Session

POPULATION CHANGE ON NATIONAL AND REGIONAL LEVELS

Demographic development of Russia and Ukraine: fifteen years of independence

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All developed countries face serious problems connected with consequences of reproduction type change and age structure transformations. Besides, for Eastern Europe and CIS countries the last decades of the XXth century are marked by radical changes in all spheres of social life. For new independent states experiencing reforms the demographic component of their development is highly sensitive to social, political and economic transformations. Undergoing similar reforms Russia and Ukraine, besides, have more similarities in economic, cultural, linguistic and other aspects than other former Soviet republics. Moreover, migrational exchange between Russia and Ukraine is a significant part of migration streams in these countries. Besides, authorities of both countries express their serious concern about population size decrease (see Fig.1): as compared with the total population in 1989 population size of Russia by the year 2004 has decreased by about 2 per cent while for Ukraine this decrease has been about 7.5 per cent. Thus, it presents both theoretical and practical interest to make a comparative analysis of current state and future demographic dynamics of Russia and Ukraine.

At the beginning of the XXIst century the demographic situation in Russia and Ukraine is characterized by low fertility, high mortality, both natural and total increase being negative. This alarming situation does not appear suddenly, it results from the previous demographic development. Demographic development of Russia and Ukraine till the beginning of the 1990th was analysed in [3]. It was shown that general trends of natural population movement for Russia and Ukraine had been similar while considerable differences in migration trends took place.

Generally speaking, the main demographic components of population reproduction are fertility, mortality and migration. Besides, it is acknowledged that population age-sex structure plays an important role in population reproduction.

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Thus, in this paper our attention is focused on dynamics of the mentioned components for Russia and Ukraine since the year 1989 (when the last Soviet census was conducted).

To understand better demographic changes in Russia and Ukraine their demographic characteristics will be compares with those for some developed countries representing different regions of Europe. The study is based on vital statistics; data of the first censuses conducted in independent Russia and Ukraine (2001 for Ukraine, 2002 for Russia), materials of the Council of Europe and Population Division of the Department of Economic and Social Affairs of the UN Secretariat are used [1, 2, 5-7, 9]. For computations Excel and Mathcad 2001 Professional are used.

Changes in demographic characteristics after the last Soviet census (1989-2004)

Fig. 2-6 demonstrate changes in main demographic processes – fertility, mortality and migration. Trends of fertility for Russia and Ukraine have been similar (see Fig. 2,3), though the TFR fall in the beginning of the 1990th for Ukraine was less sharp than that for Russia. For both countries in the beginning of the XXIst century some fertility increase (as compared with its minimum reached in 1991) takes place. It should be mentioned that in 1991-1997 the TFR for Ukraine had been higher than that for Russia.

Both for Russia and Ukraine during the considered period the input of age groups under 25 to the TFR decreased while that of older age groups increased. Thus, in 1989 the input of ages under 25 to the TFR for Russia was 54% (57% for Ukraine), while that of ages 25-39 – 45% for Russia (41% for Ukraine); in 2003 the input of ages under 25 to the TFR for Russia was 46% (52% for Ukraine) and that of ages 25-39 – 52% for Russia (47% for Ukraine). The input of younger age groups (< 20, 20-24) to the TFR for Russia is greater than that for Ukraine, while for ages 25-39 vice versa. This may be considered as an evidence that Russian profile of fertility is closer to the Western model than that of Ukraine.

In both countries negative trends in dynamics of mortality appeared in mid-60th, then in the mid-80th some life expectancy increase took place and since the end of the 80th LE has decreased. But life expectancy for Ukraine has been higher than that for Russia (see Fig. 4). It should be mentioned that differences between Russia and Ukraine in life expectancy are greater for male population than for females, besides both for males and females since 1997 differences between Russia and Ukraine have increased. Thus, in1997 this difference for males was 1.2 years (0.1 year for females), by 2002 it increases till 3.6. years for males (2.2 years for females).

But generally trends of natural population movement for Russia and Ukraine don't have principal diversities.

Unlike natural movement considerable difference in migration dynamics can be seen (Fig. 5). In the considered period net migration for Russia has been positive, while for Ukraine since 1994 it has been negative. For both countries values of net migration vary in a very wide range. For Russia and Ukraine migrations between them are very important. Thus, maximal positive values of net migration for Ukraine in 1991 and 1992 were caused by immigrants from Russia (see Fig.6) by about 40 per cent. For a decade Russia's migrational exchange with Ukraine has been positive and amounted 10-20 per cent of country's annual net migration. For Ukraine the proportion of migrational exchange with Russia has been higher. This fact should be taken into consideration when elaborating migration policies in these countries.

The mentioned diversities in main demographic processes lead to differences in population age structures (population pyramids of Russia and Ukraine are given on Fig. 7). As compared with the Russian one, age composition of Ukraine is characterized by lower proportions of children (in 2003 the proportion of ages 0-14 for Russia was 20.9%, for Ukraine – 15.8%) and higher proportion of the elderly (this proportion for Russia was 18.6%, for Ukraine – 21.3%).

The world is undergoing an unprecedented demographic transformation, and all countries face challenges resulting from the relationships between ageing and almost

all spheres of life especially labour market and sustainability of social security systems. Demographic transition started in Russia and Ukraine later than in Western countries, thus even in the recent past Russia and Ukraine were "younger" than the majority of developed European countries (e.g. in 1975 the proportion of population 60+ for Western Europe was 19.1 per cent while for Russia - 13.6 per cent [8]). But ageing in Russia and Ukraine is progressing rapidly. Thus, ageing characteristics of different types for Russia/Ukraine and countries representing Western, Southern, Northern Europe are considered: proportions (e.g. proportions of population 60+ in the total population), ratios (e.g. ageing index, dependency ratios), life expectancies at older ages.

It can bee seen from Fig. 8-10 that there are no principal differences in ageing development in Russia, Ukraine and developed European countries. Values of some ageing characteristics for Russia and Ukraine don't differ much from those for other parts of Europe. Thus, in the year 2000 the proportion of population aged 60+ was for Russia 18.5%, for Ukraine – 20.5%, for Northern Europe – 20.4%, for Southern Europe – 21.8%, for Western Europe – 21.7%; ageing index was for Russia 101.2, for Ukraine – 115.2, for Northern Europe – 107.9, for Southern Europe – 138.0, for Western Europe – 127.6; old age dependency ratio was for Russia 29.2, for Ukraine – 33.3, for Northern Europe – 33.6, for Southern Europe – 34.9, for Western Europe – 35. It should be mentioned that male/female differences in ageing indicators are more marked for populations of Russia and Ukraine than for the West.

