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Population Ageing as Generation Substitutions (Economic and Social Aspects)[1]

*Marcela KÁČEROVÁ – Jozef MLÁDEK**

Abstract

The goal of the paper is recognition of the population ageing processes. They are using some new methods and techniques of study long-term trends and regional differentiation of population ageing in Slovakia. Number of many cognitive tools, the focus was mainly on the group of those using comparisons of different age generations – index of potential economic support, coefficient of inflow, outflow and exchange, index of social support, dynamic economic and reproduction ageing index. Applying these methods were obtained new knowledge about trends and regional differentiation of population ageing in Slovakia.

Keywords: *population ageing, generation substitutions, time trends of ageing, regional differentiation of population ageing in Slovakia*

JEL Classification: J11

1. Introduction

One of the general regularities of the population development in most countries of the world involves the change of the population age structure, termed the population ageing (less frequent is the process of population rejuvenation). From the demographic viewpoint these changes involve the increase in the number or proportion of the population in higher age categories (top-down population ageing). The changes also involve the reduction in the number and proportion of the children population (bottom-up ageing). Seemingly simple assessment of the younger and older age categories of the population is complicated by their mutual relation as well as the relation to the other age categories of the population under assessment.

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The age structure of the population and the processes involved in its formation can be considered as a demographic phenomenon with a relatively high degree of complexity. As opposed to the large group of demographic phenomena that are associated only with a certain part of the population (marriage, divorce, fertility, population education, etc.), that can be described using a relatively simple indicators, the development of the age structure and the associated changes affect the entire population. The complexity of the age structure of the population is manifested through multi-causal relations with many population and social phenomena. The existing age structure reflects a long-term development of the basic population processes, such as fertility, mortality and migration. On the other hand, the age structure of every population may significantly affect the development of many population phenomena and processes. Very often the trends and intensity of these population processes are differentiated by the population age categories and are assessed as such.

Changes of the age structure, processes of population ageing have not only relevant demographic consequences; they also attract the attention of several disciplines of science and represent a major social phenomenon. The assessment and evaluation of its consequences involve the optimistic (positive) as well as pessimistic (negative) opinions.

Positive assessment of the population ageing is based on the continuing growth of the life quality, expressed especially in the growing life expectancy (particularly health expectancy). In Slovakia, in 1950 the life expectancy at birth was 59 years in men and 63 years in women. By 2009 these indicators grew to 71 years for men and 78 years for women. These indicators reflect the economic development, public health care services, improved nutrition, improved education and cultural maturity of the society.

More frequently the population ageing is viewed pessimistically, as a serious economic and social threat of the future development. It is often associated with the problems of economic development (ageing labour force and decrease of their number), health care and especially the sustainability of the pension system. There are also other specific needs of the elderly age categories – special, extremely high demands for health care, size and technical level of housing, special nutrition requirements, needs of cultural and sports events, etc. And these needs go hand in hand with increased material, staffing and financial requirements.

Developed countries with growing number and proportion of this population are burdened by most problems related to the satisfaction of the requirements of the elderly age categories of the population. They are searching especially for the new resources to be used to sustain their pension systems. The pay-as-you-go (PAYG) pension systems are encountering very serious problems as a result of

the diminishing number of the active labour force (generation of resources) and growing number of the people using these resources. The most commonly used way out is the increasing of the pension age that enables the increased generation and reduced spending of the pension resources.

The goal of our work was the recognition of the population ageing processes and the presentation of the collected knowledge – especially the scientific methods and technique involved in these processes and their application to the analysis of long-term trends (in the period of 1945 – 2025) and regional differences within Slovakia (at the district level). Of the multitude of tools available, we have focused our attention especially on those that use the comparison of various age generations and measure the generation substitution. To calculate all indicators and for construction of development graphs and maps are used the data on the age structure of population in Slovakia (ŠÚ SR, 1945 – 2009) and Population Projections (Vaňo and Bleha, 2008).

2. Theoretical Baseline, Methods and Techniques Used to Assess the Population Ageing Processes

Two different approaches are often applied to the study of ageing. In the first case the efforts focus on the comparison of several regional population structures (inter-regional analysis) with emphasis on the differences in age structures of the population and the achieved level of ageing. In the second case the attention focuses mainly on the changes of the age structure of a single regional population over the course of time (inter-temporal analysis). However, it appears that it is beneficial to combine both approaches and that there are benefits in geographical analyses.

The complexity and importance of the population age structure and the processes of change are reflected in a relatively extensive set of methods and techniques used to assess it. There are several statistical and graphic processes, that differ in their demands for collection and processing of the basic statistical information as well as in interpretation of the collected statistical and graphical parameters.

The above-mentioned extensive set of methods and techniques of the population age structures study can be divided into several groups in order to get better insight.

The first group is represented by simple one-component indices (Pavlíková and Mládek, 1999; UK, 2006). They characterize only one typical population age category, such as indices of absolute and relative frequency of age categories like population in a post-productive age and post-reproductive age in selected age categories (0 – 14, 60 and more, 65 and more, 70 and more, 80 and more). These characteristics are distinguished by simple interpretation and at the same

time they provide plastic information on the studied issues. The absence of knowledge concerning other population age categories is the disadvantage.

