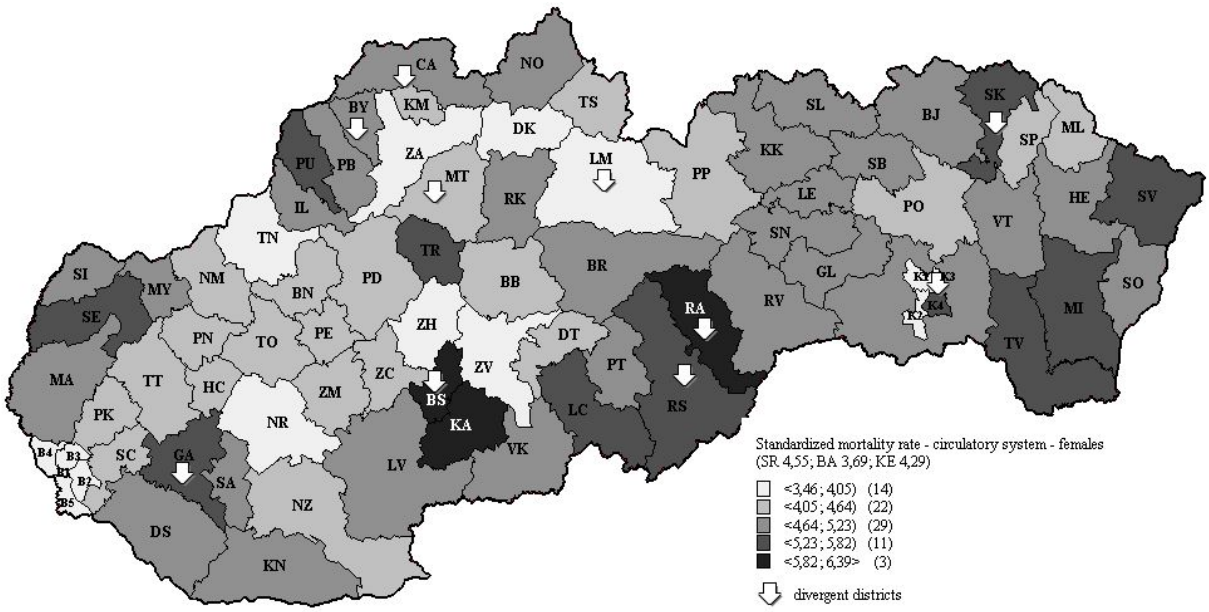
Speaking of the developments, 15 divergent districts were detected for men. As it follows from the enclosed map, they form an interesting strip from the north, from district Námestovo, to the south, to district Veľký

Krtíš, also a strip formed by districts Skalica, Piešťany, Hlohovec, and Galanta. Púchov, Bytča, Turčianske Teplice, Poprad, and Rožňava count among these districts else. 10 divergent districts were detected for women - Banská Štiavnica, Bytča, Čadca, Galanta, Košice III, Liptovský Mikuláš, Martin, Revúca, Rožňava, and Svidník. It is necessary to point out district Liptovský Mikuláš, which ranks among districts with the lowest mortality due to circulatory system diseases but it can get among districts with higher mortality in perspective.

Map 5.6 Mortality due to circulatory system diseases in the SR districts, 2001-2005, males



Map 5.7 Mortality due to circulatory system diseases in the SR districts, 2001-2005, females

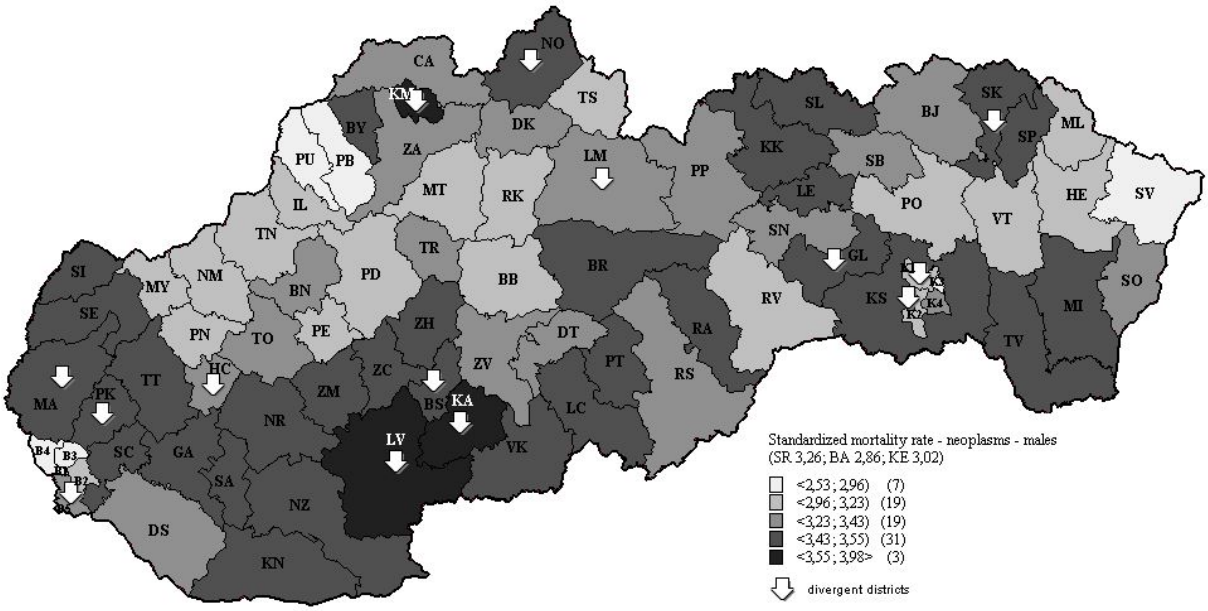


In 1996-2000 to 2001-2005 mortality recorded an increase due to neoplasms for men in 18 districts. The highest increase was recorded in districts Košice-okolie, Krupina, Kysucké Nové Mesto, Malacky, and Stará Ľubovňa. On the other hand, the highest decrease was in districts Detva, Dunajská Streda, Trebišov, Tvrdošín, and Rožňava. 27 districts were recorded for women with the increase in mortality due to this disease. The highest increase was in districts Banská Štiavnica, Kežmarok, Kysucké Nové Mesto, Partizánske, and Pezinok, the highest decrease in districts Humenné, Medzilaborce, Rimavská Sobota, Senica, and Sobrance.

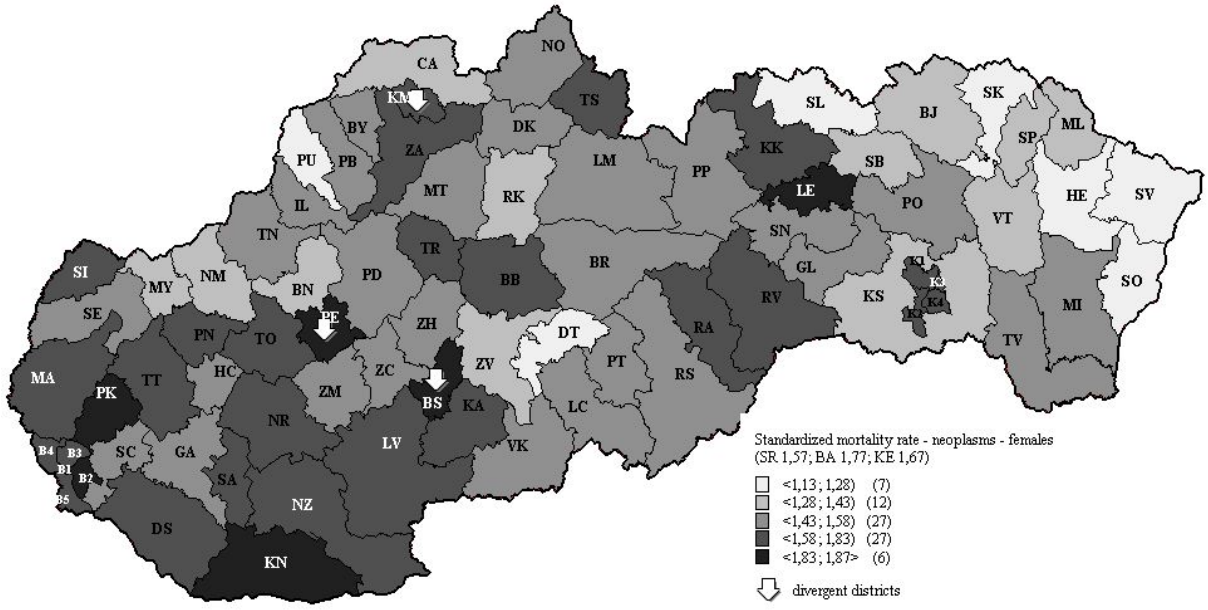
In 2001-2005 the highest mortality was recorded for men due to neoplasms in districts Levice, Kysucké Nové Mesto, and Krupina, contrariwise the lowest one in districts Bratislava I, III, IV, Košice III, Považská

Bystrica, Púchov, and Snina. The highest mortality was for women in districts Banská Štiavnica, Bratislava II, Komárno, Levice, Partizánske, and Pezinok, contrariwise the lowest one in districts Detva, Humenné, Púchov, Snina, Sobrance, Stará Ľubovňa, and Svidník.

Map 5.8 Mortality due to neoplasms in the SR districts, 2001-2005, males



Map 5.9 Mortality due to neoplasms in the SR districts, 2001-2005, females

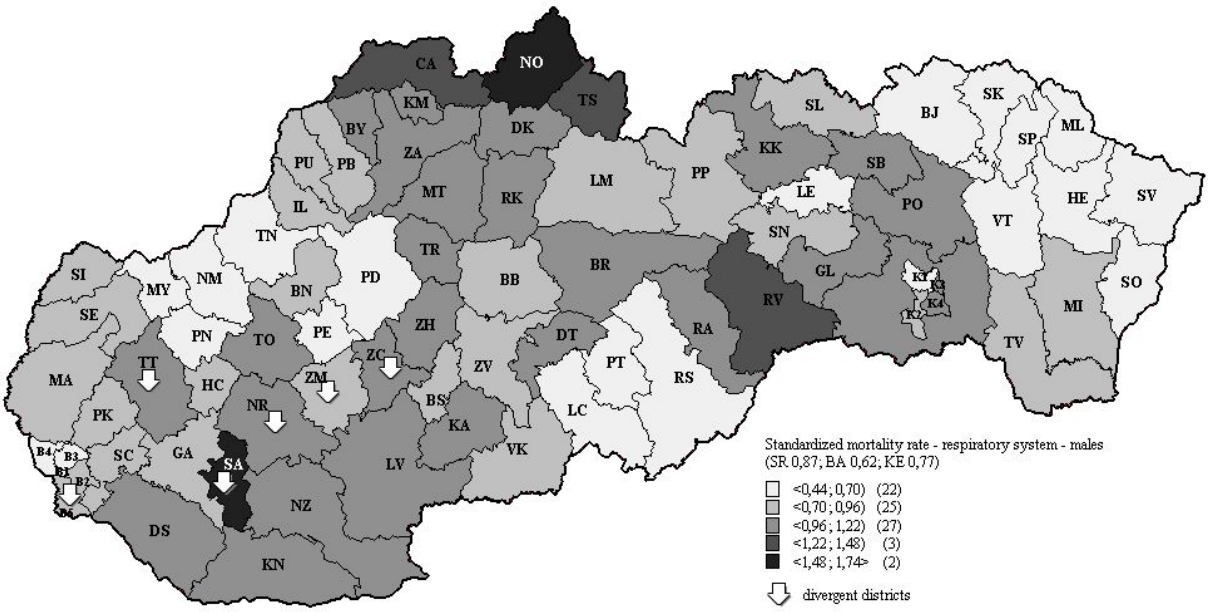


Future prospects of mortality due to neoplasms indicate 14 divergent districts for men. They can be divided into several groups according to location: Malacky, Pezinok, and Bratislava V; Levice, Banská Štiavnica, and Krupina; Kysucké Nové Mesto, Námestovo, and Liptovský Mikuláš; Gelnica, Košice–okolie, and Košice I; and districts Svidník and Hlohovec. There are substantially less divergent districts for women, only 3, namely Banská Štiavnica, Kysucké Nové Mesto, and Partizánske.

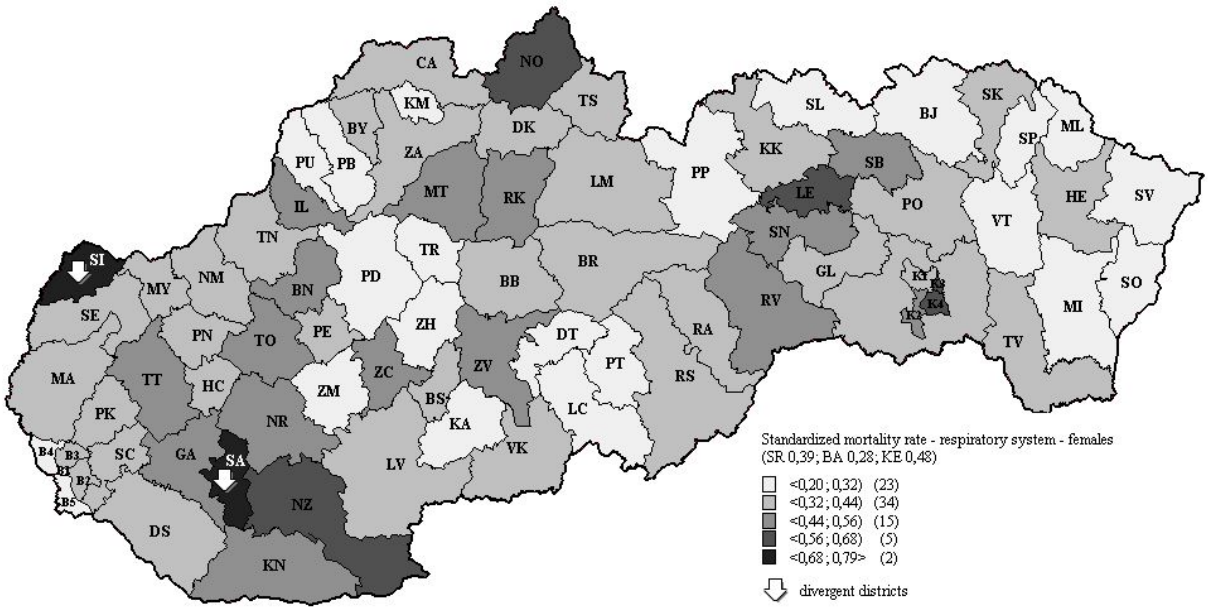
In 1996-2000 to 2001-2005 standardized mortality rate registered increase due to respiratory system diseases for men in 37 districts. We can emphasize districts Košice III, Nitra, Trnava, Šaľa, and Zlaté Moravce from them. On the other hand, Banská Štiavnica, Detva, Poltár, Revúca, and Zvolen are districts with the highest decrease in mortality. The increase came for women in 23 districts; the highest of them was in districts Bardejov, Nové Zámky, Šaľa, Senec, and Skalica, the highest decrease in districts Detva, Dolný Kubín, Revúca, Ružomberok, and Zvolen.

Districts Šaľa and Námestovo exceed highly other districts with their level of mortality due to this disease for men. We can classify also districts Čadca, Tvrdošín, and Rožňava to them. It is also district Šaľa, Skalica and districts Košice III and IV, Levoča, Námestovo, and Nové Zámky for women. Minimal values are registered for men in districts Bardejov, Bratislava I, Humenné, Poltár, and Snina, while for women in districts Bratislava I, Lučenec, Medzilaborce, Sobrance, and Stropkov.