But the picture becomes quite different when life expectancies at older ages are considered. Life expectancies at 65 years for Russia, Ukraine and selected European countries representing Northern, Southern, Western and Eastern Europe for 1990 and the latest available are compared (see Fig. 11) demonstrating that unlike developed European countries life expectancies at older ages for Russia and Ukraine in the considered period do not increase and that they are much lower than for those countries. LE at 65 for Russia in 2004 was equal to 10.9 years for males and 15.3 years for females (for Ukraine in 2003 – 11.8 for males and 15.6 for females) while in 2001-

2003 for selected European countries representing Northern, Southern and Western Europe it was 16.1 – 17.3 years for males and 19.1 – 21.3 for females.

Thus, when applying Western experience (e.g. in the field of pension system reforms or care of older people) it is very important to take into account the mentioned similarities and diversities in ageing development.

Future trends of demographic development (2000-2050)

A number of projections made in different Russian and Ukrainian institutions and by different authors and the UN prospects were examined [4]. Projections made before mid-90th were more optimistic than ones made later. Almost all projections made in the end of the XXth century don't assume Russian and Ukrainian population increase. Population non-decrease can be ensured by such values of demographic characteristics that they are hardly attainable in the next decades.

Here we dwell upon the UN projections up to the year 2050 (UN World Population Prospects, the 2004 Revision [9]). For each country medium, high and low variants are based on the same assumptions for LE and migration. For all variants TFRs for Ukraine are supposed to be lower than those for Russia, while values of LE – higher. Annual net migration for Russia is set to be equal to 50 thousand, and –100 thousand for Ukraine.

Fig. 12 demonstrates total population size dynamics for Russia and Ukraine in 2000-2050 according to medium, high and low variants. For all scenarios total population will decrease (more rapidly for Ukraine), this decrease being determined by the assumptions made. Thus, according to the medium variant by the year 2050 Russia's population can decrease by 24% as compared with population size in 2000 (Ukraine's – by 46%).

Differences in fertility assumptions result in substantial differences in age structures both for Russia and Ukraine. Fig. 13a-13c demonstrate dynamics of proportions of

children and the elderly for medium, high and low variants for Russia, Ukraine and the whole Europe. For all variants the gap between the proportions of children and the elderly is increasing, being higher for Ukraine. For the medium variant the difference between the proportions of the elderly and children in 2000 for Russia was 0.1% (2.9% Ukraine, 2.8% for Europe), by 20250 it can reach 14.5% for Russia (25.6% for Ukraine, 19% for Europe).

Population age structures for Russia and Ukraine in 2025 and 2050 (medium variant) age given on Fig. 14 a, b showing further progress of population ageing. This process will develop according to all considered scenarios having profound and far-reaching consequences forcing Governments to reassess many established economic, social and political policies and programmes.

Results of the study may contribute to better understanding of demographic situation in Russia and Ukraine within the European context and will allow to use more widely the experience of each of these countries in elaboration of social policies.

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Fig.1. Total population, Russia and Ukraine, 1989-2004 (%, relative to 1989)