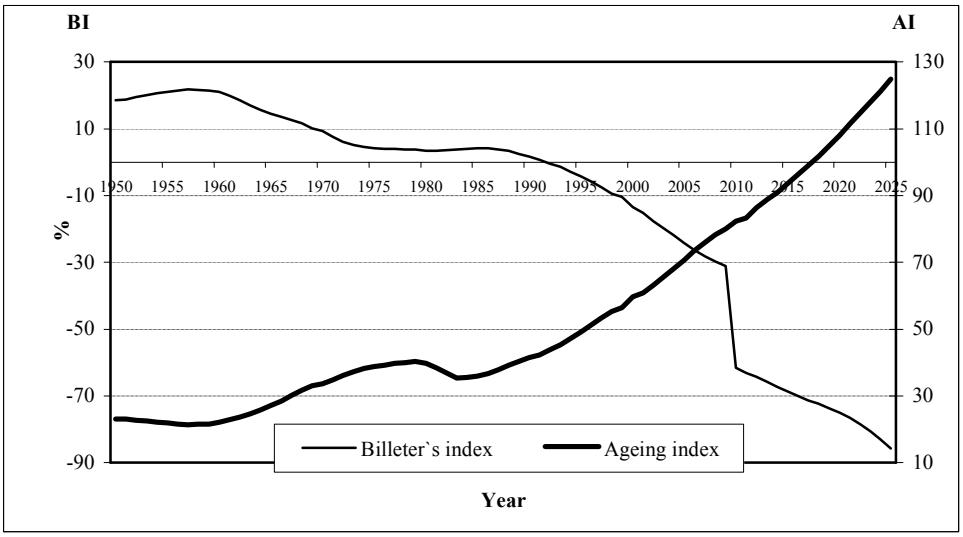
The second group consists of more complicated rates of population ageing. These are a statistical rates in the construction of which several characteristic population age categories are taken into account or all age categories are considered (Mládek and Káčerová, 2008; Mládek, 2006; Verešík, 1984; Michálek 1995). Their statement value is naturally higher but their interpretation tends to be more complicated as the one-component indices. Age index, ageing index, dependency indices, Billeter index, median age and mean age should be included in this group of indices.

Billeter index – ageing rate (Billeter, 1954), is defined as the ratio of difference between the populations at the child – pre-reproductive age and post-reproductive age and the population in the reproductive age (Mládek and Káčerová, 2008; Pavlíková and Mládek, 1999; UK, 2006). However, ageing is in this case in inverse proportion to the resulting value. In case that the Billeter index reaches negative values, the frequency of a post-reproductive category is higher than the frequency of a pre-reproductive population category.

The other, very often used is the ageing index, which is the ratio of the 65 year and older population and the populations at the child (0 – 14) – pre-reproductive age (Fig. 1). Both these indexes manifest the ageing process of population in Slovakia, which intensity strong increase in the 1990s of the 20th century.

F i g u r e 1

Development of Population Ageing Indexes in SR



Source: ŠÚ SR (1946 – 2006), ŠÚ SR (1997 – 2010), VAŇO, B. – BLEHA, B. (2008)

In addition to the demographic information dependency indices have also a significant socio-economic declarative value (Mládek, 2006; UK, 2006). Young age dependency ratio compares the population in the pre-reproductive age with a population in the productive age. Old age dependency ratio takes into account the post-productive age population and compares it with the productive group. Both these indices try to characterize certain load on the productive population with non-productive components of the population. In case that we sum up the population in the pre-reproductive and post-reproductive age and compare the total with the population in the productive age economic dependency ratio will be obtained. Its construction shows clearer economic orientation.

The ability to characterize the population age structure is also characteristic of some mean values, for example, the mean age and median age.

Graphic methods represent the third group of the instruments intended for age structures evaluation and presentation (Sonis, 1981; Podolák, 2001; Mládek, 2006; Káčerová, 2005). The most frequently used method, especially for its illustrative character, is perhaps the population pyramid. It is the double histogram representing the number of inhabitants in respective age categories (one-year or five-year) and by sex categories. In such a way the history of a population, especially formation of its age structure is represented in rough features. In its form – in the irregularity of the frequency of age categories – demographic events are reflected that influenced the level of reproduction (growth or decline in natality) or the migration of population (UK, 2006).

The triangular graph (Ossan′s triangle) is suitable for the analysis and interpretation of population′s age structure. Its basis consists of an equilateral triangle in which the observed population structures (communes, districts, and States) are represented by means of three coordinates (UK, 2006).