Map 5.10 Mortality due to respiratory system diseases in the SR districts, 2001-2005, males



Map 5.11 Mortality due to respiratory system diseases in the SR districts, 2001-2005, females



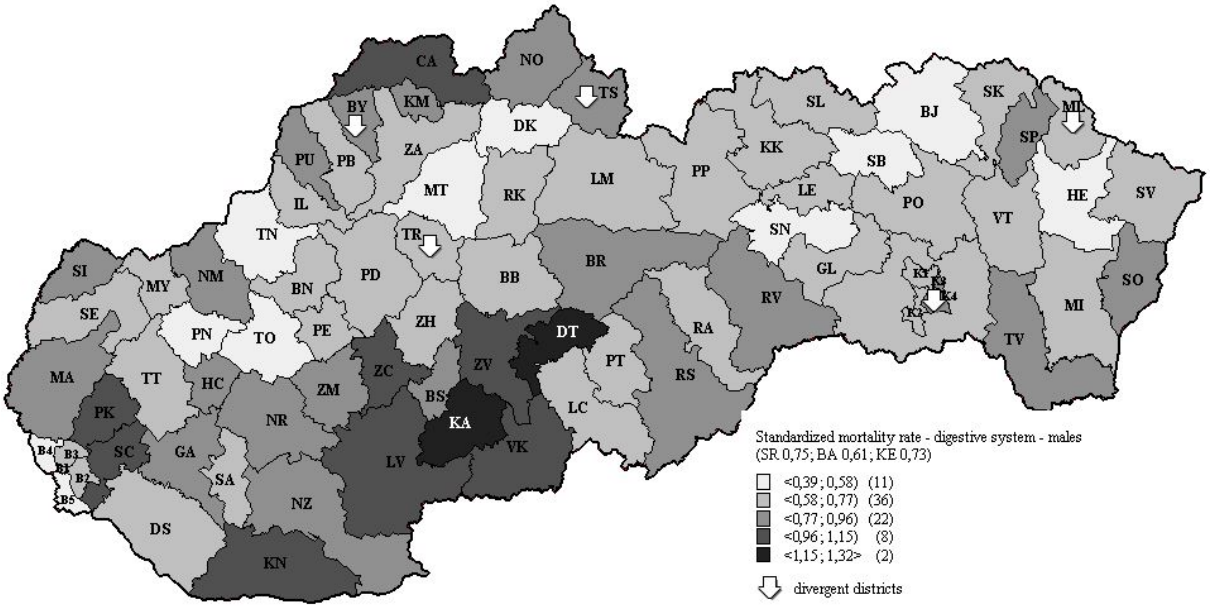
From the view of the future development 6 divergent districts were found out for men, namely districts Bratislava V, Nitra, Trnava, Šaľa, Zlaté Moravce, and Žarnovica. Only two districts have a divergent tendency for women, namely districts Skalica and Šaľa. Here district Šaľa has to be pointed out, for men like also women. There is the highest mortality due to respiratory system diseases in both cases; it has been increasing in time and diverging significantly in perspective.

In 1996-200 to 2001-2005 the only main cause of death is the mortality due to digestive system diseases, for which more than half of districts register growing tendency for both men and women. It is 46 districts for men and 59 districts for women. There are 5 districts with the highest increase for men - Bytča, Košice III and IV, Turčianske Teplice, and Tvrdošín, for women Košice II, Senec, Skalica, Námestovo, and Považská

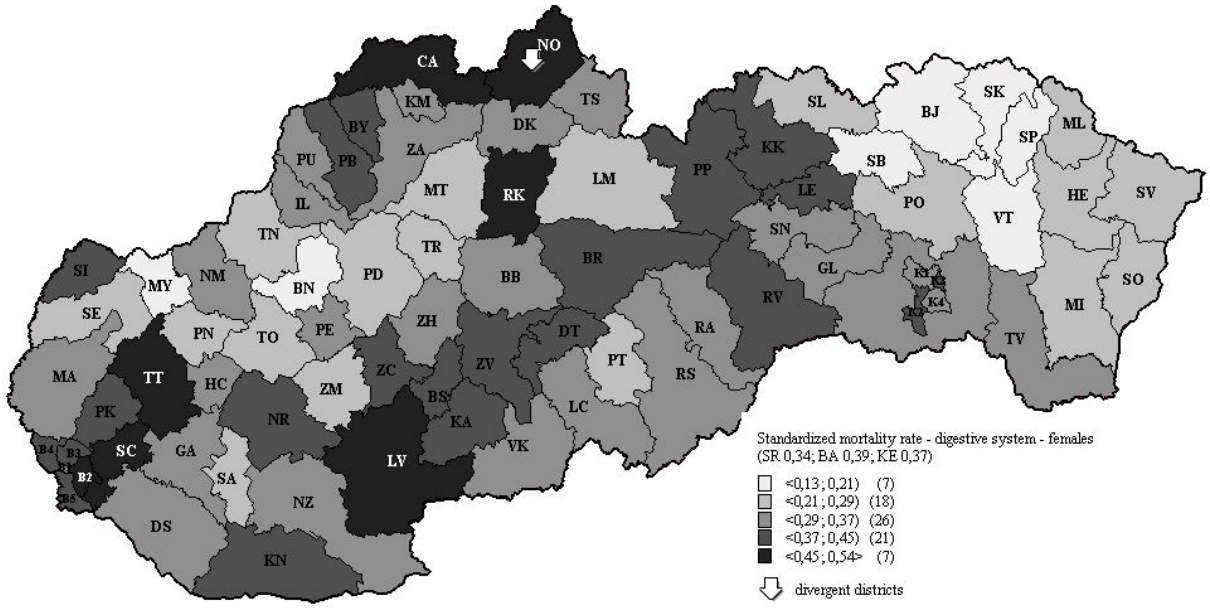
Bystrica. On the other hand, there are 5 districts with the highest decrease for men - Levice, Kysucké Nové Mesto, Myjava, Ružomberok, and Veľký Krtíš. They are districts Medzilaborce, Nové Zámky, Sobrance, Topoľčany, and Zlaté Moravce for women.

In 2001-2005 from the view of level districts Detva, Krupina, Levice, Pezinok, and Žarnovica ranked among 5 districts with the highest male mortality; contrariwise the lowest mortality was in districts Bratislava IV, Dolný Kubín, Martin, Piešťany, and Sabinov. The highest female mortality was in districts Čadca, Levice, Námestovo, Ružomberok, and Senec, the lowest one in districts Bardejov, Sabinov, Stropkov, Svidník, and Vranov nad Topľou.

Map 5.12 Mortality due to digestive system diseases in the SR districts, 2001-2005, males



Map 5.13 Mortality due to digestive system diseases in the SR districts, 2001-2005, females

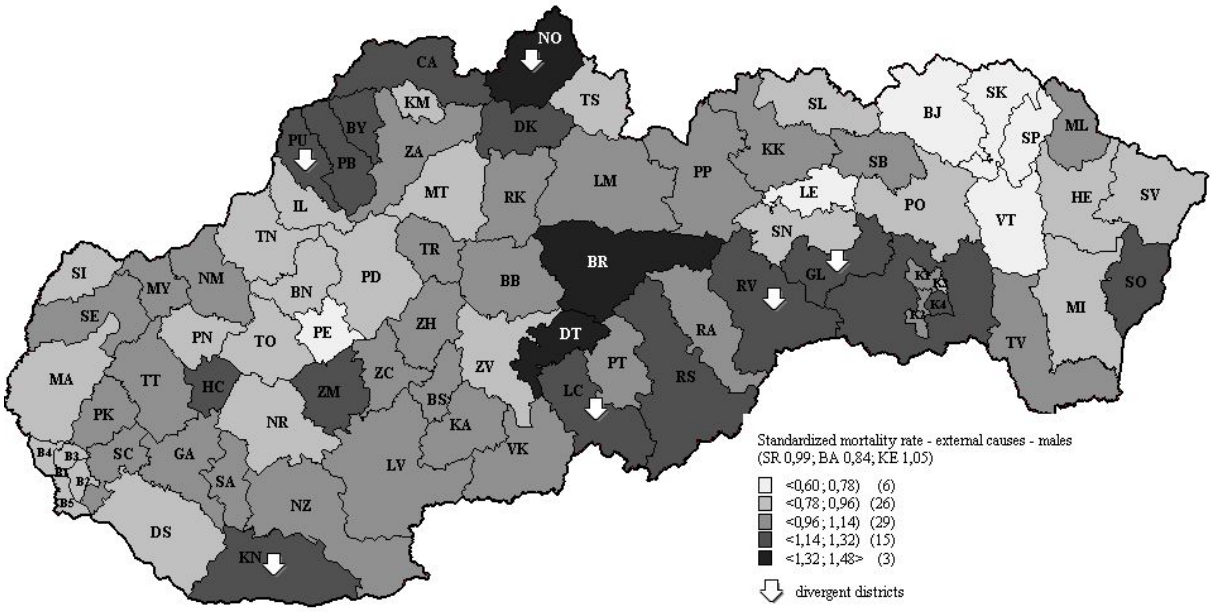


With respect to the future trends, this cause of death registers 5 divergent districts for men. These are districts Bytča, Košice IV, Medzilaborce, Tvrdošín, and Turčianske Teplice. Only one significantly divergent district is for women, district Námestovo. Ironically, it is a small number against the number of districts in which mortality increased in the observed period, how it has been mentioned, but these increases are small, non-significant.

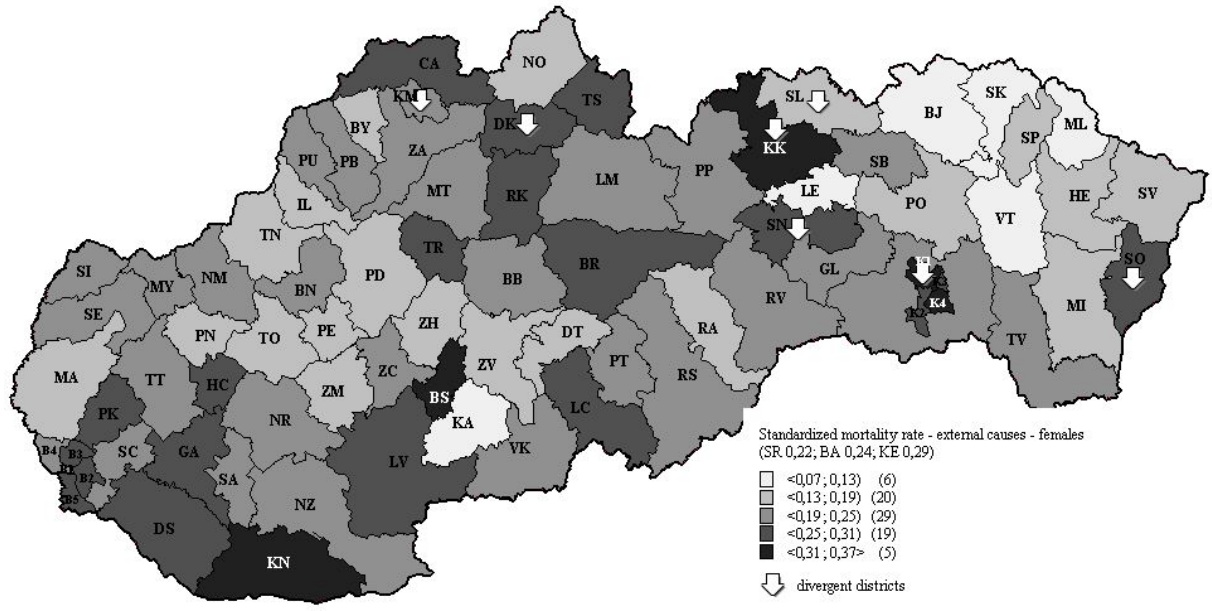
During the period 1996-200 to 2001-2005 male mortality registered increase due to external causes of death in 19 districts. The highest increase was recorded in districts Gelnica, Komárno, Lučenec, Námestovo, and Rožňava. On the contrary, the highest decrease in districts Bratislava I, Dunajská Streda, Košice IV, Kysucké Nové Mesto, and Zvolen. Increase in female mortality was recorded from this cause of death in 15 districts. The highest one was in districts Dolný Kubín, Kežmarok, Košice I, Kysucké Nové Mesto, and Sobrance. On the other hand, the highest decrease was in districts Detva, Bratislava IV, Myjava, Turčianske Teplice, and Zvolen.

In 2001-2005 standardized mortality rate reached the highest values from external causes of death for men in districts Brezno, Detva, and Námestovo, for women in districts Kežmarok, Komárno, Košice I and IV, and Banská Štiavnica. The lowest values were learned for men in districts Bardejov, Levoča, Partizánske, Stropkov, Svidník, and Vranov nad Topľou, for women in districts Bardejov, Krupina, Levoča, Medzilaborce, and Vranov nad Topľou.

Map 5.14 Mortality due to external causes of death in the SR districts, 2001-2005, males



Map 5.15 Mortality due to external causes of death in the SR districts, 2001-2005, females



6 divergent districts were found out for men from the long-term viewpoint, namely Gelnica, Komárno, Lučenec, Námestovo, Púchov, and Rožňava, 7 divergent districts for women, Dolný Kubín, Kežmarok, Košice I, Kysucké Nové Mesto, Sobrance, Spišská Nová Ves, and Stará Ľubovňa.

As it follows from the previous sections, causes of death appear at various intensities in particular districts, also differentiated by sex. We can select districts with low or high mortality through the synthesis of these pieces of information[12].

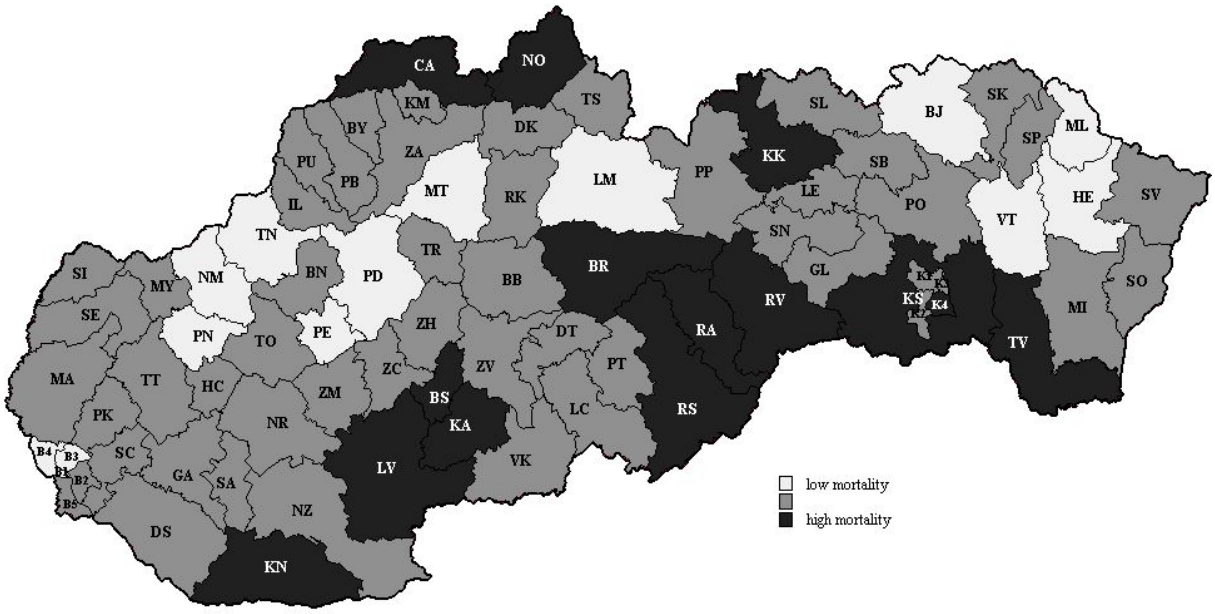
We can talk about low mortality in regions formed by the following districts:

- Bratislava I, Bratislava III, and Bratislava IV – Districts of Bratislava count generally among districts with low mortality. Districts Bratislava II and Bratislava V have not been included among the best districts for rather high mortality due to neoplasms, respiratory and digestive systems diseases.
- Piešťany, Nové Mesto nad Váhom, Trenčín, Partizánske, Prievidza, Martin, and Liptovský Mikuláš – Also district Ružomberok could be included into this group but it was not, considering rather high mortality due to respiratory and digestive systems diseases.
- Bardejov, Vranov nad Topľou, Humenné, Medzilaborce – This area would be more closed with districts Svidník and Stropkov, but their high mortality due to circulatory system diseases and neoplasms cancels that.