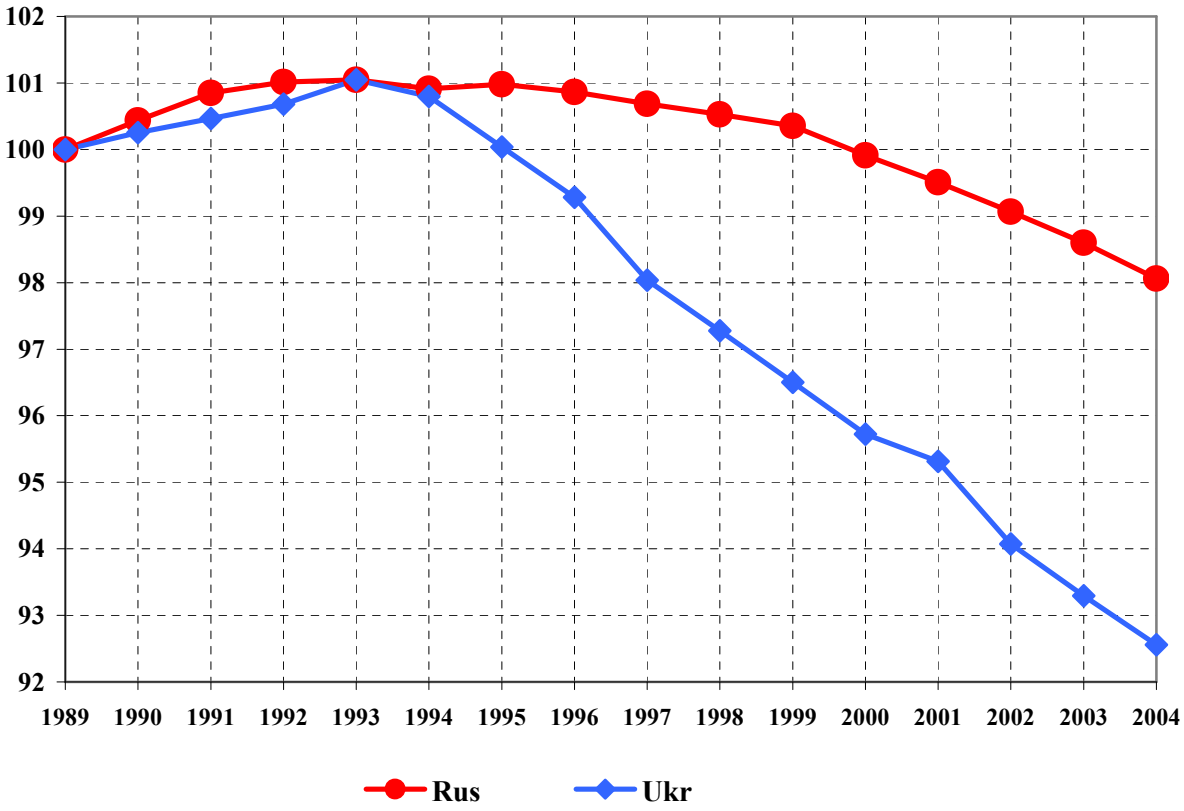


Fig.2. Total fertility rate (TFR), Russia and Ukraine, 1989-2004/2003

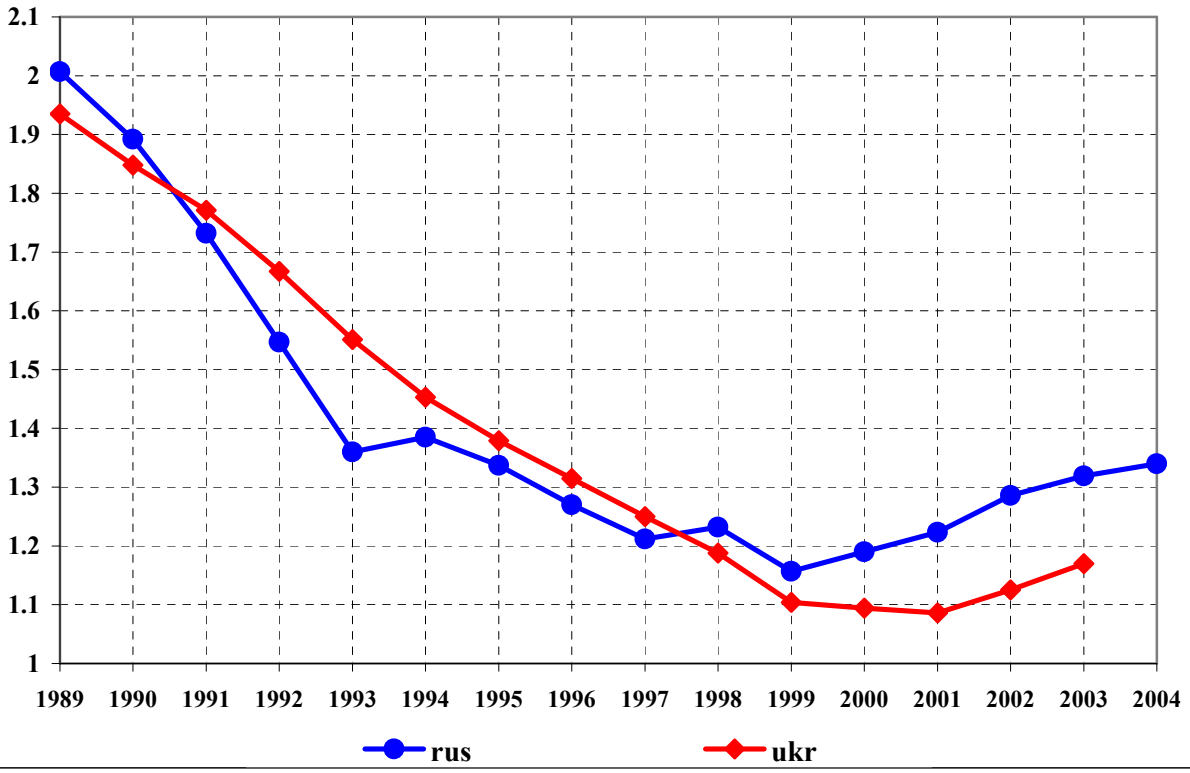


Fig.3. Age profiles of fertility, Russia and Ukraine, 1989 and 2003

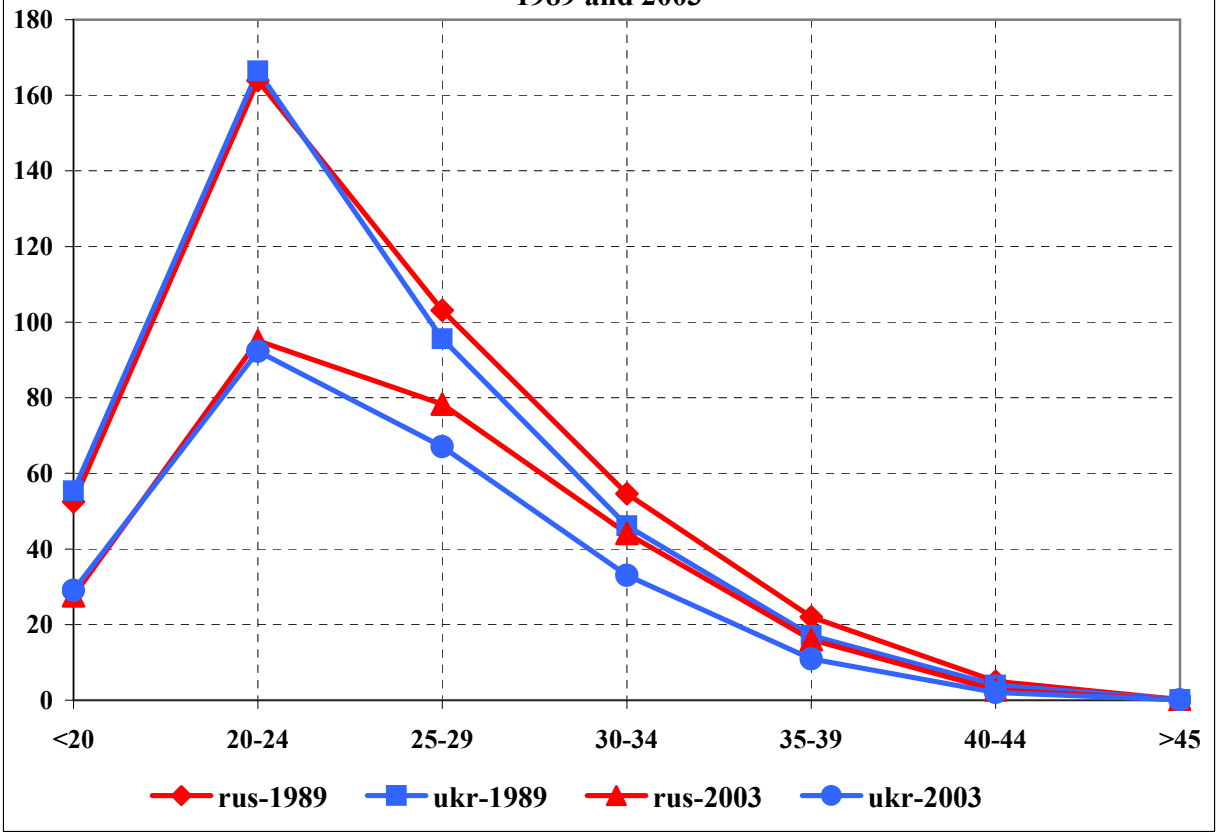