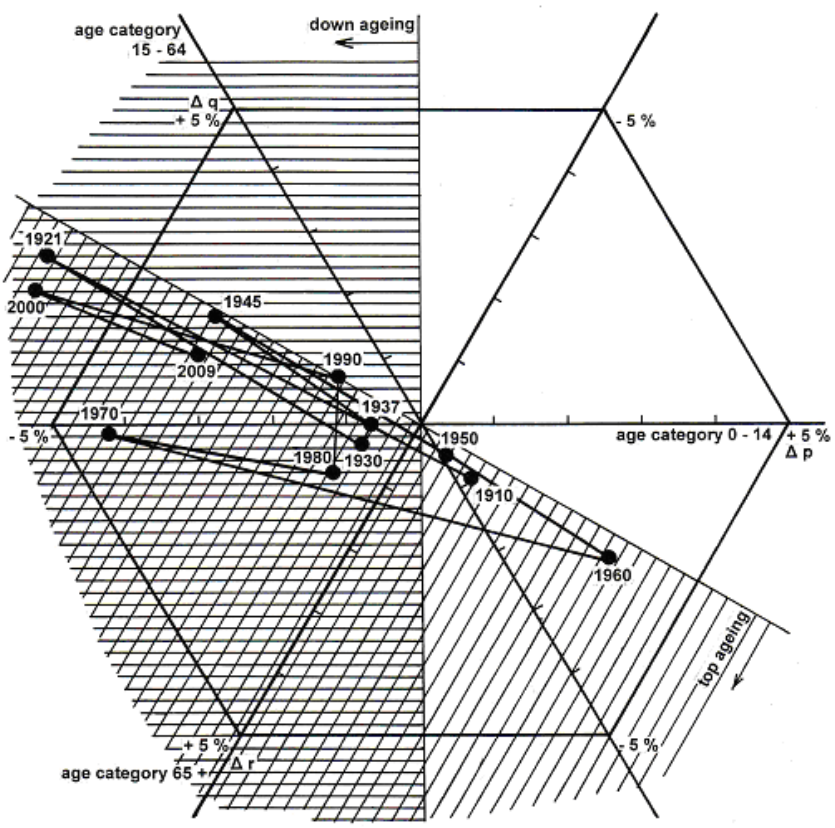
Sonis (1981) used one of the methods that enable the study of time and spatial differences of the population ageing and in the territory of Slovakia it was applied by Podolák (1998), Pavlíková and Mládek (1999), Mládek (2004). Its substance consists in the characteristics of the relative representation of three significant population age categories (below 15 years, 15 – 64 years old and over 65 years) and their changes in the course of one or several periods.

An attempt to evaluate the process of population ageing in Slovakia will be made according to the respective decades of the last century on the basis of graphic interpretation (Fig. 2). The whole period is without any exception characterized by ageing of population at the top. This process was most distinct in the period 1960 – 1970. The evaluation of ageing of population at the bottom is by far more varied. In three end years (1950, 1910 and 1960) rejuvenation of population at the base was even recorded. They were preceded by periods of the

high natural population increases. It was a noticeable change in the reproductive processes in 1990s that manifested by the most significant population ageing at the bottom.

F i g u r e 2

Hexagonal Chart of Age Population Structure Changes in Slovakia 1900 –2009



Source: ŠÚ SR (1900 – 2001), ŠÚ SR (1946 – 2006), ŠÚ SR (1997 – 2010)

3. Comparison and Substitution of the Population Generations in Slovakia

The latest group of newer tools used to analyze the age structure of the population and the population ageing is represented by the change indicators based on comparison or substitution of the selected population groups, most often generation groups – generations associated with certain major demographic, economic and social processes and functions. These may be generations with major reproduction function, generations of economically active population, generations

with the function of education and social support (Długosz and Kurek, 2009; Hrubý, 1996; Lutz, 2006; Qiao, 1988).

3.1. Population Ageing Over Time

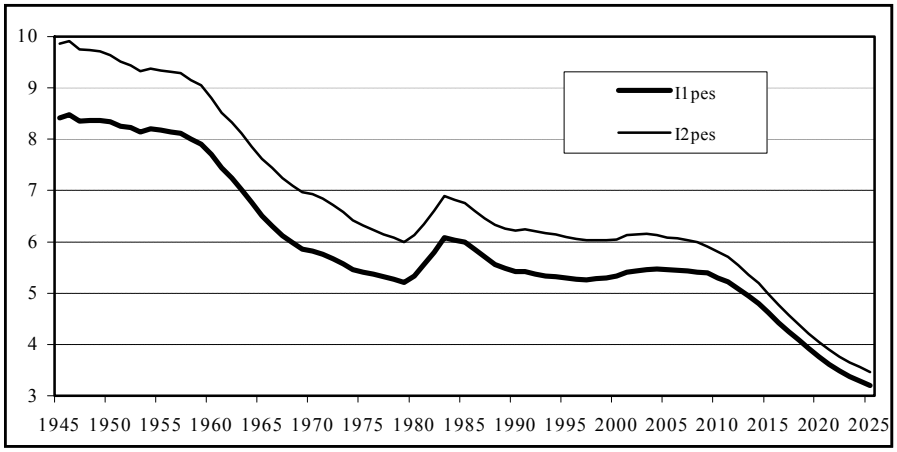
From the economic aspect, very important is the quantitative relation between the age categories of productive and post-productive population. This is expressed by the *Index of potential economic support* – I_{pes}

$$I_{1pes} = \frac{O_{15-64}}{O_{65+}} * c \qquad I_{2\,pes} = \frac{O_{20-64}}{O_{65+}} * c$$

If we substitute 100 for c, then the index represents the number of people in productive age, per 100 of people in the post-productive age. The index can be defined and used in two modifications. In the first case I_{1pes} is used on the basis of statistical data on productive population at the age 20 – 64 and in the second case –I_{2pes} is based on data on 15 – 64 year old. Both indicators have a similar trend (Fig. 3). If we use the number of economically active individuals as the numerator and the number of pensioners as the denominator, the index would represent the number of working individuals per 100 inactive individuals (pensioners).