We can talk about high mortality in regions formed by districts:

- Komárno, Levice, Banská Štiavnica, and Krupina – Also district Nové Zámky could rank into this group, but low mortality due to circulatory system diseases excluded it.
- Čadca and Námestovo – Mainly high mortality due to respiratory and digestive diseases characterizes them.
- Brezno, Rimavská Sobota, Revúca, Rožňava, Košice-okolie, Košice IV, Trebišov, and Kežmarok – High infant mortality rate is typical of them.

Map 5.16 SR districts with the lowest and highest mortality, 2001-2005, males and females



It is obvious that mortality of our two biggest cities is from the view of city as a whole also the synthesis of mortalities in districts that create them. The previous analysis indicates that Bratislava has a lower mortality than Košice. It results also from a good position of three mentioned Bratislava districts and unfavourable position of district Košice IV. Also indicators of life expectancy at birth confirm it in 2001-2005, when Bratislava registered 72.83 years for men while Košice 70.80 years. The situation is similar for women, while the value of indicator is 79.13 years in Bratislava, 77.78 years in Košice. The unfavourable position of Košice is emphasized also by lower value of life expectancy at birth for women against the all-Slovakia value for this period.

The situation according to main causes of death is not so transparent. Male mortality measured by standardized mortality rate is lower in all cases in Bratislava than in Košice. It is different for women. While mortality due to circulatory and respiratory systems diseases and external causes of death is lower in Bratislava than in Košice, mortality due to neoplasms and digestive system diseases is lower in Košice.

[12] The Ball's method has been used.

Bratislava registers better values against the all-Slovakia values of indicators by main causes of death for men. The position of Košice seems to be similar, except for deaths due to external causes where all-Slovakia values are better. It is not so clear for women. The districts of Bratislava and Košice have more unfavourable values than all Slovakia for mortality due to neoplasms, digestive system diseases, and external causes of death. Both cities are below the SR value in mortality due to circulatory system diseases and Košice registers worse and Bratislava better values in mortality due to respiratory system diseases than the all-Slovakia indicator.

6. Migration

The period of the last ten years is characterised by considerable changes in legislation of migration in the Slovak Republic. Mainly the legislation on referring entry and residence of foreigners in the SR territory was changing, which has reflected not only in the structure of immigrants by residence status type, but also in changes in the structure of immigrants by country of arrival. The statistics of registered foreign emigration are incomplete, underestimated, because it is not based on the records of emigrants from the SR in the country of destination. This is not a problem only in the Slovak Republic, but also in many other countries.

In the first half of monitored period increases in foreign migration had a lowering trend, in the second half this trend reversed, mainly due to the accession of the SR into the EU. The changes in migration trends are connected also with entry conditions for foreigners to the SR – the citizens of EEC and Switzerland are treated separately, other foreigners separately. The citizens of the EEC and Switzerland with the intention to stay permanently in the SR (mainly for business, employment, study) have right to permanent residence in the SR. The conditions are stricter for foreigners from the third countries.

In 2005 the increase of registered international migration exceeded the number of 3 thousand persons for the first time. But the migration between the SR and the Czech Republic (CR) recorded a decreasing trend, which reflected in the gradually decreasing population gains from this type of migration. While in the first half of period gains from migration with other countries and from the CR recorded convergent tendencies, they are already diverging in the second half of period. The proportions of both migration types were almost the same (about 50 %) in the first half, later the gain from foreign migration without the CR increased to such extent that the gain from migration with the CR make up only 1/5 of the increase of foreign migration of the SR. So the position of the CR has been diminishing highly in the SR foreign migration, but the CR is still the most significant partner of the SR.

Except for the CR citizens, mainly the citizens of Ukraine, former Yugoslavia, and Romania had a significant proportion on the number of immigrants before the EU enlargement. The position of the EU member states strengthened after the enlargement. In 2005 also the increase of 120 women from South Korea is interesting (in connection with the construction of car factory in Žilina), but also the growth in number of immigrant-women from the USA (105 persons).

The structure of residence permits has changed in favour of permanent residence after the SR accession to the EU. In 2005 20.9 thousand foreigners had the permanent residence in the SR, i.e. permanent residences comprised 80 % of permitted residences (in 2003 only 58.2 % of permitted residences were permanent). According to the data from Ministry of the Interior of the SR 25.6 thousand foreigners altogether lived in 2005 in the SR, which is less than half percent of the SR population. It is still very low number and proportion compared to the CR (278.3 thousand persons, i.e. 2.7 %); with the exception of year 2004 even lower than in previous years.

Employment, study, and family reunification are the main reasons for residences permitted to foreigners in the SR territory. The numbers of foreigners working in the SR are low, but relatively stable and reach about 5.0 – 5.5 thousand persons yearly; entrepreneurs and employees being represented approximately equally. The most of foreigners employed or conducting business in the SR were from the Czech Republic (1.1 thousand in 2004), but their proportion has been ever decreasing. Significantly more citizens of the SR are working abroad. The most attractive country, without language barriers for Slovak nationals, is the Czech Republic where even 84 thousand citizens of the SR were working as of 31 December 2005.

Also refugees are regarded as legal migrants. While at the beginning of the observed period the number of asylum applicants was relatively insignificant in the SR, it reached the maximum in 2001 - 2004 (8.2-11.4 thousand persons), after the SR accession to the EU it fell to 3.5 thousand persons (in 2005). The rate of asylums granted is low in the SR. From 1992 up to the end of 2005 asylum was granted to 588 persons and citizenship to 174 refugees. But asylum proceeding was stopped even for 88 % of cases. Many of an asylum applicants often had no real interest to stay in the SR and had left the SR else before the asylum proceeding ended.

The term illegal migration, whose unambiguous definition does not exist in world, means illegal entering the SR territory, illegal exit from the SR, and illegal stay of persons in the SR territory. Illegal migrants are not only foreigners, but also citizens of the SR. Numbers of illegal migrants are being influenced on one hand by international political, economical, and social situation, on the other hand by measures taken to protect state boundaries. The development of illegal migration has a similar character to the development of the number of asylum applicants in the SR. At the beginning of monitored period the number of illegal migrants was around 2 thousand persons, but in 2001-2004 was already ranging in 10,9 -15,5 thousand persons. In 2005 the improvement of state boundaries protection according to the Schengen agreement brought decrease in the number of illegal migrants to 8 thousand persons.

In the field of internal migration the whole period has been already a period of strengthening deconcentration tendencies and enforcement of suburbanization processes. The migration situation of the observed period is completely different compared to the period of the 1980s and the first half of the 1990s. Nowadays municipalities with 5 thousand inhabitants and over are recording losses from migration, municipalities with fewer than 5 thousand inhabitants record migration gains, while in the first half of the period the smallest municipalities were still recording migration losses. The highest gains were recorded in municipalities with 1 thousand to 2 thousand inhabitants. On the other hand, the highest losses were in towns with 20 thousand up to 100 thousand inhabitants, in which the number of inhabitants decreased due to migration by 47 thousand persons during the whole observed period. The number of inhabitants increased approximately by the same value in municipalities with 1 thousand to 5 thousand inhabitants.

In the SR 77 – 90 thousand persons changed their permanent residence annually. The development of number of persons changing residence was not steady and had a variable character. The level of internal migration of population changed only slightly in all period. While in 1996-2000 15 of 1000 inhabitants of the SR changed their permanent residence, in 2001-2005 it was fewer than 16. Inhabitants preferred migration to short distances – from one municipality to another within a district (even 47 % of migrants within the SR). Approximately 30 % fell on moving from one district to another within a region and about 23 % on migration for long distances – from one region to another within the SR.

During the observed period also the age structure of migrants changed. The level of migration decreased in younger age groups, mainly at the age of 20-24 years (almost by 17 %) and children aged 0-4 (almost by 9 %). This situation is connected with delay of marriages and births into higher age and subsequently also with lower number of young families in migration

International migration at district level does not record high values. Those are only a few tens of immigrants, but in the smaller districts the increases reach neither 10 persons for particular periods. Higher numbers of immigrants (above 100 persons in a period) are related only to districts of Bratislava and also to districts where significant investments were headed (Žilina, Trnava, Nitra, but also Malacky), but only in two last phases of the period due to the realization of investment projects. In 2001-2005 almost one third of all immigrants from abroad were directed into these districts. These districts had also the highest gains of international migration, which oscillated around 100 persons. But these were very low values in relative indicators. Almost all districts of Slovakia experienced gains from international migration; only 5-6 districts recorded migration losses. The number of districts with decreases is probably higher due to incomplete registration of emigrants.

The sight of Bratislava and Košice cities is interesting. The numbers of immigrants coming from abroad to Bratislava were oscillating around 500-700 persons on average and the numbers of immigrants to Košice around 70-130 persons. So 1/4 of immigrants from abroad to the SR were heading into these two cities and 1/5 of all immigrants from abroad headed into Bratislava. These two cities gained 19 % of increases from foreign migration of the SR, 18 % of which Bratislava, but the proportion of these two cities was gradually decreasing. It means that investments have increased the attractiveness of the territory outside Bratislava and Košice.

Looking at the maps of internal migration two areas are migratory attractive in the SR. One of them has been profiled in the hinterland of Bratislava with the capital as its core. Districts Malacky, Pezinok, Senec, Dunajská Streda, and Galanta formed it while the core alone – the city of Bratislava is loss making from migration. The losses of Bratislava were about 1.4 persons per 1000 inhabitants in the first period.

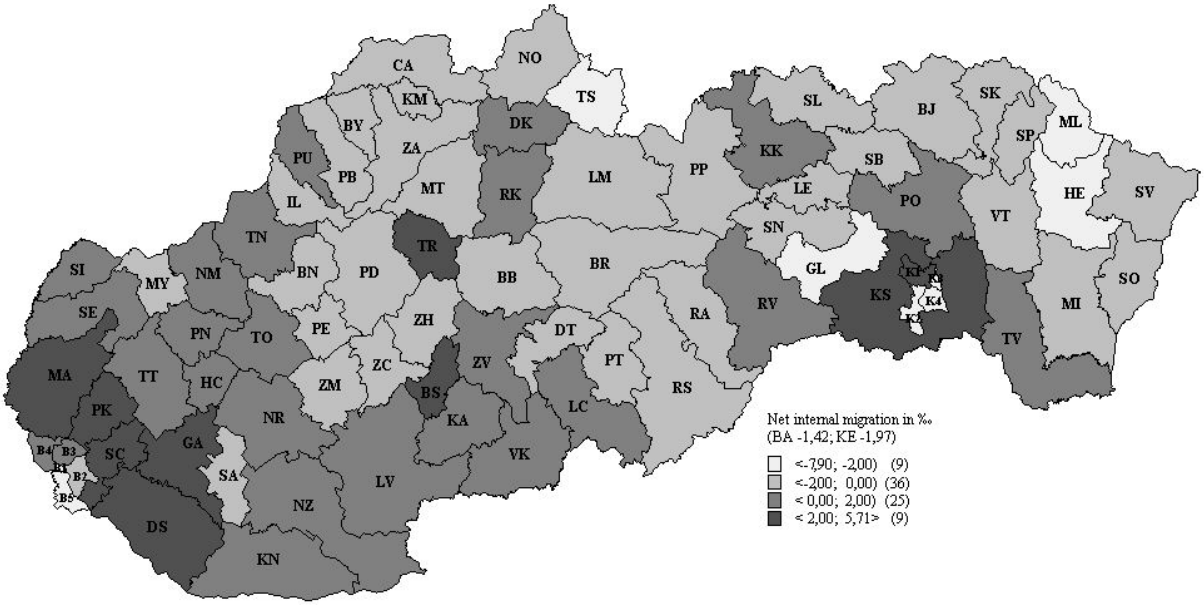
A similar situation is also in eastern Slovakia. Around the city of Košice – as a core - the immigrational area of Košice was created by district Košice - okolie. However, the city of Košice recorded migration losses - like Bratislava. This situation is a consequence of the suburbanisation processes in the SR when population migrates from town to its hinterland. Except for these areas there were two immigrationally significant districts acting like solitaires – Turčianske Teplice and Banská Štiavnica. The other districts with increases from internal migration were located mostly in western and southwest Slovakia; in the rest of the territory they were situated more or less separately, with the exception of districts around district Košice - okolie.

The highest losses from internal migration were connected with districts in the utmost northeast (Medzilaborce, Humenné) with lack of working opportunities, and districts Tvrdošín and Gelnica. Also three "city" districts of Košice (Košice II, III, IV) and two districts of Bratislava (Bratislava I and V) ranked among districts with the highest decreases, but on the contrary, district Košice I ranked among districts with the highest gains from internal migration. The gains have been already somewhat lower in Bratislava districts (Bratislava II, III, IV). However, it must be emphasised that migration between districts includes mutual migration between districts within the city boundaries.

In 1996-2000 there were 45 districts with population decreases of internal migration in the SR. Neither in the following periods had the situation changed more substantially. There were 44 districts with migration losses

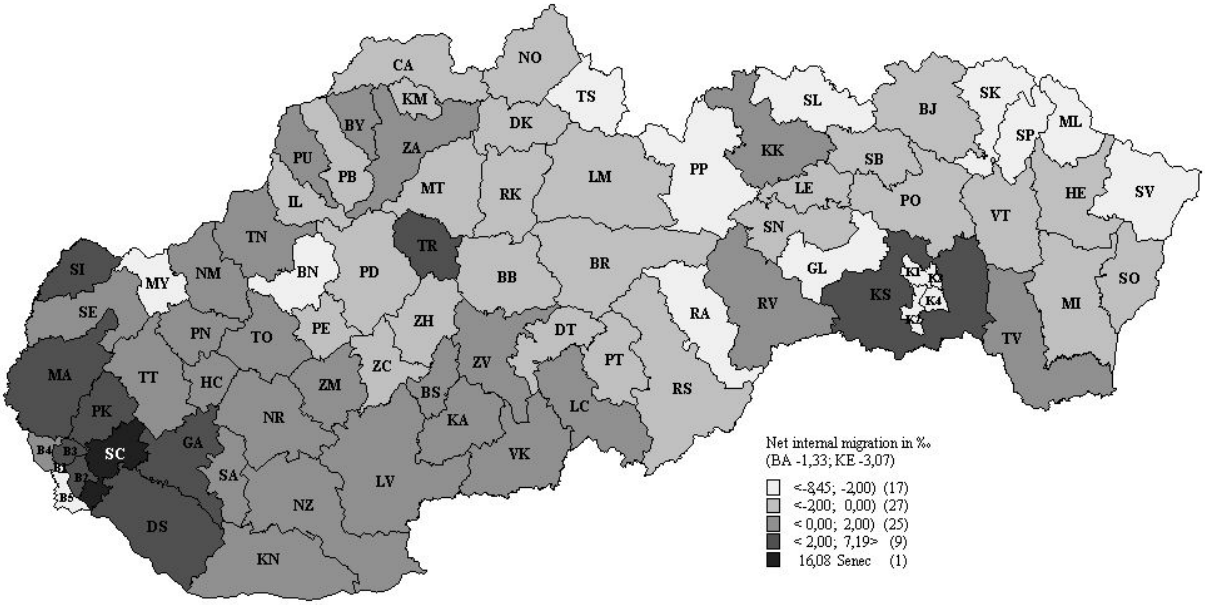
in 2001-2005. But net emigration deepened in several districts of eastern Slovakia including also all districts of Košice. Losses deepened markedly also in the city of Košice itself, which became the area with migration loss of 3 persons per 1000 inhabitants. On the other hand, the increase fell more markedly in district Banská Štiavnica and district Skalica ranked among districts with more significant increase. Concurrently also maximal values of the relative increases raised from about 5 persons to 7 persons per 1000 inhabitants in districts Malacky and Pezinok. However, the increase from internal migration recorded the steepest development in district Senec, when it achieved 16 persons per 1000 inhabitants at the end of observed period. Only these districts with the highest increases rank among the districts of the suburban area of Bratislava. In this area migration relations between Bratislava and these districts are being manifested the most markedly. Even about 60 % of all emigrants from Bratislava to the SR directed to these districts. Even 2/3 of immigrants of the district Senec came from Bratislava. At the same time emigrants from Bratislava comprise about 55 % of immigrants of the district Malacky, about 47 % of the district Pezinok, and 43 % of immigrants of the district Dunajská Streda. A similar situation is in the suburban area of Košice city, which has only one district in its hinterland, Košice – okolie, into which about 43 % of emigrants from Košice are headed (without international migration). The share of Košice city in immigrants into district Košice – okolie is high, at 78 %. So the current migration model is different diametrically from the migration model of the 1980s, when the greatest migration flows were directed to towns and just towns had the highest migration increases.