Fig.4. Life expectancy ad birth, Russia and Ukraine, 1989-2004/2002

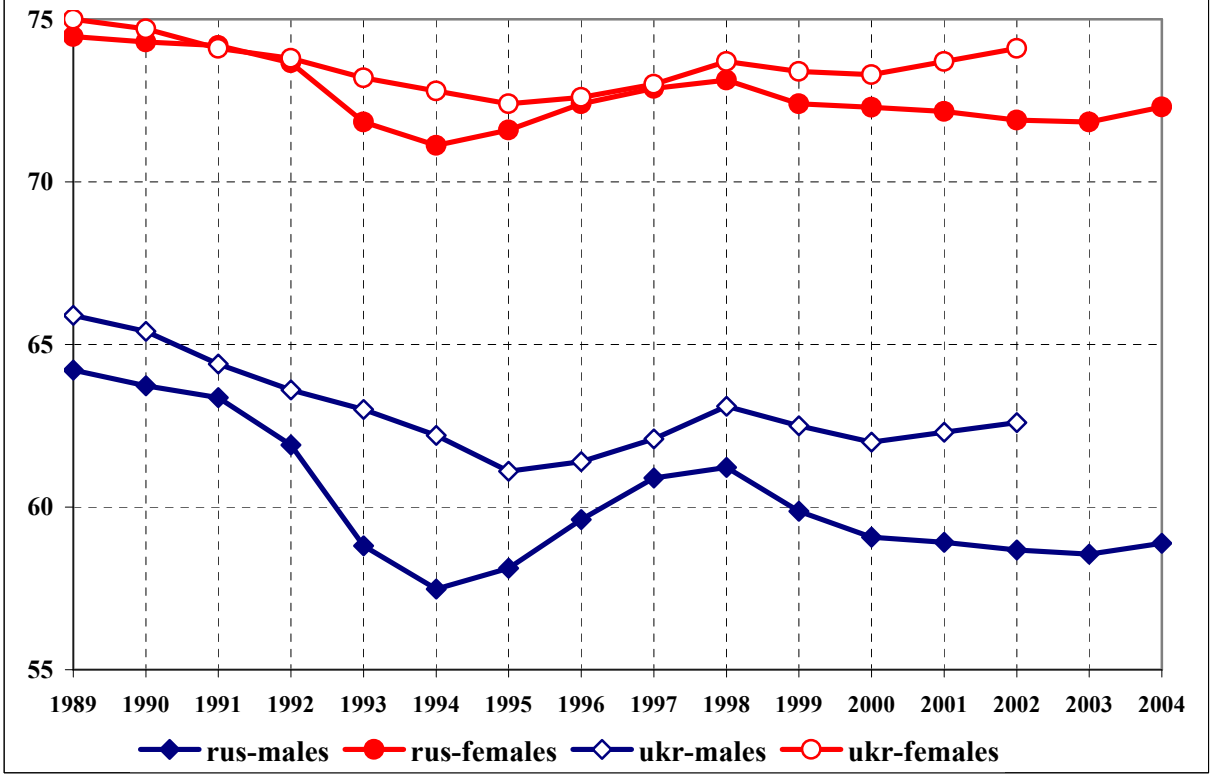


Fig.5. Rate of net migration (%), Russia and Ukraine, 1989-2004

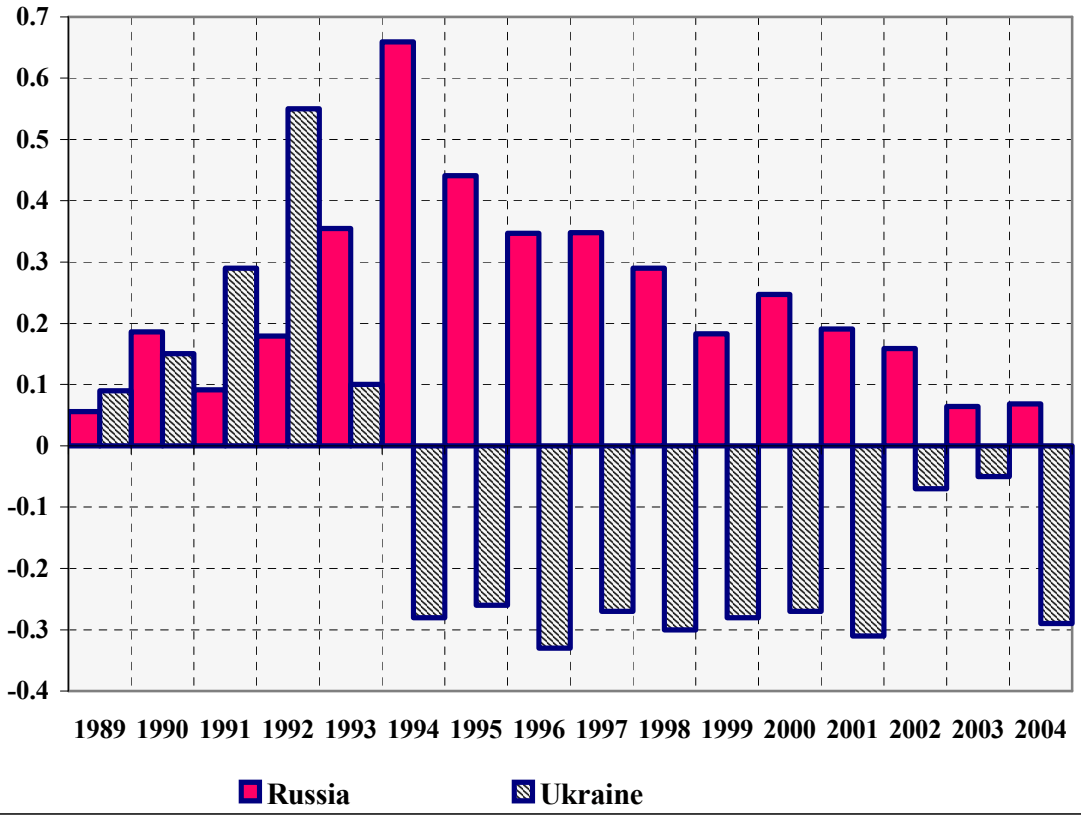
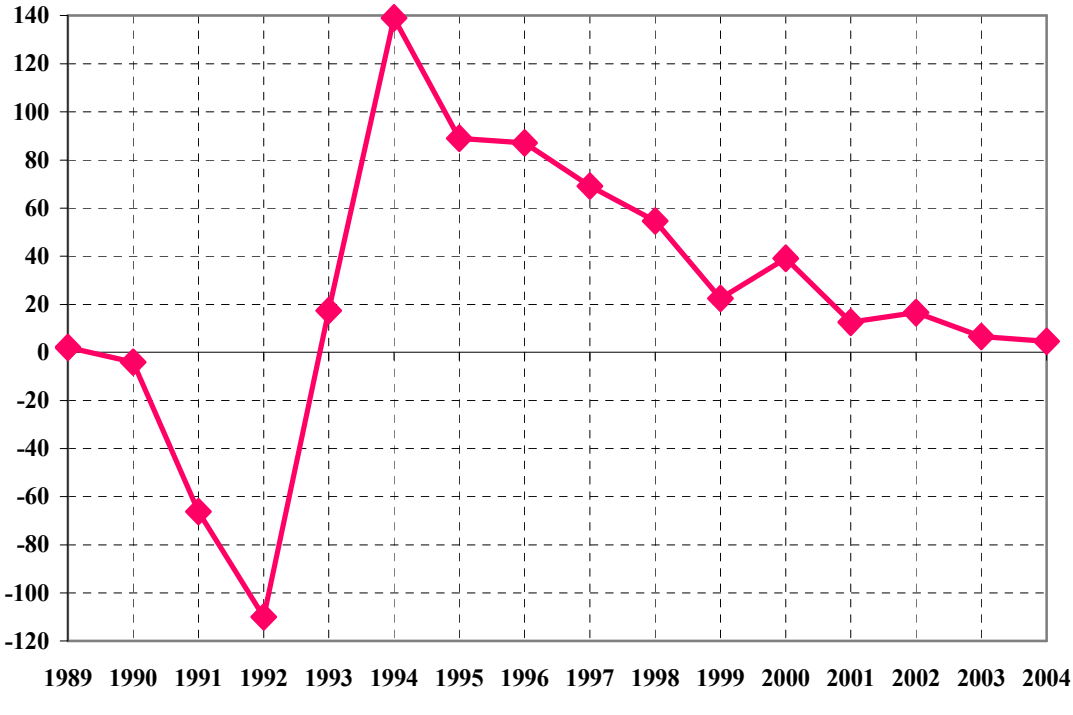