F i g u r e 3

Index of Potential Economic Support SR in 1945 – 2025



Source: ŠÚ SR (1946 – 2006), ŠÚ SR (1997 – 2010), VAŇO, B. – BLEHA, B. (2008)

The trend of the potential economic support I_{2pen} has a dropping tendency, confirming the ageing of population. In the 1950s there were 9 – 10 persons in productive age per single person in post-productive age (Fig. 3). By 2000 this indicator dropped to 6 and stabilized over 15 years. The forecasts expect this

indicator to drop as low as 3.5 by 2025. The only period with positive development in this respect were the years of 1980 – 1985 – as a manifestation of low population numbers of those born during the 1st World War who entered the post-productive age category.

The category of productive population is generally considered very important in the socio-economic sense. That is why we need to assess its changes as the younger generations enter the category of productive population, and older generations leave the same (Hrubý, 1996; Káčerová, 2009).

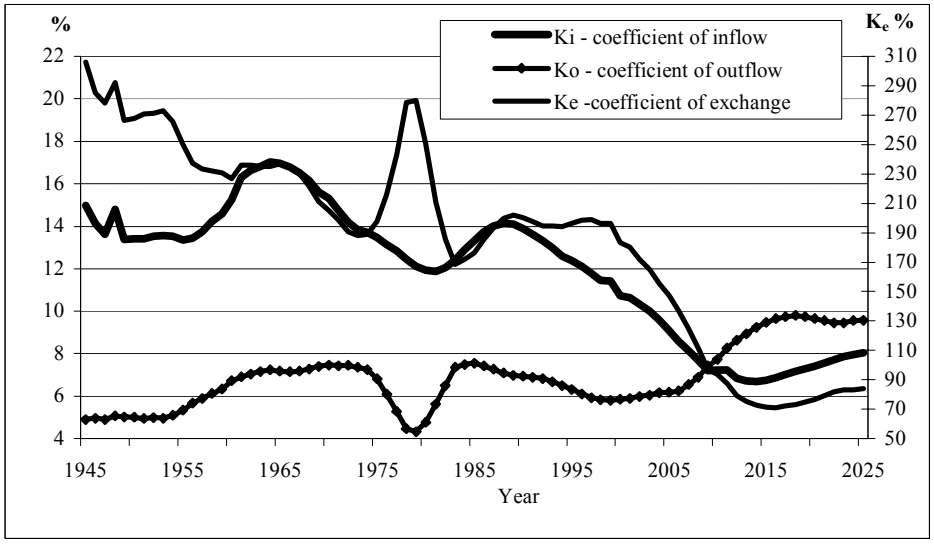
$$K_i = \frac{O_{10-14}}{O_{15-64}} * c \qquad K_o = \frac{O_{60-64}}{O_{15-64}} * c \qquad K_e = \frac{O_{10-14}}{O_{50-64}} * c$$

where

K_i – coefficient of inflow,
K_o – coefficient of outflow,
K_e – coefficient of exchange.

F i g u r e 4

Coefficient of Inflow, Outflow and Exchange



Source: ŠÚ SR (1946 – 2006), ŠÚ SR (1997 – 2010), VAŇO, B. – BLEHA, B. (2008)

The coefficient of inflow represents the number of 10 – 14 year old entering the productive age category. Overall the index is dropping – i.e. the inflow of the young age groups to the productive category is diminishing. In the 1950s the level was 14 – 16 persons and by the year of 2003 the value dropped to 8. The outflow coefficient represents the outflow of 60 – 64 year old from the productive age

group into post-productive. The curve represents the growing trends of the indicator, but there is a significant reduction in the years of 1971 – 1975 when the population born during the 1st World War entered the 60+ age category. The exchange coefficient represents the changes in the ratio of "inflow" to "outflow" from the productive age category. In the course of half the century, the situation has changed significantly. In the 1950s there was a 2.5 – 3-times inflow of the young population compared to the outflow of the older age group. At present the inflow of the young generation is insufficient to compensate for the outflow (97%) and this trend will continue (Fig. 4).

Very often the emphasis is put on the substitution of certain important social age groups. Długosz and Kurek (2009) consider the 85+ age category to be one of such important social groups. Usually this age category is associated with the need of special care, social or family support. With respect to certain demographic trends and the achieved population parameters of the population in Slovakia (life expectancy) we have reduced this age limit to 80 years. Upon such modification the *Index of potential social support* (parents) looks as follows:

$$I_{ss1} = \frac{O_{80+}}{O_{50-64}} * c \qquad I_{ss2} = \frac{O_{85+}}{O_{50-64}} * c$$

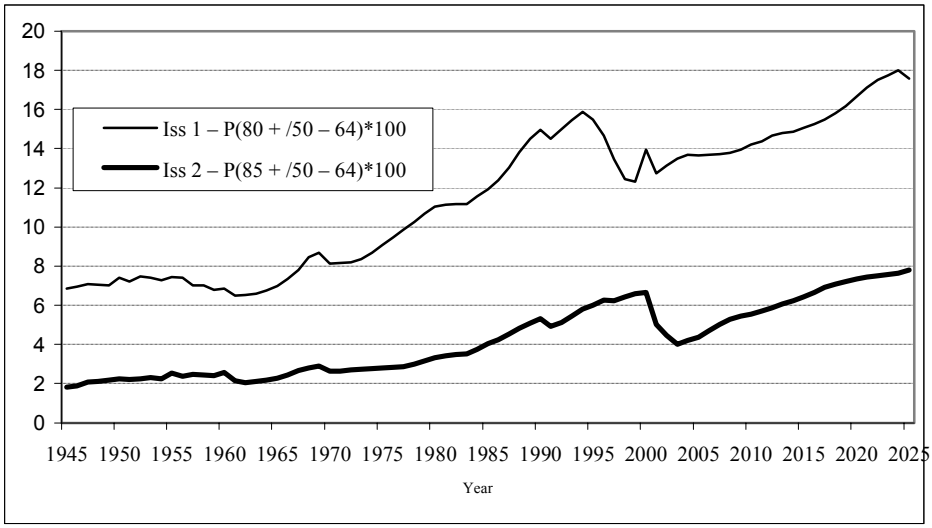
Index (I_{ss1}) represents the number of individuals in the 80+ age group per 100 50 – 64 old individuals. This ratio can be viewed as the relationship between the generation of parents and their children and as a potential possibility of direct inter-generation assistance.