Map 6.1 Increase (decrease) from internal migration in the SR districts, 1996-2000



It has been still not true in Slovakia that population would migrate mainly from regions with high unemployment. At the end of 2005 population increases from internal migration were registered in 5 districts (Veľký Krtíš, Kežmarok, Trebišov, Rožňava, Lučenec) and decreases in 7 districts (Rimavská Sobota, Revúca, Sobrance, Košice I, Sabinov, Poltár, Gelnica) from 12 districts of the SR with the highest unemployment rate (above 20 %). Population increases of internal migration are influenced to a certain degree by preparation and subsequently realization of great investment plans, which act as attractors. They attract labour force and are gradually increasing gains also in internal migration. Until now this influence has been reflected the most in district Žilina (car factory Kia-Hunday) and less also in districts Malacky (car-industrial fleet Lozorno), Košice–okolie (Kechnec: gearboxes Powershift), Galanta (Samsung), etc. A more considerable increase in the number of immigrants can be expected also in district Trnava, connected with realization of automobile project Peugeot-Citroën. However, until the end of 2005 (and naturally neither in period 2001-2005) this influence was not well-expressed yet.

Map 6.2 Increase (decrease) from internal migration in the SR districts, 2001-2005



7. Population increase

Although Slovakia is a country with very low fertility, the number of its inhabitants was increasing mainly due to natural increase in the past decade. It was caused by the fact that in the second half of the 1990s there were still persisting development trends of natural changes (to a certain extent more progressive) from the first half of the 1990s, though the weight of migration in total increase was gradually increasing.

At the beginning of new millennium the natural increase was already much lower. It turned to decrease in some years, which caused that the total increase was almost zero at the turn of millenniums. Over the whole period of 10 years (1996-2005) the number of population of the SR increased only by 45 thousand persons, which is even less than annual increase in population in the late 1970s. The natural increase of 27.3 thousand persons for this period comprised 61 % of total increase for the monitored period and was approximately at the level of one-year natural increase from the late the 1980s.

In the particular observed phases the natural increase showed descending trend and gradually was shifting towards zero. However, it was differentiated markedly by sex. Evaluating development in particular years, in 2001-2003 the SR recorded a natural decrease in population for the first time in its after-war history. It was mainly due to natural decrease of men, which was recorded yearly in 2001-2005. Excess male mortality played a significant role in the development of natural increase. Decreasing tendencies has been recorded also in natural increase of women, but natural decrease has not appeared yet.

Migration at the SR level is actually international migration. According to the records of the Statistical Office the SR gained almost 18 thousand persons from international migration in 1996-2005 (although really probably fewer because of incomplete registration of emigrants). The development of migration was also unstable, but minimal values of migration increases are connected rather with the middle of the monitored period unlike natural increase. The accession of the SR to the EU contributed to development of migration in a positive way, which was reflected mainly in the increase of number of immigrants, but also in the growth of migration increase. Immigrants are mostly from the EU countries. The share of the Czech Republic in migration gain of the SR was diminishing continuously, but in spite of that the Czech Republic is the main source country of international migration for Slovakia.

Although migration gains of the Slovak Republic have increased currently, there were no extreme values. At the end of observed period migration compensated the losses of natural changes, supplied a mild increase in number of inhabitants of the SR. The crude rate of natural increase of the SR decreased gradually from 0.99 ‰ in 1996-2000 to 0.03 ‰ in 2001-2005, i.e. if in the first period the gain due to natural changes was one person per 1000 inhabitants, in the last period already only 3 persons per 100 000 inhabitants. Also the crude rates of migration increases were not high; they were ranging from 0.30 ‰ (in 1996-2000) to 0.36 ‰ (in 2001-2005), with the minimum 0.23 ‰ (in 1998-2002 and 1999-2003). The crude rate of total increase was not significant and fell from 1.29 ‰ in 1996-2000 to 0.39 ‰ in 2001-2005 as well.

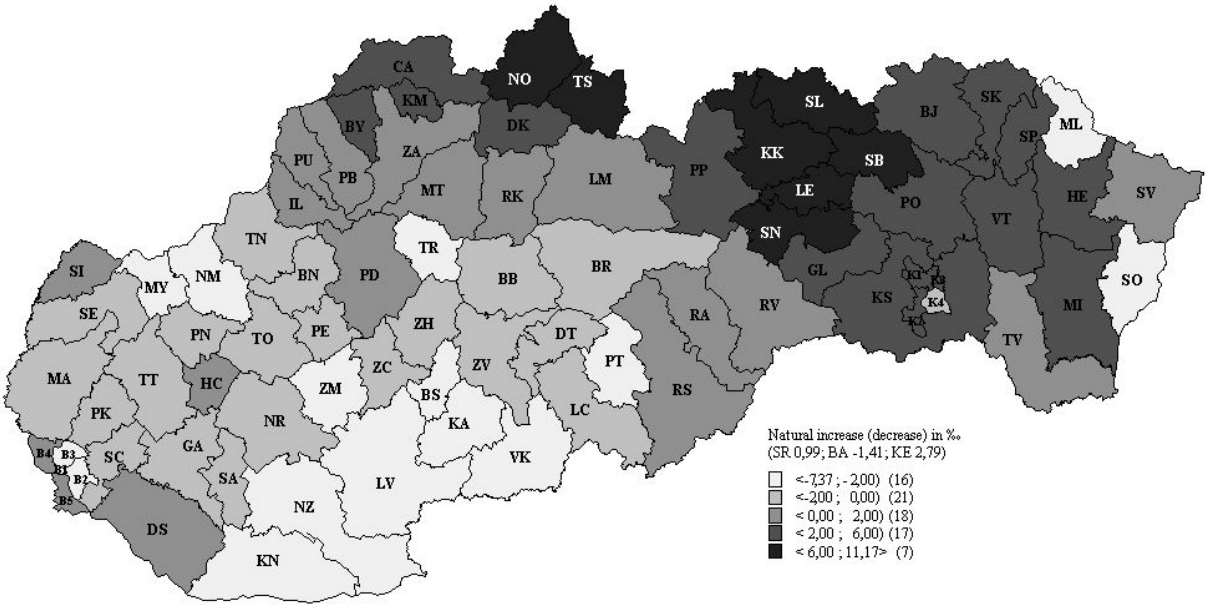
The results of Census in 2001 have brought lower numbers of inhabitants in the SR the balances of population change in the late the 1990s and considering very low population increases in the first years of new millennium, in 2005 the number of inhabitants of the SR (a follow-up to the Census in 2001) was lower than the number of inhabitants in 1998 (and only by 10 thousand persons higher than in 1996). As of 31 December 2005 the Slovak Republic had 5 389.2 thousand inhabitants.

Also the distribution of natural increase confirms that demographic development is regionally differentiated in the SR. The SR territory can be divided by natural increase into progressive northeast – with a relatively high natural increase in particular districts and degressive southwest – with a low natural increase, even with natural decrease in the districts. In the first phase of the observed period the still high natural increase was concentrated in the northeast part of the SR; in district Námestovo natural increase achieved even 11 persons per 1000 inhabitants, followed by district Kežmarok with natural increase of almost 10 persons per 1000 inhabitants and Sabinov with increase of 8 persons per 1000 inhabitants. These districts together with districts Tvrdošín, Stará Ľubovňa, Kežmarok, Spišská Nová Ves, and Levoča created two centres of regions with high natural increase (above 6 persons per 1000 inhabitants). Districts with somewhat lower increase complement those regions. One of these regions, located more eastward, includes almost the whole eastern Slovakia, except for districts in the utmost east and district Rožňava. The increase is connected, as it has been already mentioned in previous chapters, with the slower onset of the new reproductive behaviour of population (characterized by lower and later fertility) in the northeast and east of the SR compared to the southwest part of the SR. Three districts in western Slovakia - Skalica, Hlohovec, and Dunajská Streda and also districts Bratislava IV and Bratislava V with younger age structure had non-significant increases close zero. It is

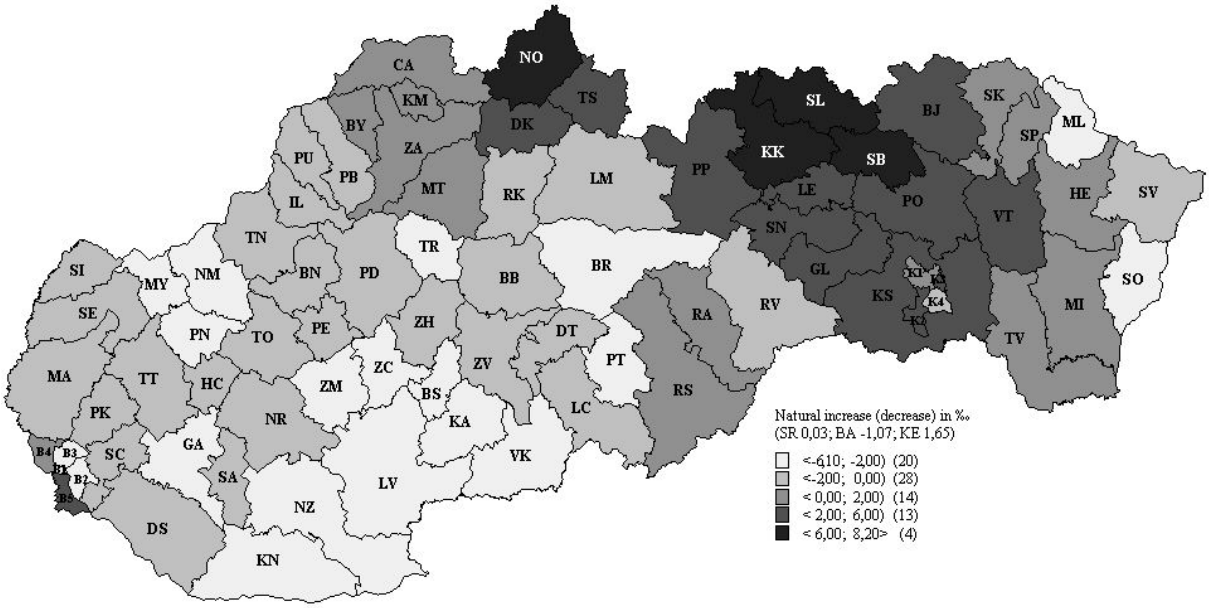
interesting that district Dunajská Streda has been recording natural increase also in the long run as one of few districts in western Slovakia.

The highest decrease was registered in districts of Bratislava - Bratislava I, Bratislava II, Bratislava III (-7.37 up to –3.11‰) with a specific age structure. Apart from these districts there were also districts Turčianske Teplice, Myjava, Medzilaborce, Nové Zámky, and Krupina, which lost more than 3 persons per 1000 inhabitants due to natural changes. A similar development, though with milder decreases, appeared in districts of southern Slovakia where a coherent region with natural decrease was formed. It includes the area from district Komárno to the east as far as district Veľký Krtíš and districts Zlaté Moravce and Banská Štiavnica in the north. A similar situation was also in districts Nové Mesto nad Váhom and Poltár.

Map 7.1 Natural increase (decrease) of population in the districts of the SR, 1996-2000



Map 7.2 Natural increase (decrease) of population in the districts of the SR, 2001-2005



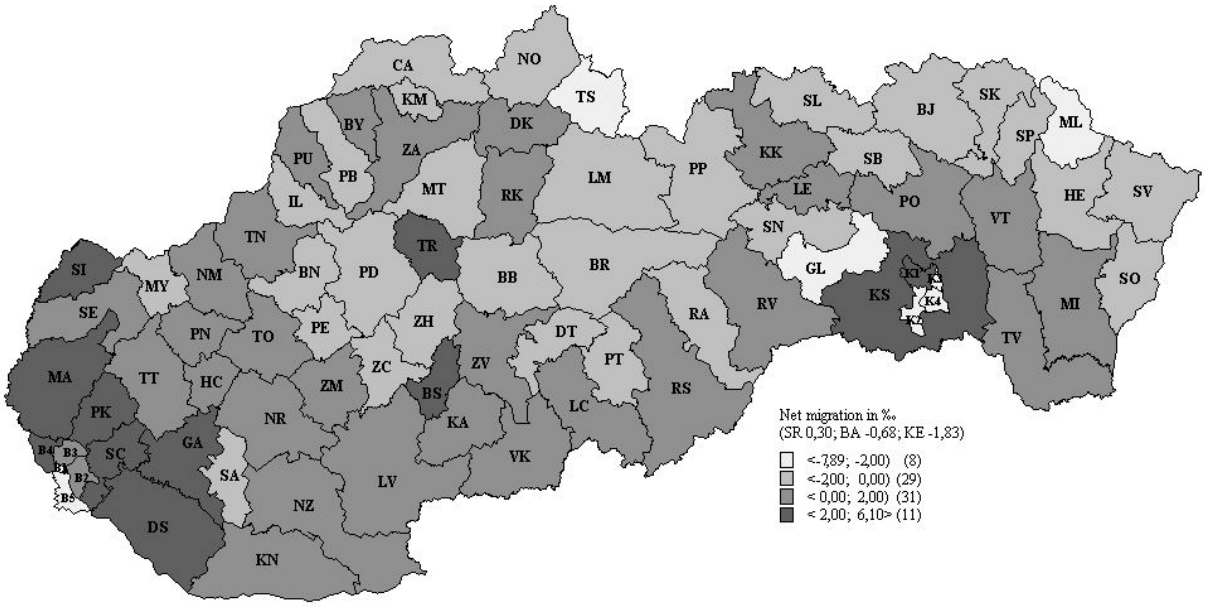
It results from the data of individual periods that natural increases of particular districts have been occurring gradually in interval with lower span. In 2001-2005 the maximal increase diminished to 8.20 ‰ and the highest decrease reached 6.10 ‰. The cores in regions with natural increase lost districts Tvrdošín, Spišská Nová Ves, and Levoča and regions with natural increase themselves diminished. So the boundaries of districts with natural decrease shifted further to the northeast. The exceptions were districts Revúca and Rimavská Sobota and districts Bratislava IV and V with population increase.

The level of natural increase or decrease in districts of Bratislava and Košice confirms that those are specific districts. The imbalanced age structure in particular districts (which is connected mainly with construction of housing estates) and low fertility caused that natural increases differ diametrically also within the city. High natural decrease was in the centre of Bratislava (Bratislava I), but also in older parts of the city (Bratislava II, III) with older age structure. However, the increase was in districts Bratislava IV and Bratislava V with newer housing and younger population. Also in Košice district Košice IV registered natural population decrease, but other districts recorded increases, while districts Košice II, III and in the first period also district Košice I ranked among the districts with higher natural increase.