Fig.6. Migration between Russia and Ukraine (thousand), 1989-2004



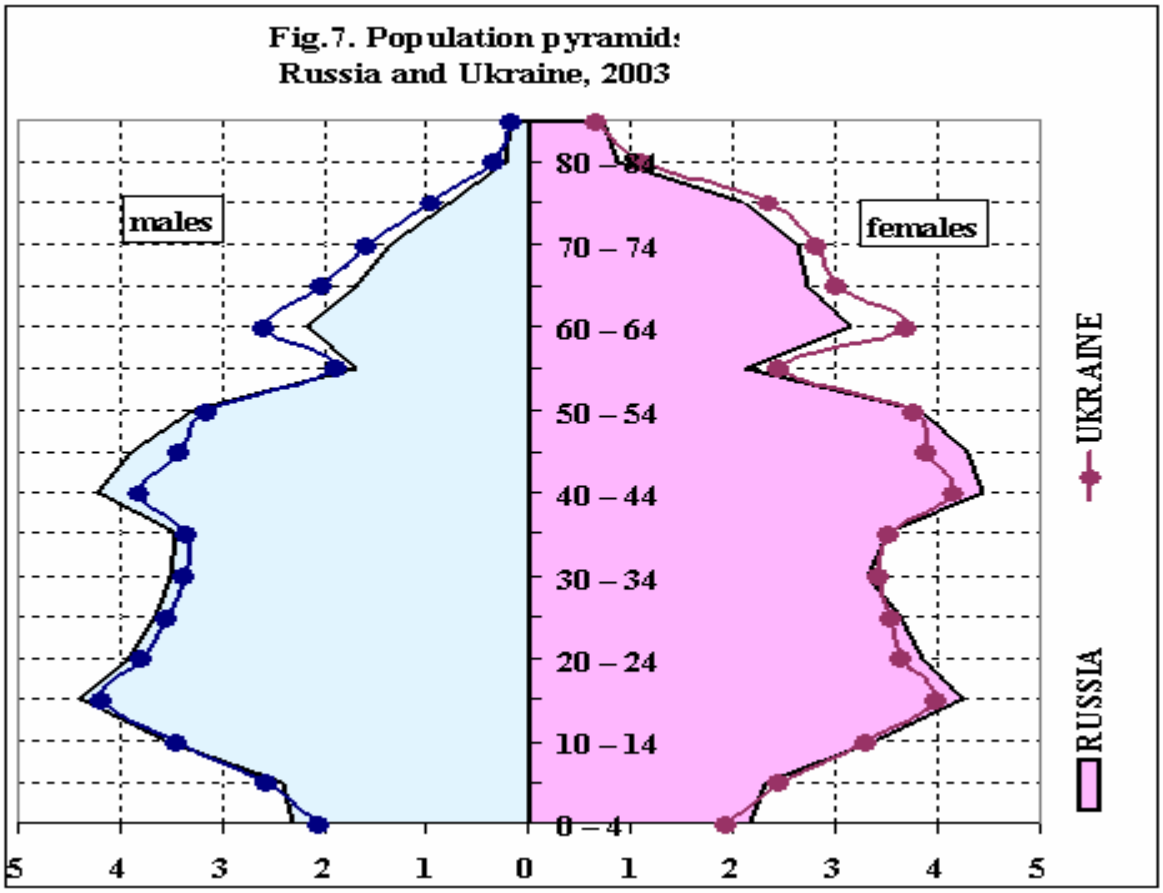


Fig.8. Proportion of population aged 60+, Russia, Ukraine and selected European countries, 1950, 1970, around 2003
(* - 2001, ** - 2002)

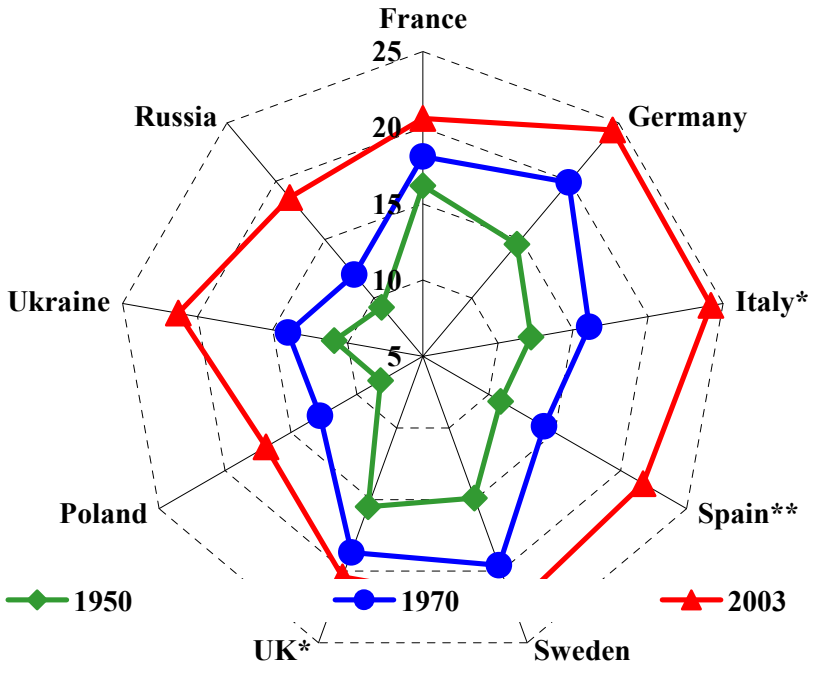


Fig.9. Ageing index, Russia, Ukraine and selected European countries, 1950, 1970, around 2003
(* - 2001, ** - 2002)