The development of the relationship between the generation of „parents" (80+) and the generation of their "children" (50 – 64 years) confirms the aging of the population in Slovakia. At the beginning of the 1950s there were only 7 parents per 100 persons in the generation of children. By 1980 this ratio increased to 11 and in 1993 it was almost 17 persons (Fig. 5). The reduction of this indicator since 1994 (to 12 – 13) is associated with the transition of less numerous generations, born during the 1st World War into the 80+ age category. In the recent years the index again grew to 14 and according to the population forecasts, it should reach 18 by 2025. The trend curve of this indicator has major breaks in the population census years, resulting from certain correction of the age structures based on the results of census.

Dynamic population ageing metrics attempt to compare the size of the age groups that enter or leave the important age categories of the population at a certain time. This is used to compare the entering and leaving population with respect to the category of productive population (Długosz and Kurek, 2009) using the dynamic index of economic ageing of productive population.

F i g u r e 5

Index of Potential Social Support



Source: ŠÚ SR (1946 – 2006), ŠÚ SR (1997 – 2010), VAŇO, B. – BLEHA, B. (2008)

$$I_{ead} = \left[P_{(0-14)t} - P_{(0-14)t+n} \right] + \left[P_{(65+)t+n} - P_{(65+)t} \right]$$

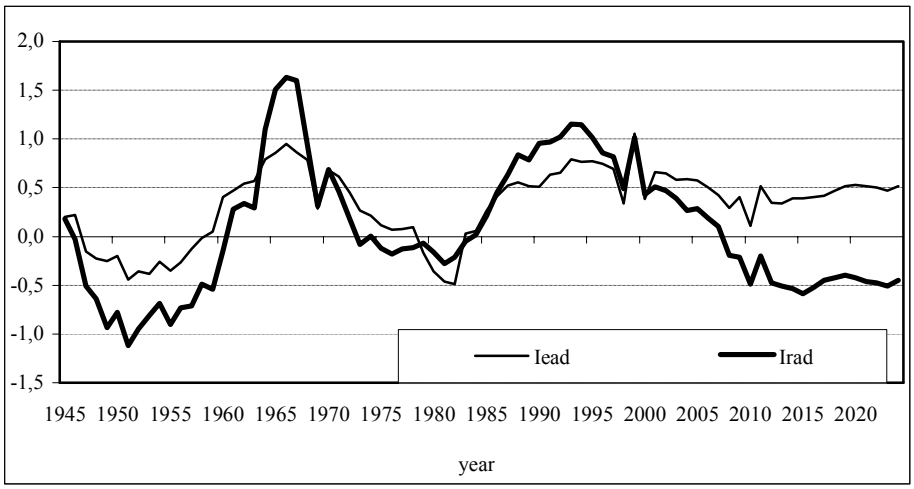
where

I_{ead} – dynamic economic ageing index,
$P_{(0\text{-}14)t}$ – share of population aged 0 – 14 at the beginning of the study period,
$P_{(0\text{-}14)t+n}$ – share of population aged 0 – 14 at the end of the study period,
$P_{(65+)t+n}$ – share of population aged 65+ at the end of the study period,
$P_{(65+)t}$ – share of population aged 65+ at the beginning of the study period.

I_{ead} represents the speed of the population ageing process. If the index assumes positive values, it means that the population is growing older. The larger the value of I_{ead} the faster is the process of ageing. If the index assumes negative values, this indicates that the population is rejuvenating.

Dynamic economic ageing index in Slovakia reflects the characteristic changes of both age categories and alternating periods of population ageing and rejuvenating. The period of population rejuvenation was in the 1950s and in the 1970s – thanks mainly to the increased fertility (Fig. 6). The population was growing older in the 1960s and since the end of the 1980s. Recently the process of ageing is enhanced especially by dropping fertility (bottom-up ageing). In 1980 the 0 – 14 category represented 26.1% and the category of 65+ represented 10.4%. By 2008 the proportion of children dropped to 15.4% and the proportion of the older generation increased only to 12.1%.

F i g u r e 6
Dynamic Ageing Indexes



Source: ŠÚ SR (1946 – 2006), ŠÚ SR (1997 – 2010), Vaňo, B. – Bleha, B. (2008)

If we were to assess the changes of the population age structure with respect to the reproduction, we should use the modified indicator – *Dynamic reproduction ageing index*

$$I_{rad} = \left[O_{(0-14)t} - O_{(0-14)t+n} \right] + \left[O_{(15-49)t+n} - O_{(15-49)t} \right]$$

where

I_{rad} – dynamic reproduction ageing index,
$P_{(0\text{-}14)t}$ – share of population aged 0 – 14 at the beginning of the study period,
$P_{(0\text{-}14)t+n}$ – share of population aged 0 – 14 at the end of the study period,
$P_{(15\text{-}49)t+n}$ – share of population aged 15 – 49 at the end of the study period,
$P_{(15\text{-}49)t}$ – share of population aged 15 – 49 at the beginning of the study period.