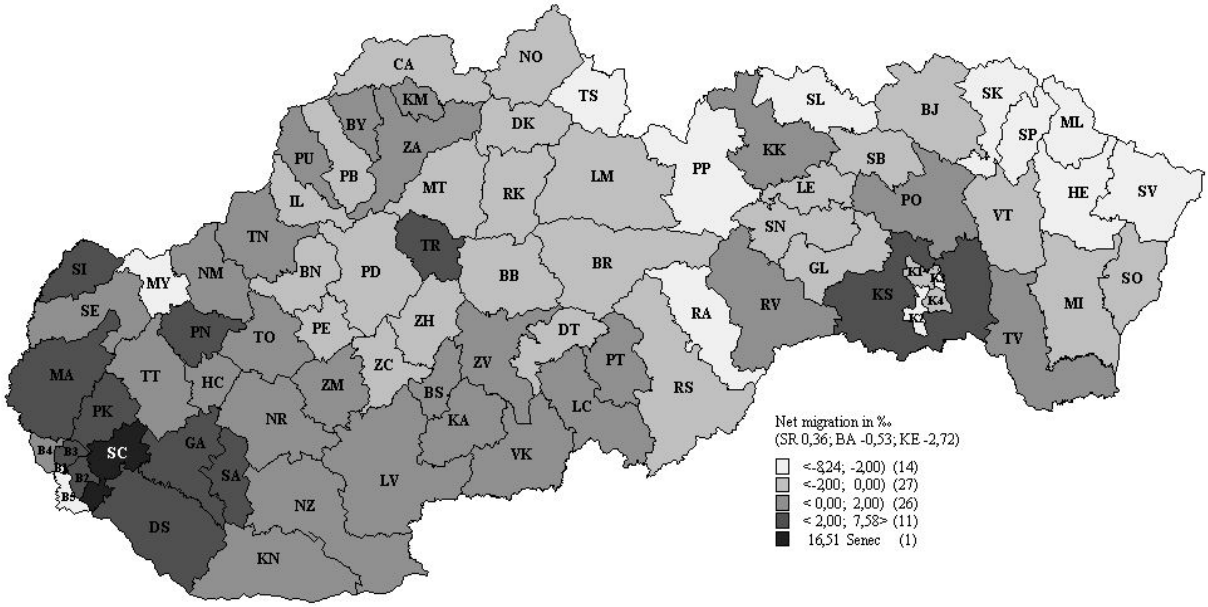
Bratislava itself as a city was losing population due to natural changes in all the observed period, though the reducing of decrease in the last phase can indicate that turn in development towards population increases could appear in the forthcoming years. The city of Košice as a whole has not recorded yet such losses due to natural changes, but natural increase lowered significantly.

Migration at the level district is not only international unlike the migration at the SR level. Just considering the low level of international migration, increases or decreases from migration (international and internal) copy substantially (almost in detail) increases or decreases from internal migration in the districts.

Map 7.3 Net migration in the districts of the SR, 1996-2000

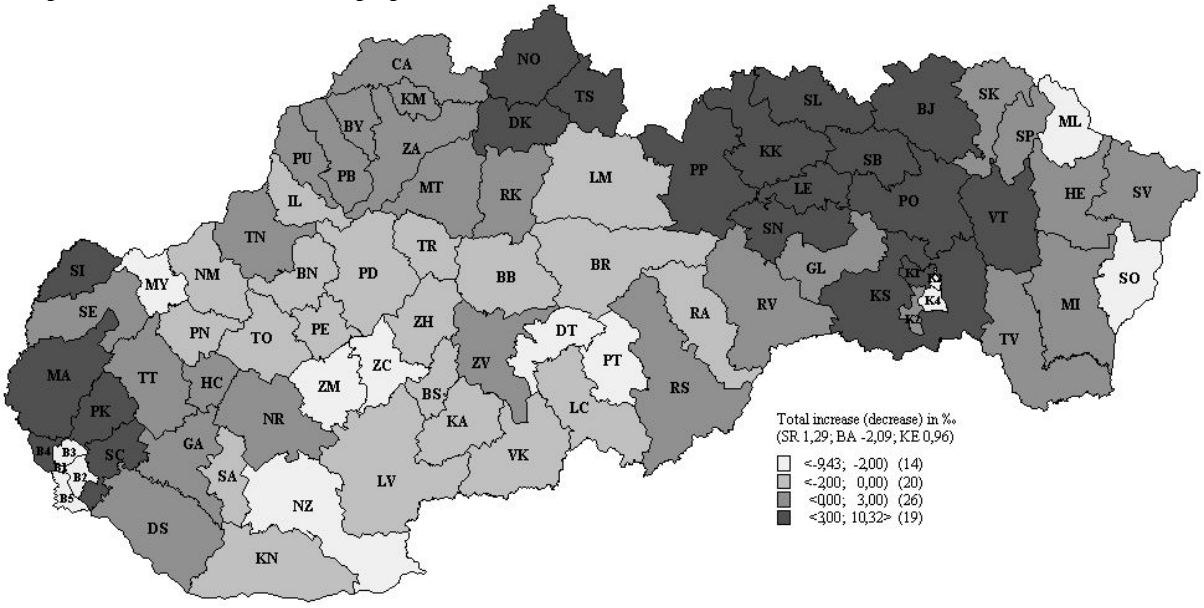


Map 7.4 Net migration in the districts of the SR, 2001-2005

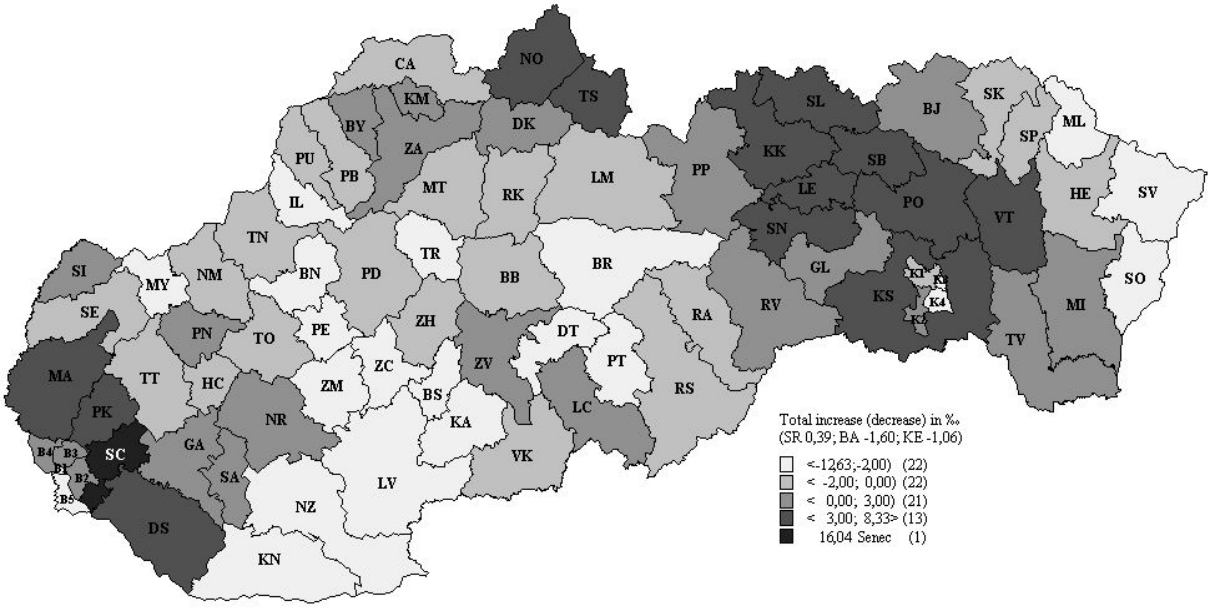


As only a few districts show decreases from international migration (although only insignificant), in that manner international migration "improves" actually migration situation in districts. It reduces migration decreases and raises increases though not markedly. Consequently, the spatial distribution of migration increases or decreases has not been changing more substantially compared with internal migration; only the maximum reaches higher values than internal migration during the whole period. The increase of international migration influenced net migration in district Bratislava III mainly. This district experienced losses from internal migration in 1996-2000, but the gain from international migration ranked it among districts with migration gains. On the contrary, district Bratislava V was not attractive for immigrants and losses from international migration deepened the losses from migration even more, like in Košice districts II, III, IV. Also district Bratislava I was recording losses, but from other reasons, like the historical centre of Košice. On the other hand, districts Košice I and Košice IV reduced migration decrease only due to increase from international migration in 2001-2005. It is obvious that international migration influences the level of migration increase mostly in big cities. However, migration increases rose as well due to international migration also in districts Žilina and Trnava. Comparing the period 1996-2000 with the period 2001-2005 the number of districts with the highest decreases grow from 8 to 14. It was caused by internal migration, when the number of districts with the highest losses from internal migration increased to 17 in 2001-2005. District Senec reached the maximum among districts and it has currently – in Slovak circumstances – an extreme gain from internal migration.

Map 7.5 Total increase of population in the districts of the SR, 1996-2000



Map 7.6 Total increase of population in the districts of the SR, 2001-2005



The development of total increase in population, as a combination of natural increase and net migration, was influenced mainly by the level of natural increase at the beginning of observed period. Gradually, as the natural increase was loosing its power, migration was prevailing more and more in the structure of natural increase. It is evident also from maps of total increase for both periods.

In 1996-2000, 3 marked regions with higher population increase were formed in the SR territory. The largest one occupied the essential part of eastern Slovakia. It was formed by 11 districts – starting with districts Poprad, Spišská Nová Ves, up to Bardejov and Vranov nad Topľou in the east and district Košice I and Košice - okolie in the south (except for district Gelnica). Districts Námestovo, Tvrdošín, and Dolný Kubín formed the next region in the north of Slovakia. In the structure of the increase in these two regions natural increase was prevailing; the exception was district Košice - okolie, in which natural increase and net migration has almost equal share on population increase. The third region of higher values of total increase was situated in the neighbourhood of Bratislava; it was formed by districts Senec, Pezinok, Malacky with natural decrease of population, but with considerable increase of migration. The region was being supplemented by district Bratislava IV with low natural increase and increase of migration (internal and also international). Also separately lying district Skalica had higher increase, in which also migration was prevailing significantly. Districts with lower increase surrounded these regions. This structure was being interfered only by districts Liptovský Mikuláš and Brezno (and some city districts, which have indeed a specific position) with weak population decrease. 14 districts with population decrease created the rest of the SR territory. Among them districts Trenčín, Zvolen, Rimavská Sobota were acting like solitaires with weak increase. In 2001-2005 two regions of highest increases diminished - districts Poprad, Bardejov, and Košice I separated from the first region and district Dolný Kubín separated from the region in the north. District Dunajská Streda integrated into region in the hinterland of Bratislava and district Bratislava IV separated from it. District Senec gained a special position of a district with maximal and markedly higher crude rate of total increase compared with other districts – a typical representative of a territory in a suburban area. The number of inhabitants increased only by migration (16,51‰) in this district, but its natural decrease was gradually falling (down to about 0.5 ‰). The position of district Skalica weakened. Also surround of regions with the highest increases was disturbed by districts with high increases. The number of districts with population decreases, i.e. with degressive development increased from 34 to 44 and number of districts with the highest decreases from 14 to 22. The maximal decrease of population, even 12.63 ‰, was in district Bratislava I. It was followed by districts with overmatured age structure and significant population decrease from migration – districts Myjava with decrease 6.72 ‰, Medzilaborce 5.57 ‰, Sobrance, Bratislava V, Brezno, Košice and Poltár with decrease above 3 ‰.

The biggest cities – the capital of Slovakia Bratislava and the centre of eastern Slovakia - Košice have a specific position in demographic development. As it has been already mentioned in the chapter on migration, both cities recorded losses from internal migration. However, gains from international migration were lowering migration losses of these cities[13]. While in Bratislava negative net migration (losses from internal and also international migration) decreased from the half of observed period, they increased in Košice. Though, the number of inhabitants of Bratislava has decreased also by natural changes when the number of live born dropped by 5.5 thousand persons lesser than the number of died over the last 10 years. Also decreases from natural changes have been gradually moderating in the capital. However, these changes are not so significant to reflect in data computed for period 2001-2005.

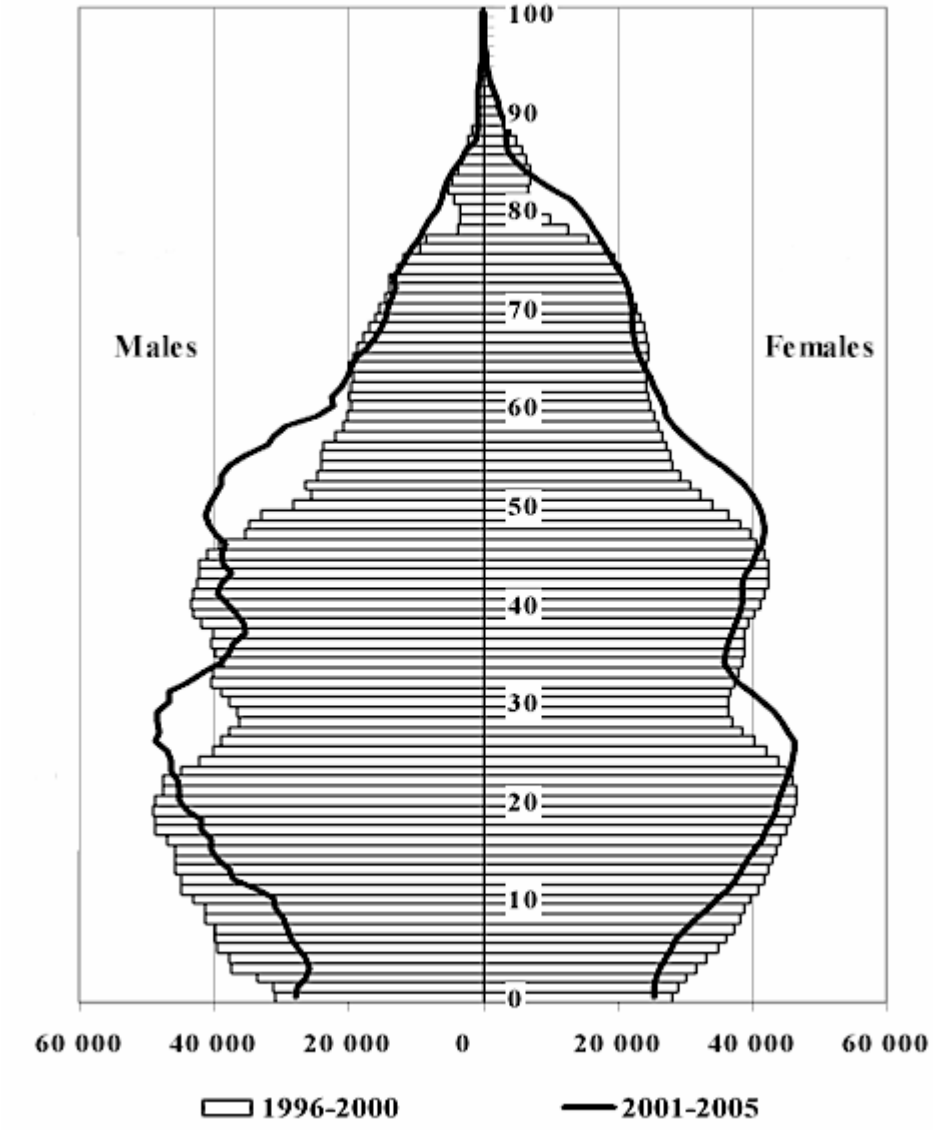
In Košice unlike Bratislava, losses from internal, but also from international migration have been still reduced by natural increase. However, Košice is still the city with decreasing number of population.

[13] In 2005 in Bratislava the losses from internal migration was fully compensated by the gains from international migration and therefore Bratislava recorded migration gains. Despite natural decrease the number of population of Bratislava increased again due to gain from international migration.