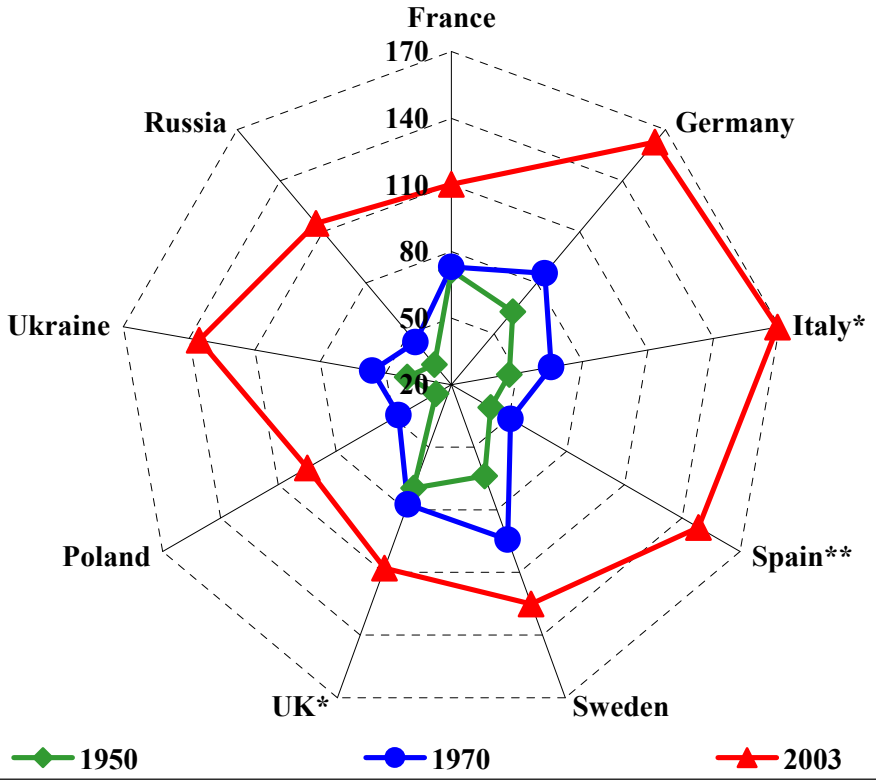


Fig.10. Old-age dependency ratio, Russia, Ukraine and selected European countries, 1950, 1970, around 2003
(* - 2001, ** - 2002)

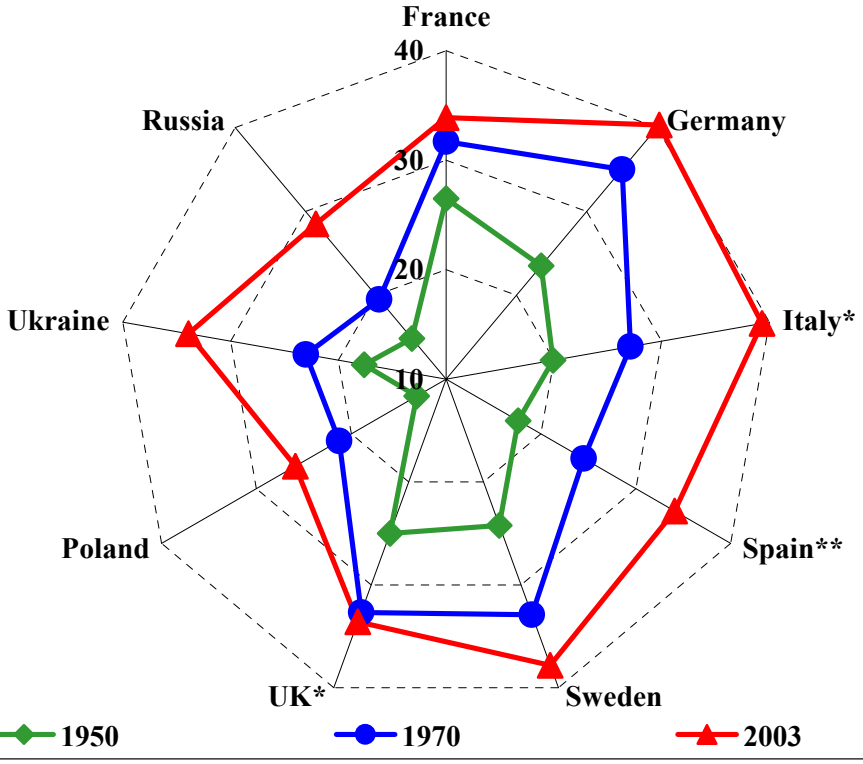


Fig.11. Life expectancy at 65, Russia, Ukraine and selected European countries, 1990 and the latest available data (* - 2002, ** - 2001, # - 2003, ## - 2004)

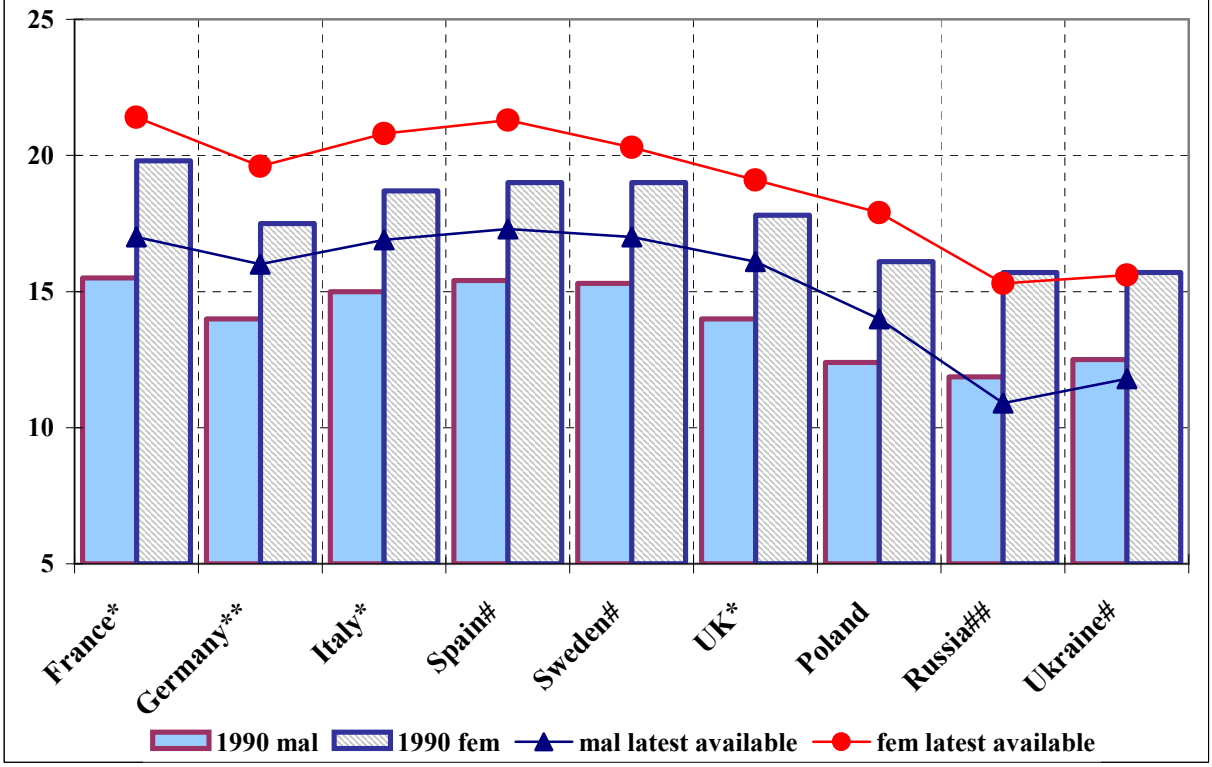


Fig.12. Total population (thousand), Russia and Ukraine, 2000 - 2050 (UN World Population Prospects, the 2004 Revision)