Positive values of I_{rad} indicate faster processes of the reproductive ageing of the population. The proportion of children (potential for reproductive category) is reduced as well as the reproduction age category. In case of negative values of I_{rad} the population is rejuvenating with respect to reproduction.

The trends of reproductive ageing of the population in Slovakia are marked for certain cyclic character. The trends reflect the fertility cycles and subsequent growing or dropping proportions of the reproduction category (Fig. 6). The first one is the period of the 1950s during which the population was rejuvenation especially thanks to high fertility. In the 1960s this trend was replaced by the period of population ageing as a result of reduced fertility. Another period of the population rejuvenation was observed in 1970s and first half of 1980s – as a consequence of increased fertility and inflow of numerous population years from the

1950s into reproduction category. The new period of population ageing is observed at the end of the 1980s and in the 1990s, especially thanks to major reduction of fertility. Worthy of notion is the slowing down of the population ageing over the last few years and even certain signs of the population rejuvenation in Slovakia. Aside from slight improvement of fertility, this is also a result of the inflow of numerous populations born in the 1970s representing the increase of the reproduction potential.

3.2. Regional Differences of the Population Ageing

Changing age structure of the population in the sense of the population ageing over time is also reflected in great regional differences. There are significant differences in ageing trends at the global, worldwide level, especially among the populations of the developed and undeveloped countries. Faster ageing of the population is observed in the developed countries and there these processes result in certain economic and social problems. Even within the community of the developed European countries there are certain regional differences in ageing trends (Pavlíková and Mládek, 2001; Káčerová a Bleha, 2007).

The development of the ageing index, Billeter´s index in Slovakia clearly demonstrates change in the population age structure (Mládek, 2006). Different manifestations of the ageing processes are identified at the level of regional units within Slovakia and we focused our attention on these regional units.

T a b l e 1

Extreme Attributes of the Potential Economic Support Index

District	1996	District	2009	District	2025
Minimal					
Spišská Nová Ves	3.4	Medzilaborce	3.6	Bratislava	1.1
Medzilaborce	3.4	Sobrance	4.2	Košice	2.7
Krupina	3.9	Turčianské Teplice	4.2	Piešťany	2.7
Trnava	4.0	Nové Mesto nad Váhom	4.3	Banská Bystrica	2.8
Poltár	4.1	Myjava	4.4	Nové Mesto nad Váhom	2.8
Maximal					
Topoľčany	6.7	Stará Ľubovňa	5.4	Vranov nad Topľou	4.0
Poprad	6.7	Spišská Nová Ves	3.4	Sabinov	4.7
Námestovo	7.1	Tvrdošín	4.5	Stará Ľubovňa	4.7
Turčianské Teplice	7.4	Kežmarok	6.2	Kežmarok	5.0
Žilina	7.4	Námestovo	7.1	Námestovo	5.6
average SR	5.3	average SR	5.4	average SR	3.2

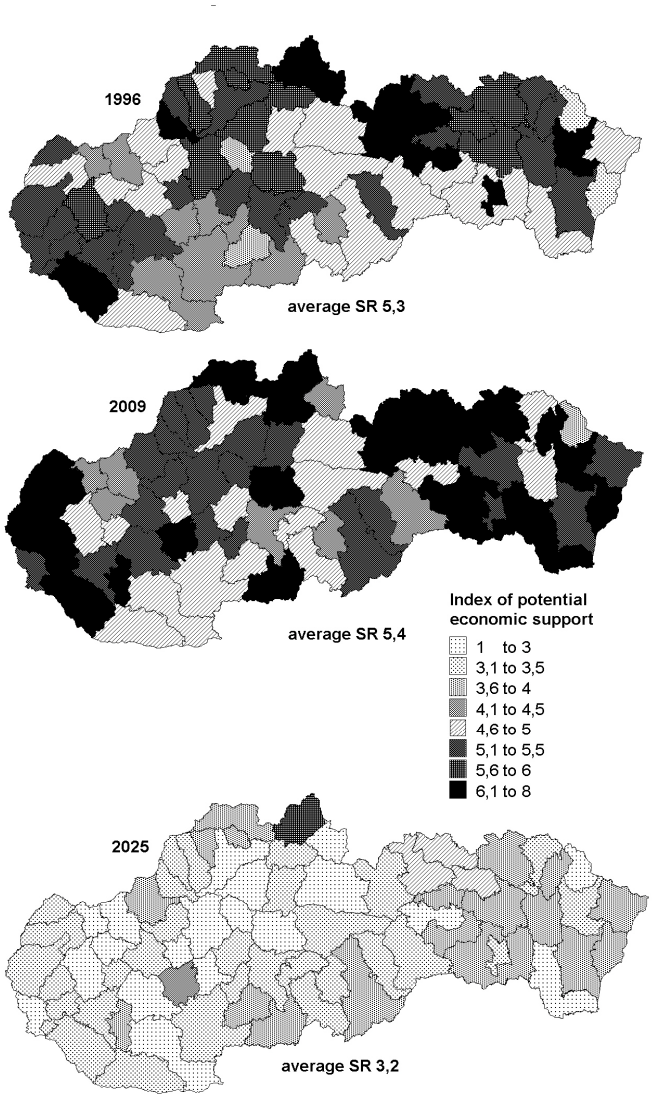
Source: ŠÚ SR (1997 – 2010). Vaňo, B. – Bleha, B. (2008)

Potential economic support of the population at the level of districts was assessed in 1996, 2009 and 2025 (Fig. 7). In the first two years the average value of the index was unchanged and certain similarity can be observed in its regional

distribution. The situation is affected especially by higher rate of fertility in the previous years and subsequent reinforcement of the category of the population in productive age. Districts with younger population in the long term have the highest value of the economic support index and the districts with advanced ageing have the lowest support index (Tab. 1).