8. Age structure

Also the changes in age structure of population are connected with population processes. Substantially regressive shape of age pyramid of population in the SR is currently reflecting the decreasing number of live births, which has been typical of the SR population from the late 1970s (a slight turn in their number was recorded only in last three years). Also it shows two maximums, the primary one from the 1950s, which is being represented by births in period of high fertility after the World War II and secondary one from the 1970s, which represent children born of parents from great population age-groups in the period, when the pronatalist measures were adopted. So-called war notch of age pyramid caused by the World War I has been already gradually faded away. Weaker population age groups are characteristic of cohorts born in the 1930s and 1940s or 1960s. Compared to the primary period (1996-2000), the last period (2001-2005) is characteristic with higher representation of older age groups in population (11.52 %), i.e. population is ageing in the SR. Population at productive age has a high proportion, in 2001-2005 comprised almost 71 % of the SR population.

Graph 8.1 Age structure of population in the SR



Also increasing mean age documents the population ageing. While in 1996-2000 mean age achieved 35.2 years, it increased to 36.7 years in the last period 2001-2005. And mean age of women was higher than mean age of men as a consequence of excess male mortality (in 2001-2005 it reached even 38.18 years for women, but only 35.04 years for men). The proportion of women is greater at age higher ages. For example in 2001-2005

there were 14 % of women, but only 9 % of men aged 65 and over in the SR population. So women comprised up to 62 % of population aged 65 and over and women aged 80 and over even more than 2/3 (68.4 %). Also the ageing index has been rising. It was getting round the level of 64.5 % in 2001-2005, while in 1996-2000 it was by 10 percentage points lower. The population ageing is related also to diminishing of child component of population[14]. Its representation has been gradually decreasing in the SR population. Its share fell from the value 20.7 % in the first period to 17.9 % in the last period. The fall is connected mainly with that the weak population age groups of children born in the second half of the 1990s and at the beginning of new millennium were gradually entering this age group and the greater population age groups of births from the 1980s were leaving it (though their number was also gradually decreasing).

The processes of population ageing can be documented also by using the economic dependency ratio[15], which expresses the burden of productive population with non-productive, i.e. depends on the size of all three components of population – productive, pre-productive, and also post-productive and concurrently it reflex also ageing process. The burden of productive population in the SR decreased by more than 5 percentage points in the observed period and in 2001-2005 reached 41.6 %. Despite the population ageing the old age dependency ratio even fell slightly (from 16.5 % to 16.3 %). Mainly the child component had a share on the burden of productive population, though the young age dependency ratio with value 30.5 % in the first period was gradually decreasing and in 2001-2005 its share was already only 25.3 %.

At district level age structure is differentiated. It reflects the various levels of natality, mortality, and migration in the past (approximately for last 100 years). At the same time the age structure influences current and future population development and in this way also the age structure itself in future.

In term of representation of main age groups in districts it can be stated that the child component of population (aged 0-14) was weakened in all districts comparing the period 1996-2000 with 2001-2005. It decreased the most in district Bratislava V, even by 7 percentage points, in district Košice II by 5.4 points, in district Ilava and Považská Bystrica by more than 4 points. The lowest decrease was in district Košice IV and district Medzilaborce. Also numbers of population aged 0-14 decreased in all districts without exception. Districts with the highest natural increase and also with the highest fertility had the greatest shares of this population and on the contrary, the lowest representation was mainly in districts with long-term natural population decrease. It is obvious that in 1996-2001 the maximal representation of children aged 0-14 was in district Námestovo with the share of 30 % and in another 6 districts of northeast Slovakia (Kežmarok, Stará Ľubovňa, Sabinov, Vranov nad Topľou, Spišská Nová Ves, and Tvrdošín) with the share above 25 %. District Bratislava I had the lowest share, only 13.3 % and neither districts Bratislava II, Bratislava III, and Košice IV did not reach proportion of 15 %. Also in period 2001-2005 population at pre-productive age had the greatest representation in district Námestovo with 27.8 %, but the share higher than 25 % was already only in districts Kežmarok, Stará Ľubovňa, and Sabinov. In this period 6 districts of Bratislava and Košice had the lowest share, and the share in district Bratislava I and Bratislava V was below 12 %.

Population at productive age, as the main source of labour force, in absolute numbers is indeed also decreasing during the observed period – mainly in some Bratislava districts and districts of Trenčín region, but in relative measure its representation was gradually increasing in all districts, except for district Košice IV. While in 1996-2001 the maximal share was 78.3% in district Košice III, in 2001-2005 the maximum shifted to district Bratislava V with proportion even 83.3 %, which gives evidence of one-sided age structure of this district, mainly due to more than hundred-thousand housing estate in Petržalka. Just in this district the share of population at productive age increased the most – by more than 6 percentage points. The proportion of population at productive age was higher than 70 % at the end of period even in 26 districts. In all the monitored period mostly districts of northern and northeast Slovakia had minimal values. On one hand, they are the districts with high pre-productive component (for example districts Stará Ľubovňa, Námestovo, Sabinov, etc.) and on the other hand, districts with significant and long-term natural decreases (Medzilaborce, Bratislava I). But also the minimal shares of population at productive age increased, approximately by two percentage points and at the end of period they were around the level of 65.5 %.

In connection with population ageing greater attention is paid to population at post-productive age. In absolute and relative numbers the development of this population has not been unambiguous for now in districts. 27 districts experienced decrease in relative numbers comparing the beginning and the end of the period, but it

[14] The child component of population involves the population at pre-productive (or in pre-reproductive) age, i.e. 0-14 years old and population at post-productive age involves population aged 65 and over.

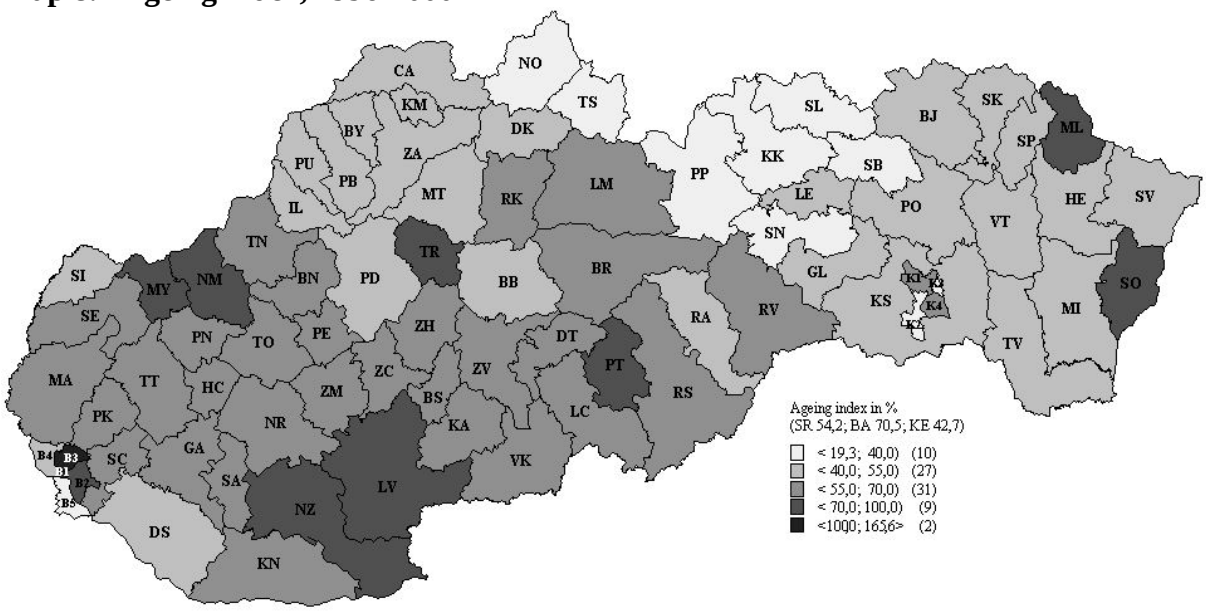
[15] Economic dependency ratio is the ratio of non-productive components (population at pre-productive plus post-productive age) and productive component of population (population at productive age). Young age dependency ratio expresses the burden of productive component with young people (aged 0-14), old age dependency ratio expresses the burden of productive component with the old people (aged 65 and over).

was not higher than 1 percentage point in all districts except for district Bratislava I (decrease less than 2 percentage points). Also in districts with increases the growth was only hardly noticeable and reached no more than 1.28 percentage points except for district Košice II (2.1 percentage points). The maximal proportion of population at post-productive age decreased from 22 % to 20 % (district Bratislava I), the minimal value increase from 3.5 % to 4 % in district Košice III. The low representation of this population was also in district Bratislava V (4.6 or 5.1 %).

Population aged 80 and over, designated also as "oldest-old", has a specific position in the group of population at post-productive age. In the Slovak Republic its share has been moving at the level round 2 %. The care for this population is already in need of greater demands mainly for health and social services. As the number of population at this highest age has been gradually increasing, a heightened attention must be paid to it in all districts. This population had the highest share in all the observed period in district Bratislava I, in 2001-2005 it achieved even 5.5 % of the district population. In 1996-2001 the district Turčianske Teplice had a high share, more than 3 %, but in 2001-2005 there were already 5 such districts (apart from Turčianske Teplice and also Bratislava III, Medzilaborce, Sobrance, and Poltár). The lowest share – up to 1 % - was in districts Košice II, Košice III, and district Bratislava V. Speaking of the ageing process, it is interesting to know the representation of population aged 80 and over on the population in post-productive age. In 2001-2005 this oldest population comprised 19 % of the SR population at post-productive age. It comprised more than 1/5 of population at post-productive age in 20 districts of the SR, and its share achieved even 27.5 % in district Bratislava I. The representations of more than 19% were in 47 districts. Women formed the majority of this oldest population, from 63.5 % (district Partizánske) up to 75.4 % (district Banská Štiavnica).

Population ageing is reflected to various extent at district level. Also maximal and minimal values of ageing indices document this. While in 1996-2000 the lowest ageing index was in district Košice III with value 19.31 %, period 2001-2005 is characterized by minimal value 24.95 % in district Námestovo, i.e. the shift of minimal value by more than 5 percentage points. The ageing index achieved the maximal value in all period in district Bratislava I, when reached 165.64 % in the first period and it increased gradually to 173.22 % in the last period. High values of ageing index (above 100 %) were also in the district Bratislava III and also in the district Bratislava II at the end of observed period. It means there were more people aged 65 and over than children up to 15 in these districts. So the span of maximal and minimal values is large, which confirms various development stages of ageing process in particular districts.

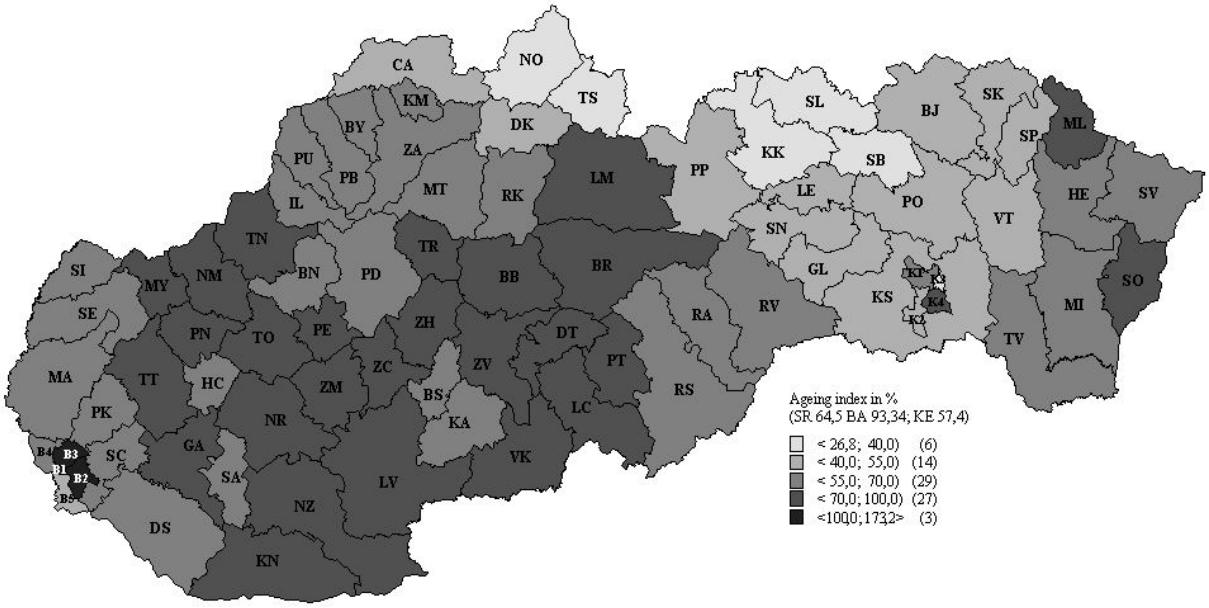
Map 8.1 Ageing index, 1996-2000



Spatial distribution of ageing index is very closely connected with distribution of natural increase. The youngest population lived in districts with the highest natural increase. In period 1996-2000 it formed two regions with ageing index below 40 %. Districts Poprad, Kežmarok, Stará Ľubovňa, Sabinov, and Spišská Nová Ves created the biggest one in the northeast of the SR. Districts Námestovo and Tvrdošín formed the second region – identical with the region of high natural increase. Districts with older population, mostly with ageing index below 55 %, were situated around them. The oldest population lived in districts with natural decrease of population in the west and south of the SR. Except for districts of Bratislava mentioned above, which formed a small region of the lowest values, districts Myjava and Nové Mesto nad Váhom and districts Nové Zámky

and Levice created another two regions of low values. But these regions were no similar to the regions with natural decrease to that extent than it was in regions of "young". High ageing index was also in separately lying districts Turčianske Teplice, Poltár, Medzilaborce, and Sobrance, which counted also among districts with the highest relative natural decrease of population. In these regions more than 70 persons aged 65 and over fall per 100 children aged 0-14, but the number of children was still higher than the number of old people at the given age.

Map 8.2 Ageing index, 2001-2005



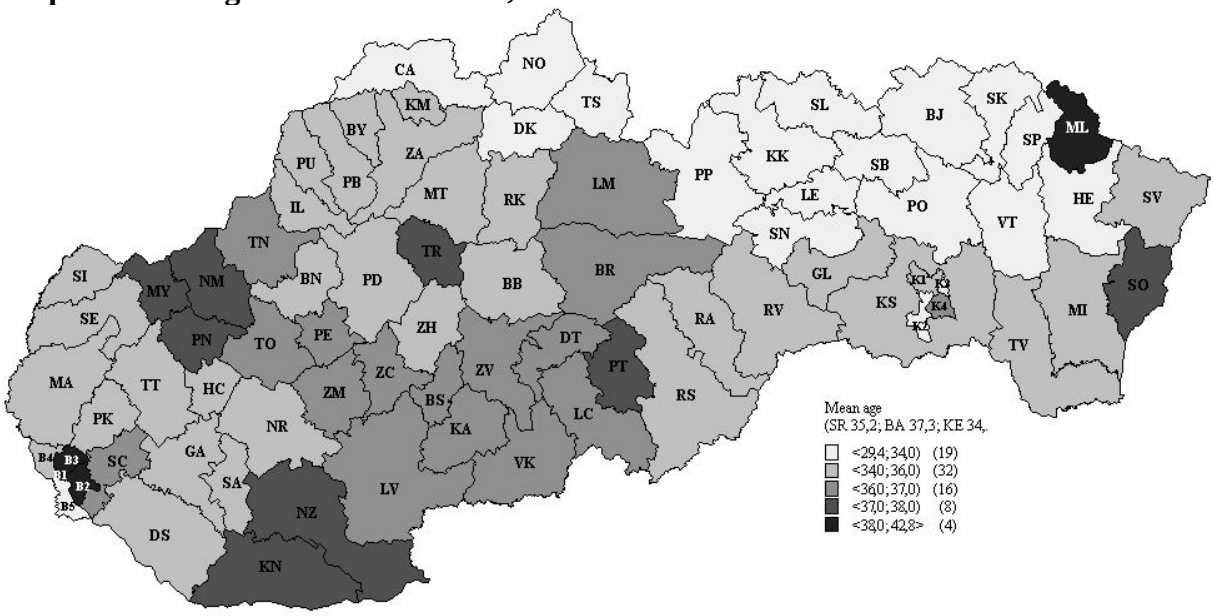
Comparing the periods 1996-2000 and 2001-2005 we can notice that population ageing of the SR has deepened. Not only maximal and minimal values of ageing index increased at district level, but also values of ageing indices in individual districts. Also in the last period ageing index with its lowest values created two regions corresponding to the highest natural increase in this period – with districts Kežmarok, Stará Ľubovňa, Sabinov in one region and with districts Námestovo and Tvrdošín in the second one (however, in the case of natural increase the only separate district Námestovo remained with the highest value). Also district Košice III with ageing index of 27.47 % ranks to these districts.