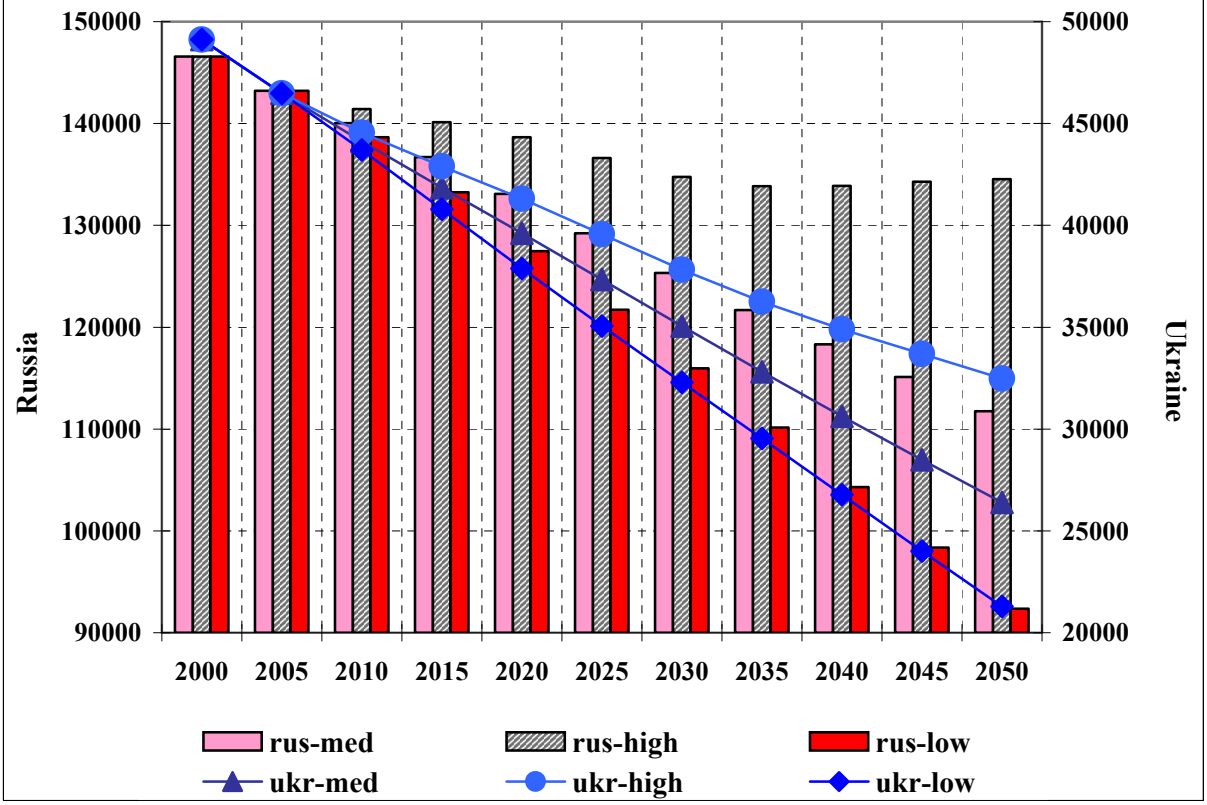


Fig.13a. Percentage of children and aged 60+ (%), Russia,Ukraine and Europe 2000 - 2050 (UN World Population Prospects, the 2004 Revision, medium variant)

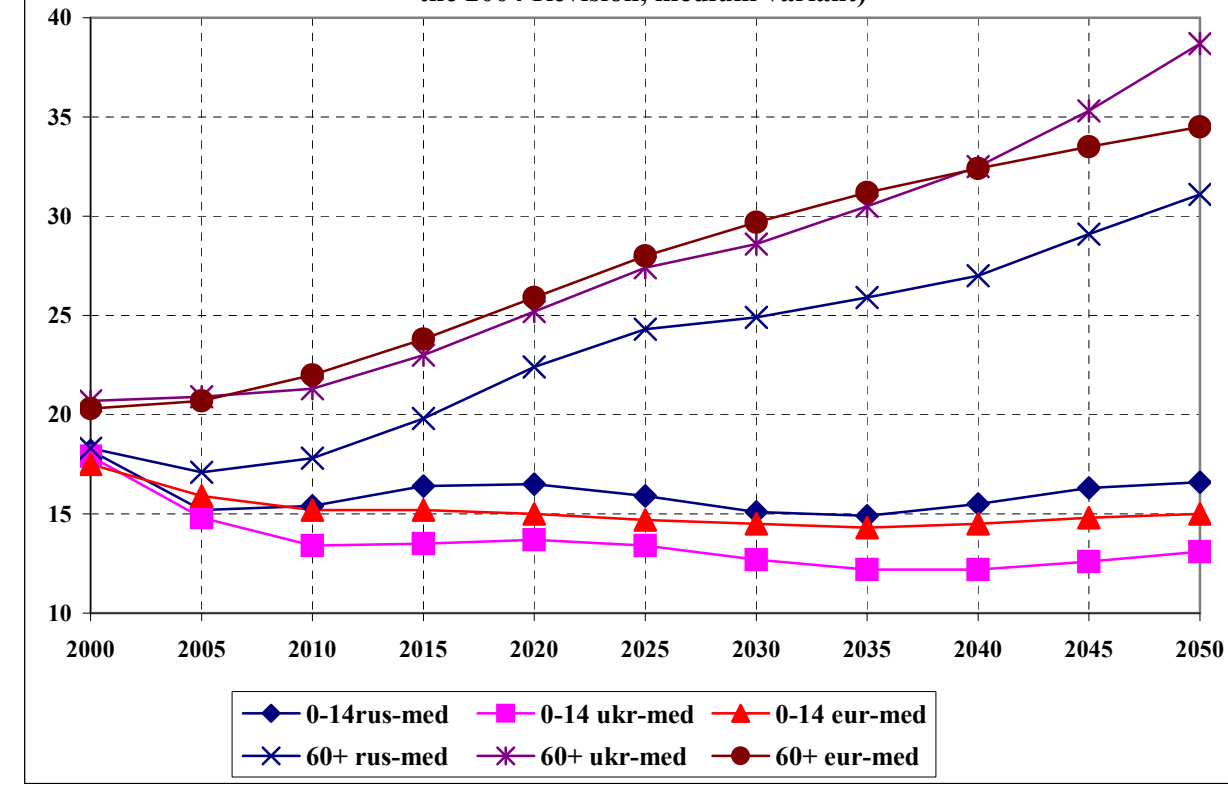


Fig.13b. Percentage of children and aged 60+ (%), Russia,Ukraine and Europe 2000 - 2050 (UN World Population Prospects, the 2004 Revision, high variant)