F i g u r e 7

Index of Potential Economic Support

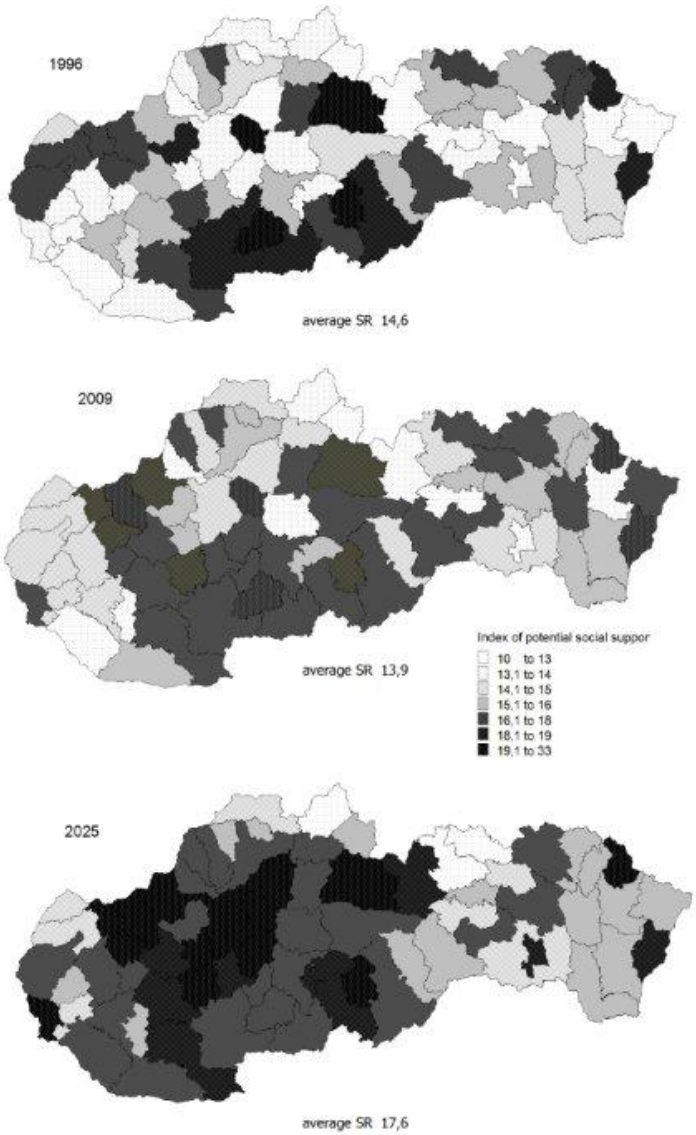


Source: ŠÚ SR (1997 – 2010), Vaňo, B. – Bleha, B. (2008)

According to the population forecast, a great shift is expected by 2025, with only 3 individuals in productive age per single individual in post-productive age. This will be a consequence of the transition of large population groups from the productive categories to the post-productive age categories. Extreme situation is expected in Bratislava where the index should reach the value of 1.1.

F i g u r e 8

Index of Social Support



Source: ŠÚ SR (1997 – 2010), Vaňo, B. – Bleha, B. (2008)

The ***potential social support*** index documents the process of population ageing and its differing manifestations in regional aspects. The comparison of the regional differences in 1996 and 2009 demonstrate insignificant changes in many districts the assessment of the potential support of "parents" and their "children" remains the same (Fig. 8). Greater transition is expected by 2025 with 17.6 in the 80+ category per 100 in the category 50 – 64. Lower index representing the inter-generation support will be maintained in several districts of the northern and eastern Slovakia. Extreme figures will be achieved in Bratislava with the index of 31.3 (Tab. 2).

T a b l e 2

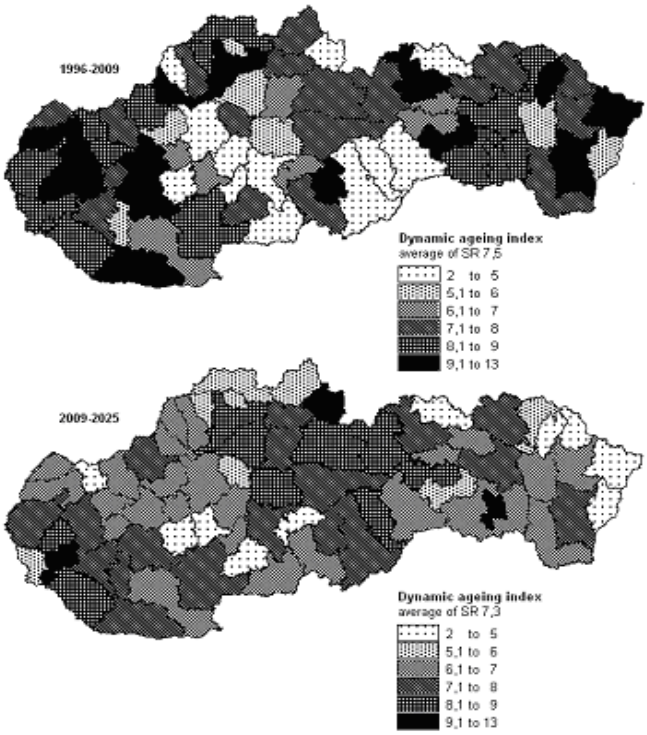
Extreme Attributes of the Potential Social Support Index