The substantial part of the SR territory (59 districts) is formed by districts, in which the number of population aged 65 and over is not higher than the number of children aged 0-14 and at least 55 old people fall per 100 children. As it has been already mentioned, the oldest population has been living in three Bratislava districts. Migration acts like an accelerator of ageing processes in districts with migration losses (Bratislava I, Medzilaborce, etc.).

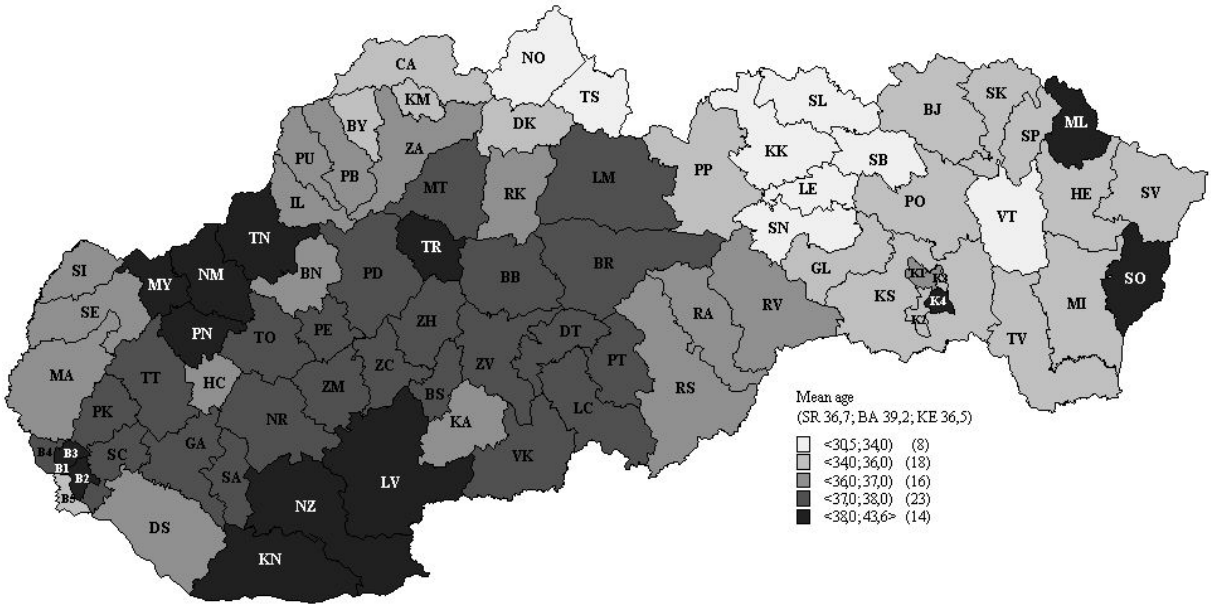
All the SR districts recorded a growing trend of ageing index; the difference was only in growth rate. It is supposed that population ageing will deepen in future and as it follows from the population projection of districts even at faster rate.

Also increasing mean age in individual districts documents the population ageing process. The minimal and maximal values of ageing index shifted up in districts. Between the periods 1996-2000 and 2001-2005 the number of districts increased from 4 to 14 in the category with the highest mean age, i.e. 38 years and over. In 1996-2000 only districts Bratislava I, Bratislava II, Bratislava III and district Medzilaborce were in this category. Districts with high mean age formed one region in western Slovakia (Myjava, Nové Mesto nad Váhom, and Piešťany), the second one in the south (Komárno, Nové Zámky). These districts together with other created a large region of higher values (with mean age above 36 years), which stretches from districts Myjava, Nové Mesto nad Váhom, and Trenčín to the southeast up to the SR borders and from Komárno and Nové Zámky in the direction through Poltár, Brezno up to Liptovský Mikuláš. Districts Turčianske Teplice and Sobrance, lying outside the mentioned region of higher values, exceeded the limit of mean age - 37 years. Regions with low mean age covered northern and northeast Slovakia, with the exception of districts in the utmost east.

Map 8.3 Mean age in the SR districts, 1996-2000



Map 8.4 Mean age in the SR districts, 2001-2005



In period 2001-2005 ageing deepened, when other districts joined four districts with the highest values of mean age (Bratislava I, Bratislava II, Bratislava III, and district Medzilaborce) from period 1996-2000. From districts with high mean age in 1996-2000, further regions of the highest values were being gradually formed – the first one from districts Myjava, Nové Mesto nad Váhom, Trenčín, and Piešťany and the second one from districts Komárno, Nové Zámky, and Levice. Also districts Turčianske Teplice and Sobrance ranked into the category of highest values. Districts of high and the highest values cover almost all western and central Slovakia, with the exception of districts Námestovo and Tvrdošín with the lowest values of mean age (30.51 or 32.91 years) and some border districts with mean age below 36 years. Districts of eastern Slovakia had mean age below 36 years and the lowest values were in districts with the highest natural increase.

Changes in number of inhabitants in three elementary age groups have been reflected also in the values of economic dependency ratio. It increased only in district Košice IV in observed period, decreased in all other districts due to the decrease mainly in pre-productive component of population and stable development population at productive age up to now. Districts with high productive component had low economic dependency ratio, mostly due to low share of both dependent groups – children, but mainly population at post-productive age. The lowest values of the economic dependency ratio were in district Košice III (decreas from 27.7 % in 1996-2000 to 22.7 % in 2001-2005) and Bratislava V (decrease from 30.1 % to 20.1 %). Old age dependency ratio reached

neither 5 % in the district Košice III and it was moving only round the level of 6 % in district Bratislava V. Districts of southwest and western Slovakia together with districts Košice II, Košice III, Košice IV, and district Poprad had lower values of economic dependency ratio than the average of Slovakia. High values (above 50 %) were in districts of eastern Slovakia (with the exception of 4 districts with low values mentioned above) and in districts Námestovo and Tvrdošín. It documents the high dependency on pre-productive component of population in most of them. For example 3.7 times more children than old people fell per 100 persons at productive age in district Námestovo (young age dependency ratio was 42.9 % and old age dependency ratio was 11.5 %), in district Kežmarok young age dependency ratio was 3.4 times higher than old age dependency ratio, but decrease in young age dependency can be visible at the end of observed period in all districts of the SR. The old age dependency ratio was higher than young age dependency ratio only in three Bratislava districts – Bratislava I, Bratislava II, Bratislava III. The burden of population at productive age with old population did not change more significantly in the observed period. It increased in 28 districts, in most cases only slightly, decreased in other districts and also only slightly. Child component of population has still the decisive influence upon changes in economic dependency of population.

With respect to the reproduction process, it is proper to study representation of population at reproductive age, i.e. population aged 15-49. Proportion of this population in districts was ranging approximately between 48 – 70 %. This rather high share was a consequence of the fact that large population age groups born in the 1970s belonged to this age group and not so large age groups born immediately after World War II were leaving it. The share of this population leaved the expected values only in atypical – "city" districts influenced significantly by migration. Already in 1996-2000 the share of population at reproductive age achieved extreme values in district Bratislava V, where comprised even 2/3 of population in district and in district Košice III, where the share achieved almost 70%. Other districts followed with a distance above 10 percentage points. On the other hand, it is understandable that this share was reaching not even 50 % in districts with greater representation of population at higher age (Bratislava I, Sobrance, Medzilaborce, Bratislava III). Spatial distibution the population at reproductive age did not form more marked regions; the distribution had rather the character of mosaic. The share of this component of population was gradually decreasing; the most of all in district Košice IV, by more than 6 percentage points when in period 2001-2005 the representation was only 50.1 %. A decrease appeared also in districts with the highest representation of this population, by 5.7 percentage points in district Košice III and by 1.8 points in district Bratislava V. 20 districts recorded a decreasing share between 1996-2000 and 2001-2005. This decrease is connected with the fact that increasingly weaker population aged 15 enters this group and great population groups born in the 1950s leave it. Districts with the lowest share recorded a slight growth (districts Sobrance, Medzilaborce) and also fall (districts Bratislava I, Bratislava III).

The cities of Bratislava and Košice have a specific position in the age structure of population. They counted among spaces with the youngest age structure in past. These districts are currently characterized by even diametrically different age structure. On the one hand, there are districts with the highest ageing index in the SR and also with the oldest population (districts Bratislava III, I, II, and Košice IV with a little younger population), on the other hand they are districts with the youngest population in the SR (Košice III, II, Bratislava V). These differences of age structure relate mainly to construction of housing estates, construction activity in various phases of the second half of last century, to which mainly young families were moving. So age structure is imbalanced and causes one-sided demand on social sphere (education, health, social services, etc.), according to representation of the most numerous age groups of population in particular periods. Therefore it is understandable that in all the observed period population of these two cities was characterized by high representation of productive population, which shared by more than 70 % in population of these cities (Bratislava 74.2 %, Košice 73.1 % in 2001-2005). Differences were in representation of population at pre-productive and post-productive age, which is connected with development of natural increase to a great extent. While the city of Košice recorded natural population increase in all period 1996-2005, Bratislava recorded natural population decrease. But nevertheless decrease in population aged 0-14 was in both cities (the share decreased from 17.0 % to 13.3 % in Bratislava and from 20.3 % to 17.1 % in Košice) and a mild increase of population at post-productive age (the growth from 11.2 % to 11.5 % in Bratislava, from 8.7 % to 9.8 % in Košice). In 2001-2005 population aged 80 and over comprised even 20.3 % of city population at post-productive age in Bratislava, 17.3 % in the city of Košice, and its growth was more marked in the capital in all period.

Economic dependency indices were gaining various and often diametrically different values in districts of Bratislava and Košice. In general, in both cities there was low burden of productive population with non-productive in all period and its values were gradually falling. While in period 1996-2000, there 41 non-productive inhabitants fell per 100 inhabitants at productive age in both cities, in 2001-2005 it was already only fewer than 35 persons in Bratislava and 37 persons in Košice. It was a result of the fact that the burden with child component fell in both cities, by 5 - 6 percentage points, while burden with post-productive component has not been nearly changed in Bratislava and increased slightly in Košice.

Considering that the city of Košice has not experienced natural decrease of population yet, the process of its population ageing was running slower in spite of emigration. The ageing index of city population was gradually increased from 42.67 % in 1996-2000 to 57.41 % in 2001-2005, but it was lower than average level of the SR (54.26 % or 64.47 %).

A different situation is in the capital of the SR, which recorded natural decrease in population during the whole observed period. Besides that also Bratislava remained an area with losses from migration in 1996-2005, which supported ageing process even more. Ageing index increased from 70.51 % in 1996-2000 to 93.36 % in 2001-2005, i.e. almost by 23 percentage points. Comparing the capital Bratislava to the SR districts, population of Bratislava is ageing faster than population of districts and ergo Bratislava has also older population. Only two districts had higher ageing index than Bratislava (except for "city" districts of Bratislava and Košice) – Medzilaborce (98.04 %) and Myjava (95.73 %). But weakening of emigration from Bratislava and repeated growth of number of live births indicate that situation could change in future or ageing process could slow in Bratislava.

The cities of Bratislava and Košice had a relatively higher proportion of reproductive component of population. Generally it is connected with the fact that strong population age groups of persons born in the 1950s and mainly in the 1970s were in this group of population. High immigration into these cities in the 1970s and the 1980s influenced the frequency of these large age groups the most markedly, because mostly young population was migrating, young families with children.

9. Regional demographic typology of districts in the SR

The analysis of particular processes is not sufficient for creating of the complex picture of demographic development in regions. The results of cluster analysis provide a synthetic picture of demographic development.

Cluster analysis enabled to classify 79 districts of the SR into seven clusters that represent seven different types of demographic structures. We evaluated attributes of these structures by position of cluster median regarding the quartile distribution of values for particular indicators in the SR districts (graph 9.1) and added other pieces of information into text, gained from the analysis of demographic processes.

Concurrently it follows from results of application of cluster analysis that mainly processes of natural development are the decisive factors for creating regional demographic types of districts, i.e. factors that differentiate the SR territory on the basis of demographic behaviour.

Districts in the north of Slovakia – Námestovo, Kežmarok, Stará Ľubovňa, and Sabinov, together with district Vranov nad Topľou, formed a marked regional type – cluster 4. High fertility (with the highest values of total fertility in the SR), high nuptiality (with low age at first marriage), but the lowest divorce, low abortion, and mean mortality[16] are typical of this regional type of districts. Migration gets mostly negative values.

Districts of cluster 2 surround the previous regional type. 17 districts create this cluster, in the west district Považská Bystrica and also districts in the north of central Slovakia – Bytča, Čadca, Kysucké Nové Mesto, Dolný Kubín, and Tvrdošín, and then districts of eastern Slovakia from Poprad towards Prešov and Svidník, and up to Sobrance. This regional type of districts is characterized mainly by lower fertility and nuptiality, higher divorce than in the previous cluster, but similar values of other indicators.

9 districts of cluster 1 form a regional type of districts with rather high fullness. It covers the south of eastern Slovakia, with the exception of three districts of Košice city (Košice I-III), includes Central Slovakian districts Brezno, Rimavská Sobota, and Revúca, and separately lying district Krupina. High mortality and abortion is typical of this type unlike clusters No. 2 and No. 4. Nuptiality and divorce register mean values. Mostly negative values are typical of migration; the exception is district Košice - okolie with rather high increase.

Cluster No. 6 is formed by 14 districts that are situated near the southern border of the SR, from Galanta and Dunajská Streda up to Zvolen, Poltár, and Lučenec (with the exception of district Krupina) and also districts Malacky, Turčianske Teplice, and Rožňava. Also this cluster is characterized with high mortality, higher abortion and divorce, but rather low fertility and low nuptiality. All districts of this cluster register population increase of migration.

The most numerous is cluster 3, where 28 districts belong to. Apart from one exception (district Detva) the cluster creates one compact area. This region covers a substantial part of western Slovakia and a part of central Slovakia – from the border with the Czech Republic up to Liptovský Mikuláš, Ružomberok, and Banská Bystrica. Also three districts of Bratislava count here (Bratislava II, III, IV). It is a cluster with rather low mortality and fertility. Other characteristics reach mean values; migration records mostly increases.

Two districts of capital Bratislava differ markedly by demographic behaviour from other districts of the SR – Bratislava I and V and three districts of the city of Košice (Košice I, II, III), which form a special cluster – cluster 5. It is characterized by low mortality, but high abortion and divorce, rather low fertility and population decrease of migration in all districts of this cluster.

Migration was a significant and determining factor by creating an only cluster – cluster 7, into which only district Senec falls. It is characterized by values of indicators of natural changes of population approximately at the level of Slovak average, but the highest population increase of migration, in which internal migration shares almost solely. In period 2001-2005 migration increase achieved even 16 persons per thousand inhabitants in gross rate and district Malacky followed only with a span with migration increase of 7 persons per thousand inhabitants.