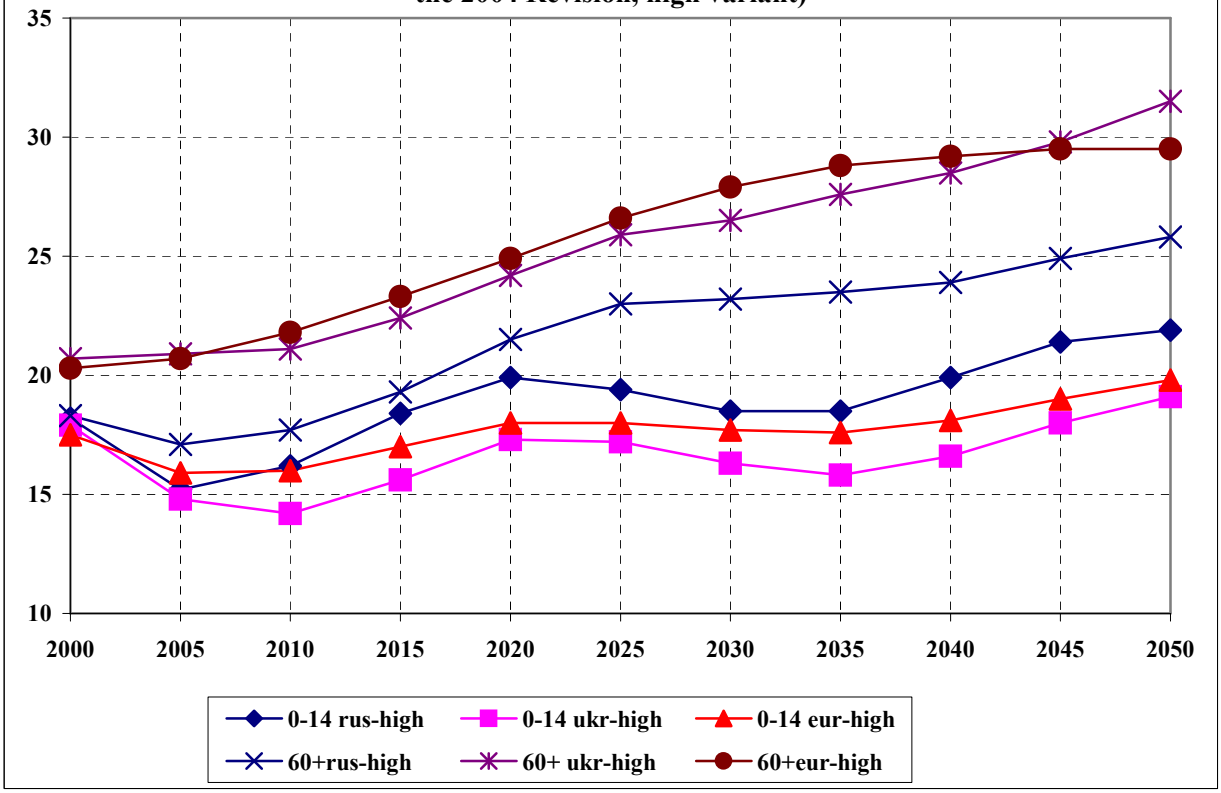


Fig.13c. Percentage of children and aged 60+ (%), Russia,Ukraine and Europe 2000 - 2050 (UN World Population Prospects, the 2004 Revision, low variant)

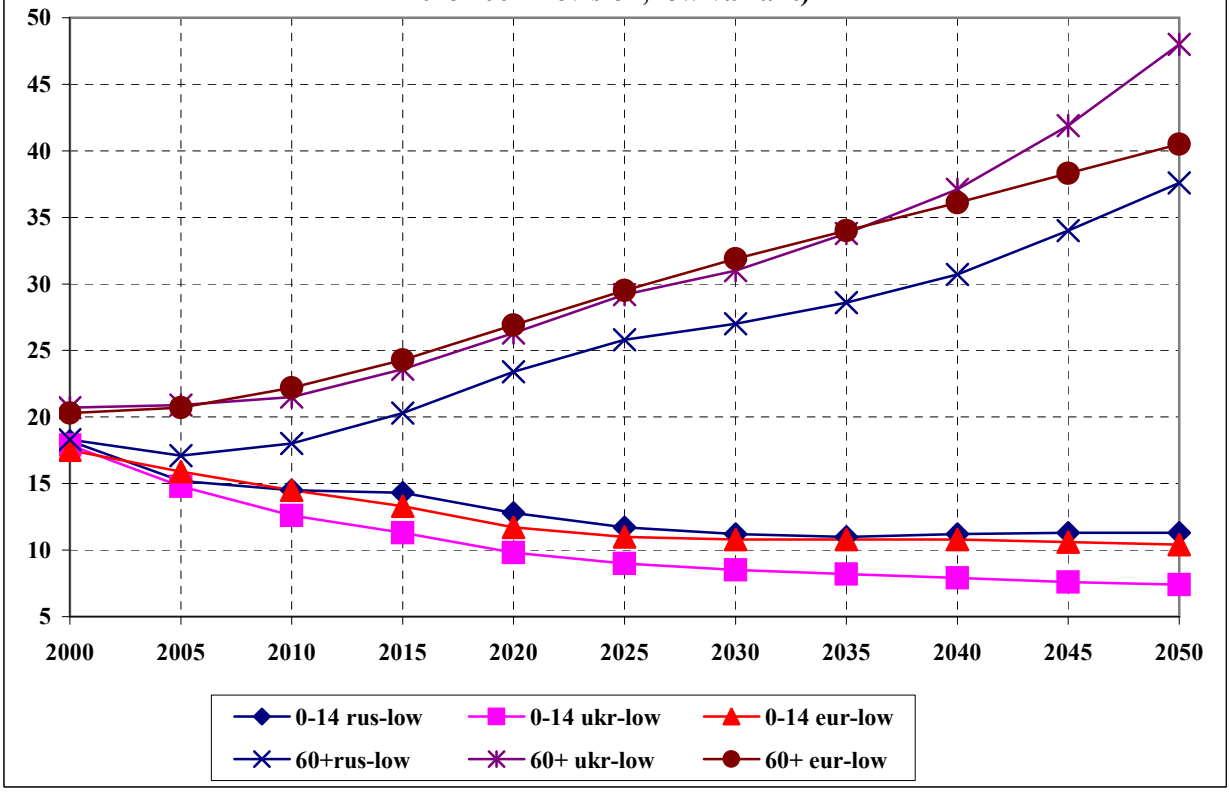


Fig.14. Population pyramids, Russia and Ukraine, 2025 (a) and 2050 (b) (UN World Population Prospects, the 2004 Revision, medium variant)