District	1996	District	2009	District	2025
Minimal					
Košice	10.1	Tvrdošín	10.9	Námestovo	11.3
Tvrdošín	10.3	Košice	11.0	Stará Ľubovňa	12.8
Ilava	10.4	Dunajská Streda	11.2	Kežmarok	12.9
Kysucké Nové Mesto	11.0	Ilava	11.3	Čadca	14.1
Dunajská Streda	11.2	Spišská Nová Ves	11.3	Košice-okolie	14.6
Maximal					
Banská Štiavnica	18.8	Poltár	17.5	Trenčín	21.7
Poltár	19.2	Nové Mesto nad Váhom	17.6	Nové Mesto nad Váhom	21.9
Liptovský Mikuláš	19.2	Turčianske Teplice	18.5	Piešťany	22.3
Krupina	20.1	Sobrance	21.8	Medzilaborce	24.0
Turčianske Teplice	22.4	Medzilaborce	23.4	Bratislava	31.3
average SR	14.6	average SR	13.9	average SR	17.6

Source: ŠÚ SR (1997 – 2010), Vaňo, B. – Bleha, B. (2008)

Regional differences in population ageing are markedly manifested in individual districts of Slovakia. The speed of the ageing processes was evaluated according to the *Dynamic economic ageing index* in two periods (1996 – 2009, 2009 – 2025). In both periods the ageing of the population was manifested in all districts, in none of the districts the population was rejuvenating. In the first period the rate of ageing was significantly differentiated with major representation of extreme values. Above-average rate of ageing was observed in the western part of Slovakia, in the wider Bratislava region. The second distinct region was formed in the districts of eastern Slovakia. The complex relations between the growth (reduction) of the young age category and growth (reduction) of the older age categories reflect the differences in the rate of ageing (Fig. 9). According to the population forecasts, the population ageing should continue until 2025. The average rate of ageing will not change much; however the differences between districts will be reduced (Tab. 3). There will be less extreme values of the index and the distribution will be homogenized.

Figure 9
Dynamic Ageing Index



Source: ŠÚ SR (1997 – 2010), Vaňo, B. – Bleha, B. (2008)

Table 3
Extreme Attributes of the Dynamic Economic Ageing Index

District	DIS (2009 – 1996)	District	DIS (2025 – 2009)
Minimal			
Veľký Krtíš	3.1	Sobrance	2.34
Rožňava	3.2	Snina	2.66
Banská Štiavnica	3.4	Medzilaborce	3.72
Zvolen	3.4	Stará Ľubovňa	4.13
Prievidza	3.9	Myjava	4.17
Maximal			
Žilina	10.0	Pezinok	8.80
Snina	10.7	Poprad	8.80
Komárno	10.8	Dunajská Streda	8.86
Kežmarok	11.3	Tvrdošín	9.03
Gelnica	12.6	Senec	9.52
		Košice	12.69
average SR	7.50	average SR	7.26

Source: ŠÚ SR (1997 – 2010).Vaňo, B. – Bleha, B. (2008)

Conclusion

The intensity of the effort to recognize the processes of the population aging is reflected in the number of the methods and techniques used in this effort. The new ones include those that attempt to compare the frequency and representation of major age generations. The search goes on for answers to questions such as the relations, comparison of the pre-reproduction and reproduction population category. How will the conditions for population reproduction develop with respect to generation exchange? Very important is the question of the comparison of the productive population categories – the inflow of young age categories as well as the changes in the count of the older age categories. Will the numbers of economically active population change with respect to the population at pension age? There is also the quantitative relation between the "parents" and their "children". In the older age categories, such comparisons may provide certain idea of the inter-generation support or care.

The article attempts to provide answers to these questions. The process of population ageing is a complex and difficult issue, the importance and consequences of which will continue to grow.

The ageing processes give rise to the need to address a whole series of social problems that currently burden especially the developed countries. The first group of problems are the issues of economic nature – especially the issue of development of economic conditions that would enable the satisfaction of the justified and specific needs of non-working pensioners. With growing proportion of this population it will be continuously more difficult to generate their income (pensions). At the same time it will be necessary to generate the opportunities for further utilization of the capabilities and knowledge of the elderly population.

The second group of problems involves the issues of social and health services. The reduction of the income of this population group should not result in the radical limitation of their needs. This is very important in the area of nutrition, personal services. Extended health care services should address the qualitative as well as the quantitative aspects. It is essential to provide an extended network of specialized facilities for treatment of elderly people and chronically ill patients - more geriatric facilities, more trained physicians and health care professionals to treat this population group, including psychological facilities and more extensive preventive activities. There are also the special housing requirements of the elderly population. Alternative solutions need to be considered – retirement homes of various types, conditions for the existence of multi-generation families, provision of nursing care services.

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