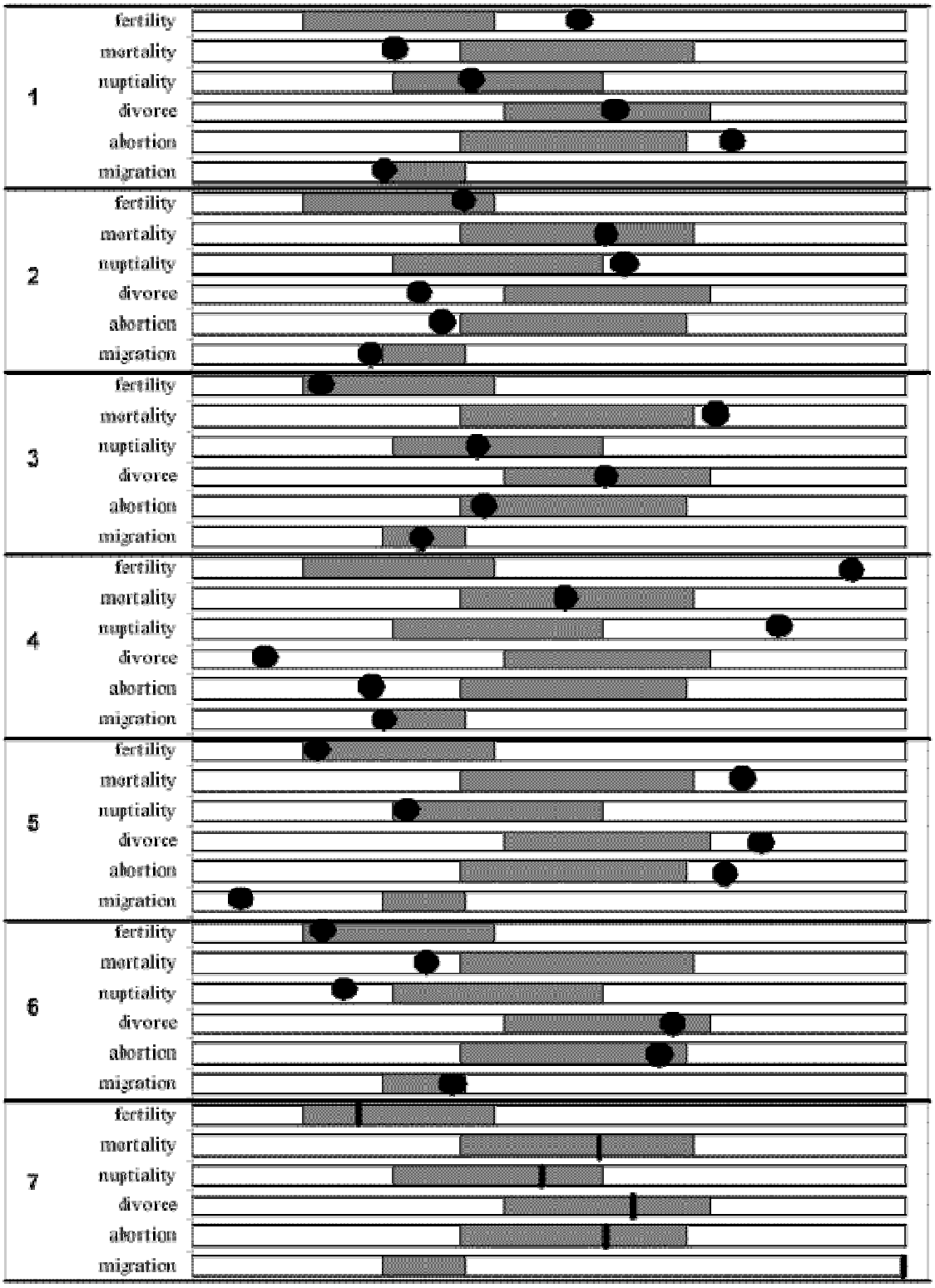
It results from placement of clusters on the map (map 9.1) that regional type (cluster 3) representing a new model of reproductive behaviour covers about a third of the SR territory. Clusters 6 (with higher mortality) and 5 (with higher abortion and divorce) are the closest to this type. These three clusters cover all western and a par of central Slovakia (except for northern districts and districts Krupina, Brezno, Rimavská Sobota, and Revúca) and also three districts of Košice rank among them. Also cluster 7 with district Senec could be rank by mean values of indicators of natural changes of population among clusters approaching the new model.

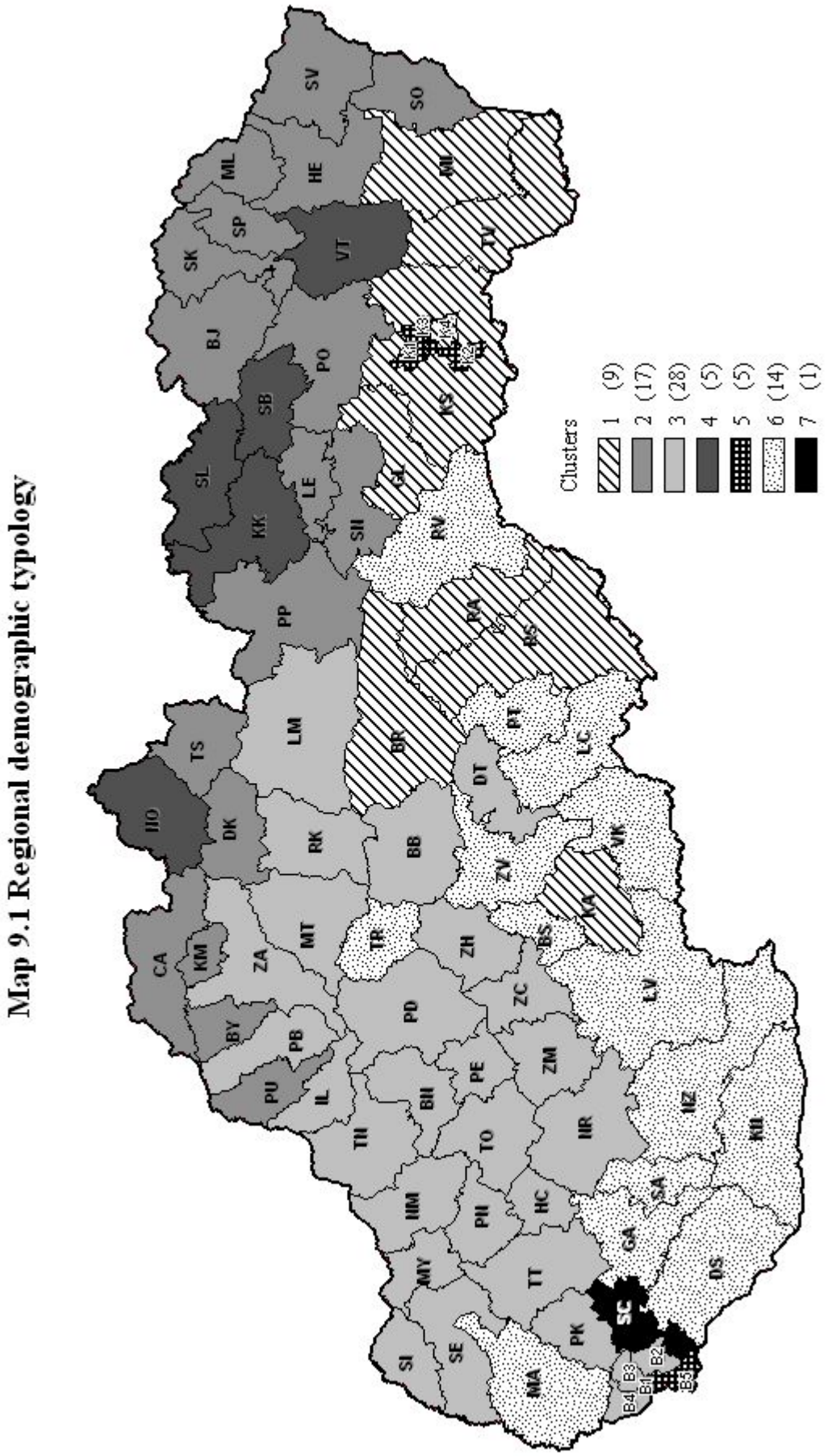
Clusters 1, 2, and 4 cover the remaining part of the SR territory, mainly the north and east of Slovakia, in which reproductive behaviour of population has been carrying the features of old model at vast rate yet. Their

[16] Mortality is characterized by values of life expectancy; therefore high values of mortality (i.e. low life expectancy) are plotted in the left part of graph 9.1.

common feature is mainly higher fertility, earlier entering reproduction, and earlier families building. The tendency for the new model of behaviour starts reflecting in cluster 2.

Graph 9.1 Position of median for values of indicators in 7 clusters regarding the quartile distribution of values for indicators in all districts in the SR





Map 9.1 Regional demographic typology

Conclusion

The main aim of the analysis of demographic development in the SR districts was to investigate how the SR territory is differentiated in terms of demographic behaviour, whether coherent regions with similar demographic behaviour were created or weather they were only separate districts deployed as mosaic with various behaviour. Cluster analysis revealed 7 different spatial types of demographic structures.

However, the frames, within which particular characteristics are ranging in the districts, result from detailed analysis of demographic processes and structures.

The analysis confirmed continuing spreading of a new model of reproductive behaviour and its spatial shift towards northeast, which is being reflected in results of analysis of natural changes of population processes. The adaptation to the new model is being reflected also in changes of the span of maximal and minimal values of individual indicators.

One of the basic manifestations of the new model is decrease in the level of nuptiality in early age categories. The maximal level of nuptiality has been shifting into the category of men aged 25-29. The highest nuptiality of women still remains in the category aged 20-24, in spite of the increase in level of nuptiality at the age over 25 years. The exceptions are urbanized centres Bratislava and Košice with the highest nuptiality in the category of women aged 25-29. At regional level the indicators of nuptiality refer to relatively more conservative marriage behaviour for women than for men.

Divorce has been recording a growing tendency in Slovakia in the long run. Every third marriage has been divorcing on average, the most often between 10th to 14th year of the marriage duration. The highest level of divorce is for men aged 30-34 and women aged 25-29. But increase in divorce is evident also in higher age groups up to the age of 50 years. The most often cause of divorces is divergence of natures, opinions, and interests for both sexes.

The Slovak Republic currently ranks among the countries with very low fertility (1.3 children per one woman at her reproductive age in 2005). The total fertility rate has shifted from values of interval 0.94 (district Bratislava III) up to 2.3 (district Námestovo) in 1996-2000 into interval 0.98 (district Myjava) up to 1.96 (district Námestovo) in 2001-2005. It is interesting that the total fertility rate started increasing slightly in some districts in western Slovakia; on the other hand it has been falling in districts with the highest fertility. Also mean age of women at childbearing has been increasing. While in 1996-2000 the highest fertility was in the category of women aged 25-29 in 15 districts, in 2001-2005 already only 11 districts remained in the category of women aged 20-24 and the fertility maximum even shifted up to the category of women aged 30-34 in district Bratislava I. Also the share of non-marital births has been increasing; its proportion has been shifted from interval 2.8 % - 33.5 % into interval 4.1 % (district Námestovo) – 46.0 % (district Rimavská Sobota).

In the long run abortion has been decreasing in the SR as well. However, the number of spontaneous abortions has been falling more slowly than number of induced abortions. The proportion of spontaneous abortions in the total number of abortions was substantially lower (approximately one quarter of all abortions). Induced abortions experienced decrease in all ages of women. It was caused probably by more responsible behaviour of population and also by overall lower number of terminated pregnancies.

Mortality has been improving in the Slovak Republic still. Life expectancy at birth increased from 68.91 in 1996-2000 to 69.96 in 2001-2005 for men. This increase was milder for women, from 77.53 to 77.91 years. We can observe a similar improvement also at age 60-64 years, i.e. at the age that characterizes the mortality of older generation. Life expectancy for men at this age achieved 16.32 years and for women 21.08 years in the last period. Also infant mortality has been improved; it fell from 8.94 ‰ in 1996-2000 to 7.14 ‰ in 2001-2005.

It is characteristic of migration that in the first half of monitored period gains from international migration were decreasing, in the second half this trend changed in connection with the accession of the SR to the EU. Before the EU enlargement mainly citizens of Ukraine, former Yugoslavia, and Romania were more represented in the number of immigrants except for citizens of the CR; after the EU enlargement the position of the member states of the EU has strengthened. Although the position of the CR has weakened considerably, the CR remains still the most significant migration partner of the SR. Speaking of the internal migration, 77 - 90 thousand people changed their permanent residence within the SR yearly. It results from the analysis of internal migration that two areas are attractive due to migration in the SR. One of them was profiled in the hinterland of Bratislava, with the capital as its core and districts Malacky, Pezinok, Senec, Dunajská Streda, and Galanta forming the hinterland. While the core alone – the city of Bratislava recorded migration losses from migration, the hinterland gained population. In a similar way an immigration area has emerged around the city of Košice – as a core, with the district Košice – okolie. The city of Košice alone as whole, recorded losses from migration. This situation is a consequence of suburbanizing processes in the SR, when population has been migrating from city to their hinterland.

Over the period of 10 years (1996-2005) the number of inhabitants in the SR increased only by 45 thousand persons, and natural increase in this period comprised 61 % of total increase which was approximately the level of one-year natural increase from the late 1980s.

It results from the development of mentioned characteristics that the SR population has been ageing, the share of children up to 15 years has been decreasing, and the share of old people has been growing slightly. It is evident that ageing process will deepen also in future.

So-called divergent districts, revealed by the analysis of selected indicators, characterized the deviations of development trends in indicators of mortality the most convincingly. For the life expectancy there were even 35 such districts for men and only 10 for women (divergence from the trend of maximal values). Districts Bytča, Lučenec, Námestovo, Revúca and Turčianske Teplice ranked among five districts with the greatest negative trend deviations. The problems are in districts Lučenec and Námestovo as well, though they count among districts with increasing life expectancy at birth. However, this increase is not fast enough for ranking among districts with the highest values of this indicator in future. The greatest trend deviations were for women in districts Banská Štiavnica, Bytča, Kežmarok, Námestovo, and Revúca. At the same time all these districts registered falling values of life expectancy at birth.

Despite very similar spatial distribution of districts according to the development of nuptiality for men and for women, only in three districts (Poltár, Rožňava and Sobrance) significant divergent deviations from the trend of maximal values of total nuptiality rate for women were recorded. For men there were 19 such districts, mainly in the central and southern part of the SR. The disproportion between number of districts with a significant divergence for men and women (19:3) points out a relatively more stable development of nuptiality for women than men.

In fertility no statistically significant divergences from the trend of maximal values of total fertility rate were detected.

The results of cluster analysis provided a synthetic view of demographic development and behaviour. The cluster analysis revealed that districts with a new type of demographic behaviour cover one third of the SR territory. This was reflected in low birth rate, higher mean age at first birth, but also low mortality. Nuptiality and abortion have been reaching mean values. Districts of this type (ranked into the cluster 3) cover western and a part of central Slovakia, with the exception of districts in the north and some southern districts. Cluster No. 6 is the closest one to this type (but it has higher mortality) and cluster No. 5 as well (with higher abortion and divorce). These three clusters cover all western and a part of central Slovakia (with the exception of northern districts and districts Krupina, Brezno, Rimavská Sobota and Revúca) and also three districts of Košice rank among them. Also cluster 7 (district Senec) is assigned to this type with mean values of indicators.

The rest of the SR territory, mainly the north and east of Slovakia is covered by clusters 1, 2, and 4, in which reproductive behaviour of population still has the features of the old model of reproductive behaviour, typical with high fertility, higher nuptiality, lower mean age at first birth and first marriage, and mean or high mortality. But new attributes of reproductive behaviour (mainly decrease in fertility) start reflecting in cluster 2.

High mortality is a serious problem for a large area close to the southern border of the SR, except for Bratislava and three districts of Košice (cluster 1 and cluster 6). Moreover the districts of southeast Slovakia (cluster 1) have high abortion. High divorce and abortion are negative features of the districts of Bratislava and Košice in cluster 5. Targeted measures of population policy (but also means of further education) to moderate negative development in these demographic processes should be directed just to these districts.

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